



SETTING CREDIBLE SPEED LIMITS

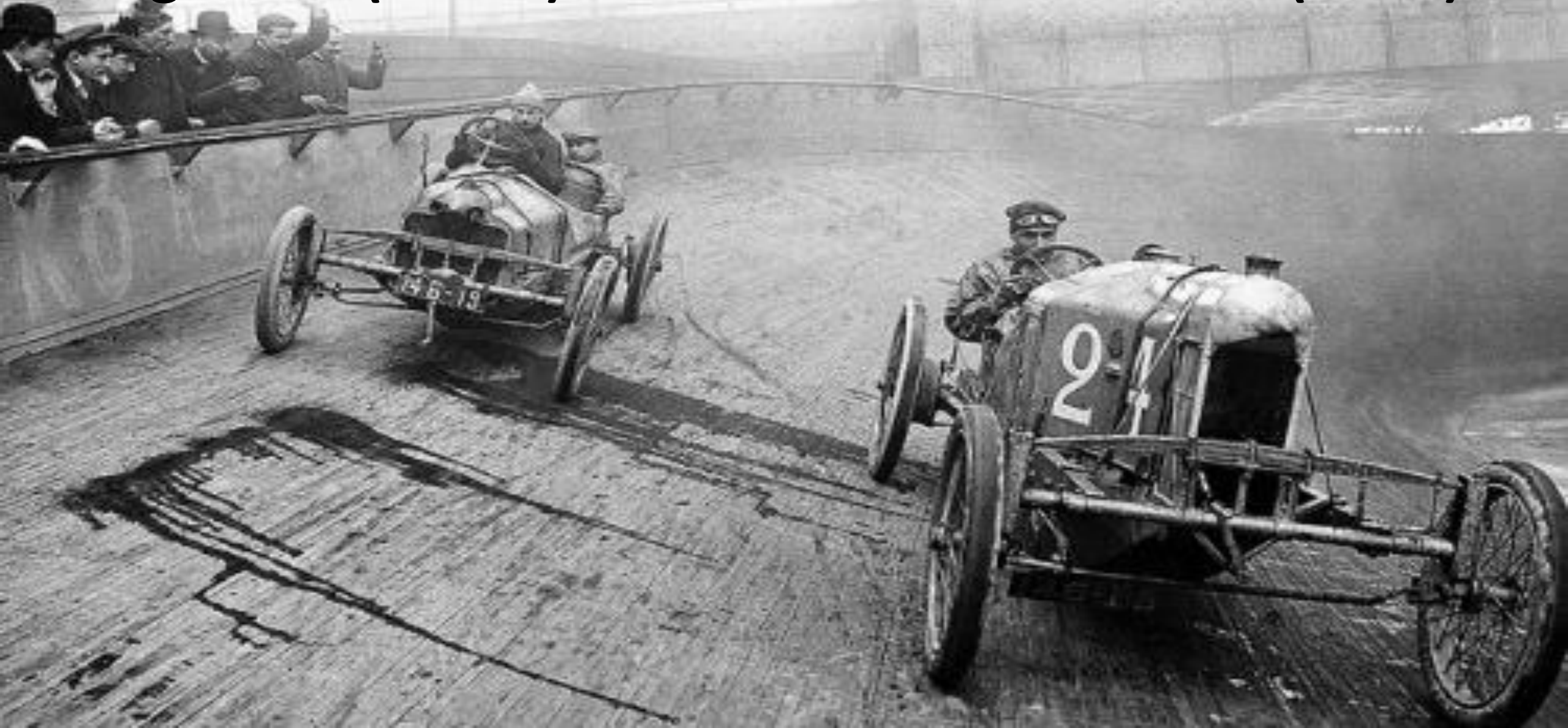
Case studies from Finland and World

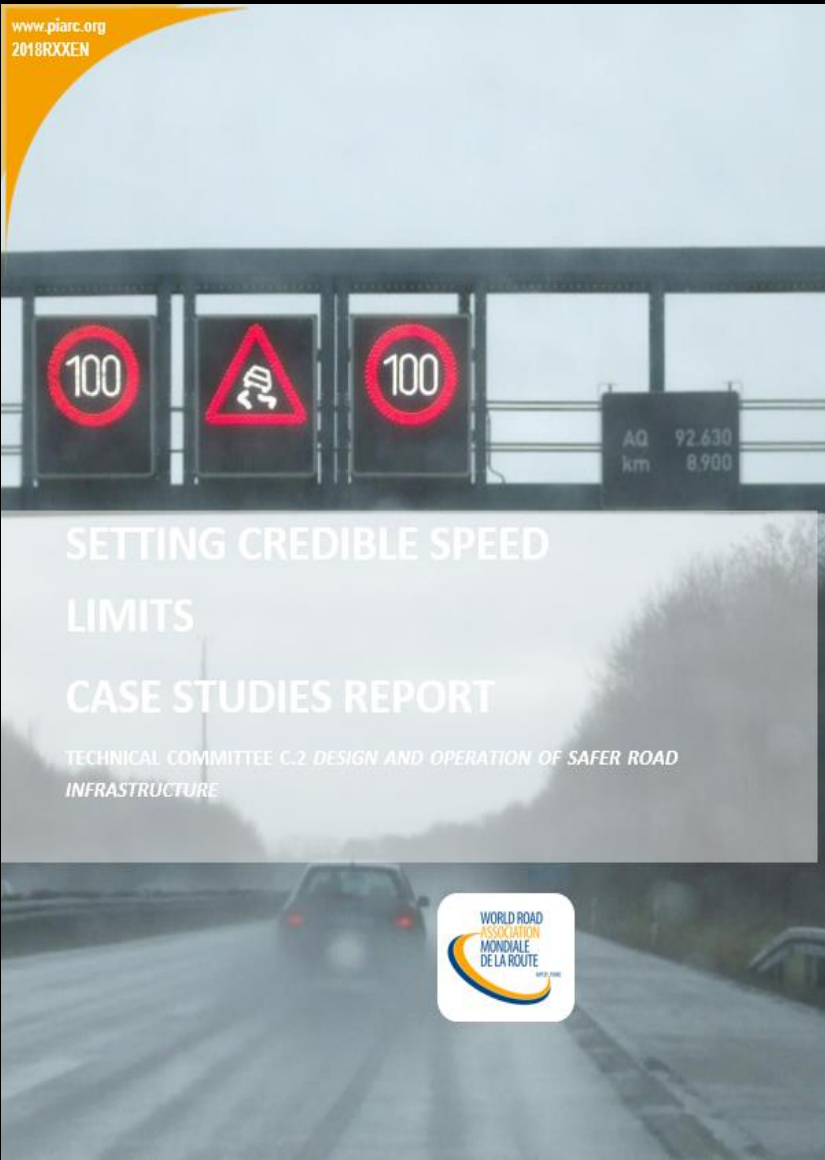
Jaakko klang

World Road Association (WRA)

**TECHNICAL COMMITTEE C.2 DESIGN AND OPERATION OF SAFER
ROAD INFRASTRUCTURE**

Permanent International Association of Road Congresses (PIARC) = World Road Association (WRA)





This report is available:
<http://www.piarc.org>

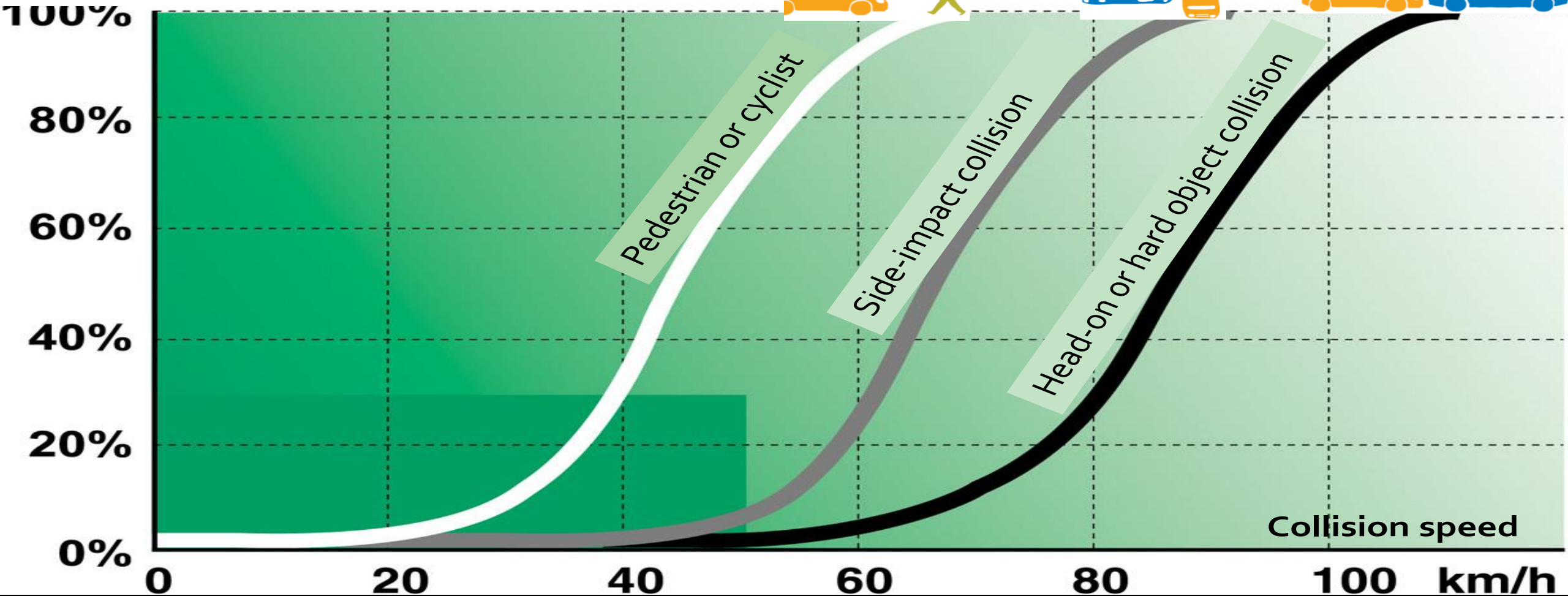
SETTING CREDIBLE SPEED LIMITS CASE STUDIES REPORT; TECHNICAL COMMITTEE C.2 DESIGN AND OPERATION OF SAFER ROAD INFRASTRUCTURE

Thanks to Working Group C2.2-3 members:

- Carlos Almeida Roque (Portugal)
- Catherine Lembree (Belgium)
- Chengcheng Tang (China)
- Domenichini Lorenzo (Italy)
- Gerhard Schuwerk (Switzerland)
- Jaakko Klang (Finland)
- Jessica Franklin (Australia)
- John Barrell (United Kingdom)
- Lise Fournier (Canada)
- Lucy Wickham (United Kingdom)
- Maria Atzemi (Greece)
- Marion Doerfel (Switzerland)
- Mathias Warnhjelm (Sweden)
- Raducu Dinu (Canada)
- Uros Brumec (Slovenia)

Human endurance

Probability of death



HISTORY AND BACKGROUND



What is a credible speed limit?



A large, brown leather boot with a white sole is shown from a high angle, dominating the upper half of the frame. Below the boot, a small figure of an elderly person with white hair, wearing a light-colored shirt and dark pants, is walking with a cane. The scene is set on a dark, textured surface, possibly a road or pavement. The overall tone is somber and cautionary.

It Won't Kill You To Slow Down

There are a lot of misconceptions about the role that speed plays in crashes. Protect yourself and your loved ones by getting the facts.



30



40



60



80



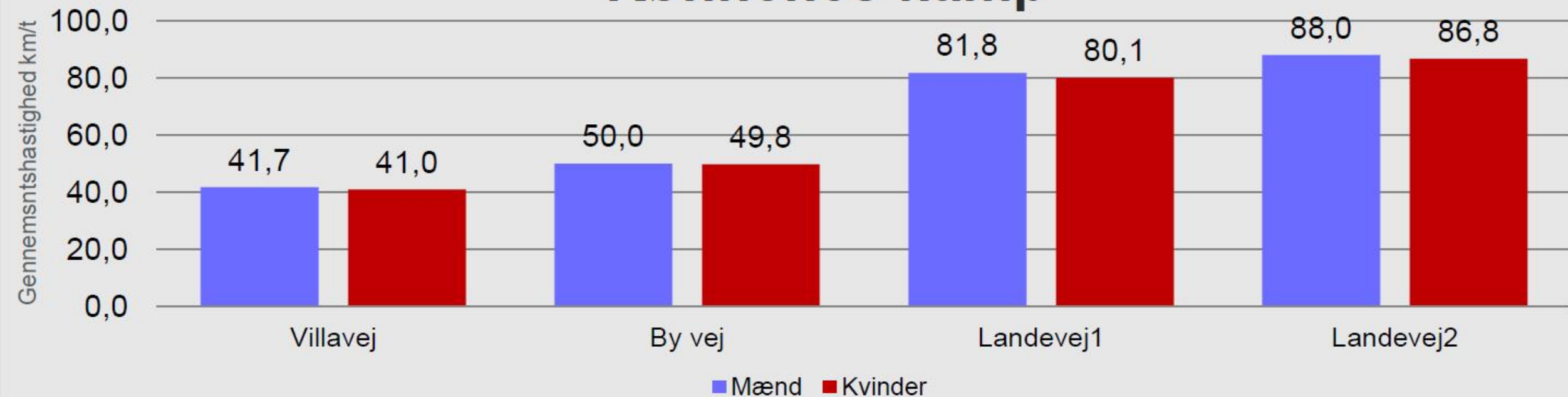
100



120

Which characteristics of road and environment influence credibility? (1/2)

Kønnenes kamp



16/05 2013



Morten Klintø og Søren Troels Berg



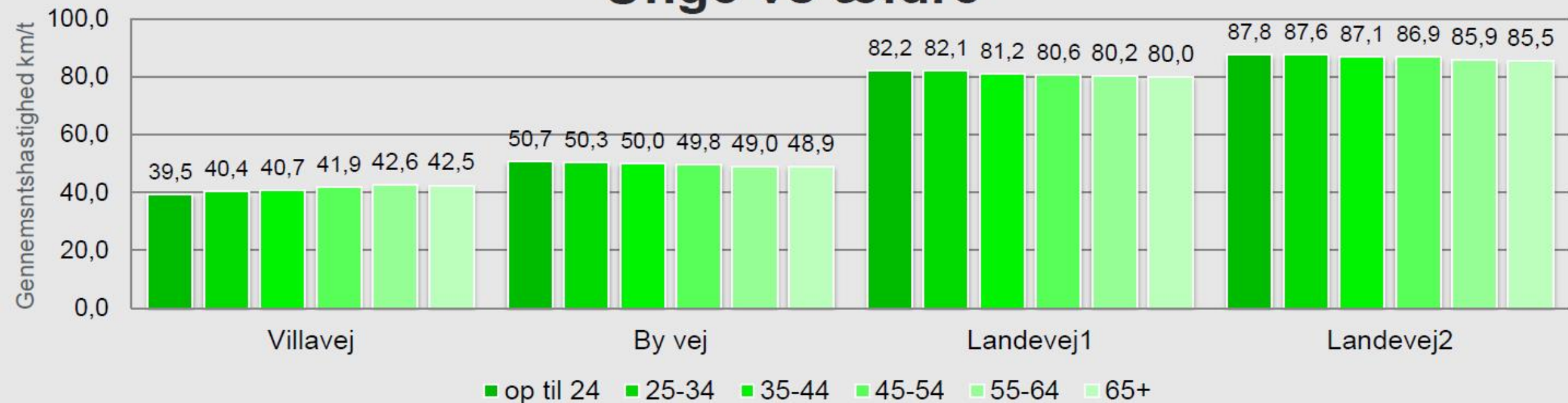


- the road width
- the presence or absence of a bend
- the view ahead
- the view to the right
- the complexity of the situation
- the presence or absence of buildings
- the presence or absence of trees on the right hand side



Are there differences between drivers?(1/2)

Unge vs ældre



16/05 2013



Morten Klintø og Søren Troels Berg





What to do if a speed limit is not credible? (1/2)



Changing the Character of Roads within Silver Zones to lower speed limits

Country

Singapore

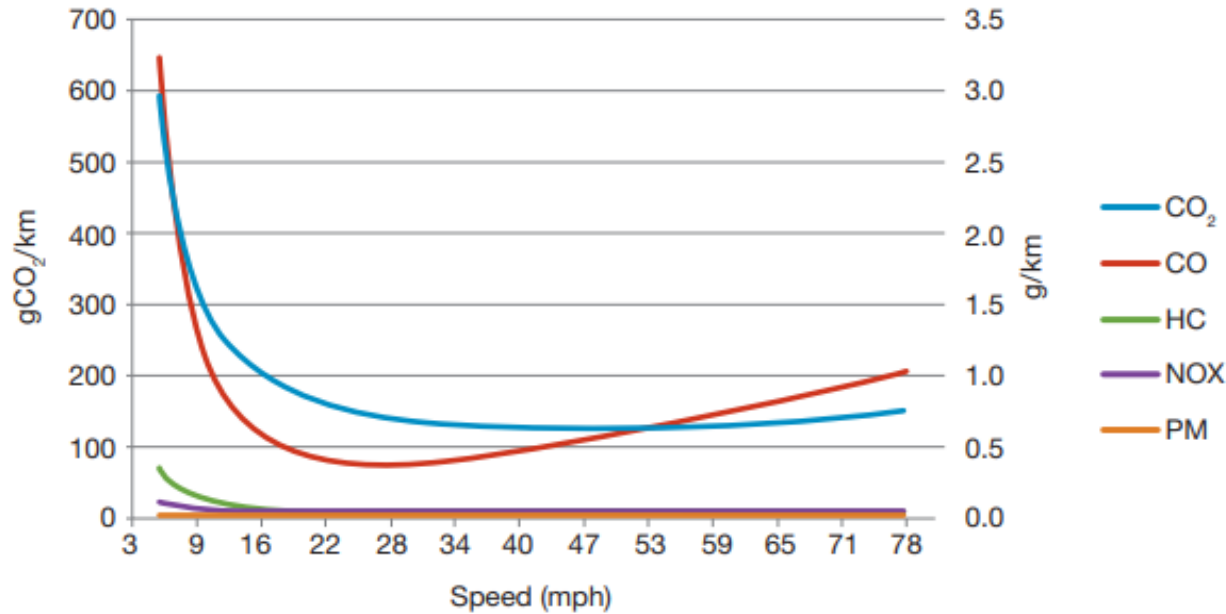
Implementation Organization

Land Transport Authority

Subject

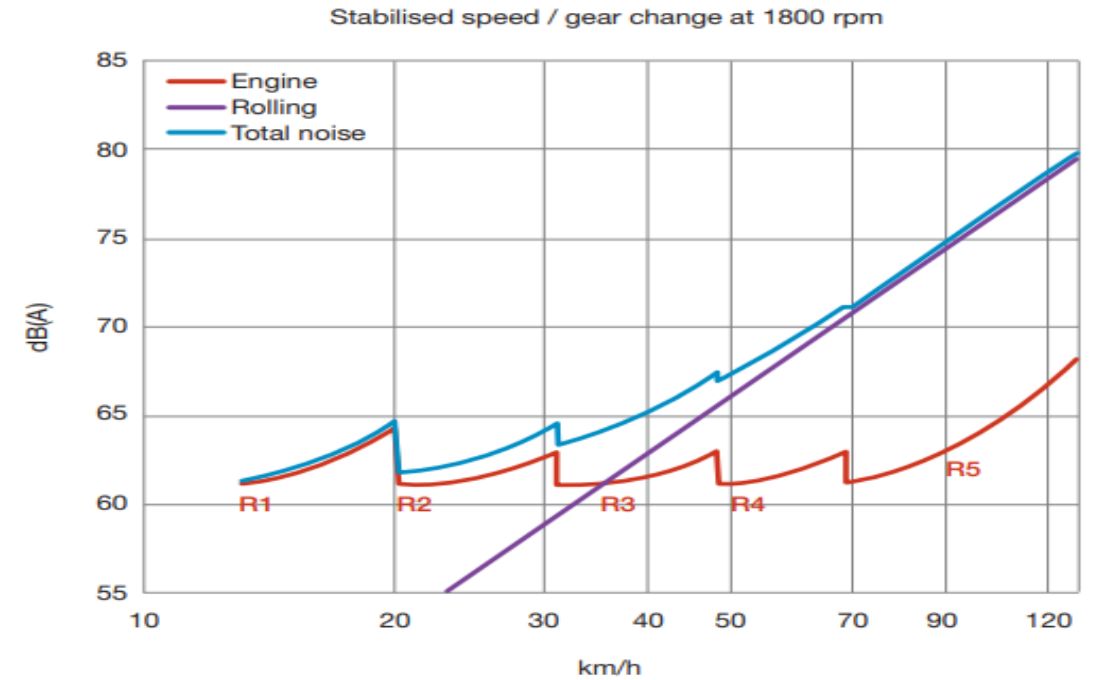
Silver Zone aims to change the character of the street such that traffic movement is slowed down significantly to below 40km/hr ...

Figure 1: Pollutant emissions as a function of speed



Source: DfT (2009)

Figure 8: Engine noise and rolling noise as a function of speed



Source: INRETS (2005)

In these cases it is advisable to explicitly communicate the reason for the low limit to the road user, as is done in e.g. Germany ('Umweltschutz') and France ('Pollution'). It goes without saying that the reason given should also be credible.

What practical use is there for credible speed limits? (1/4)

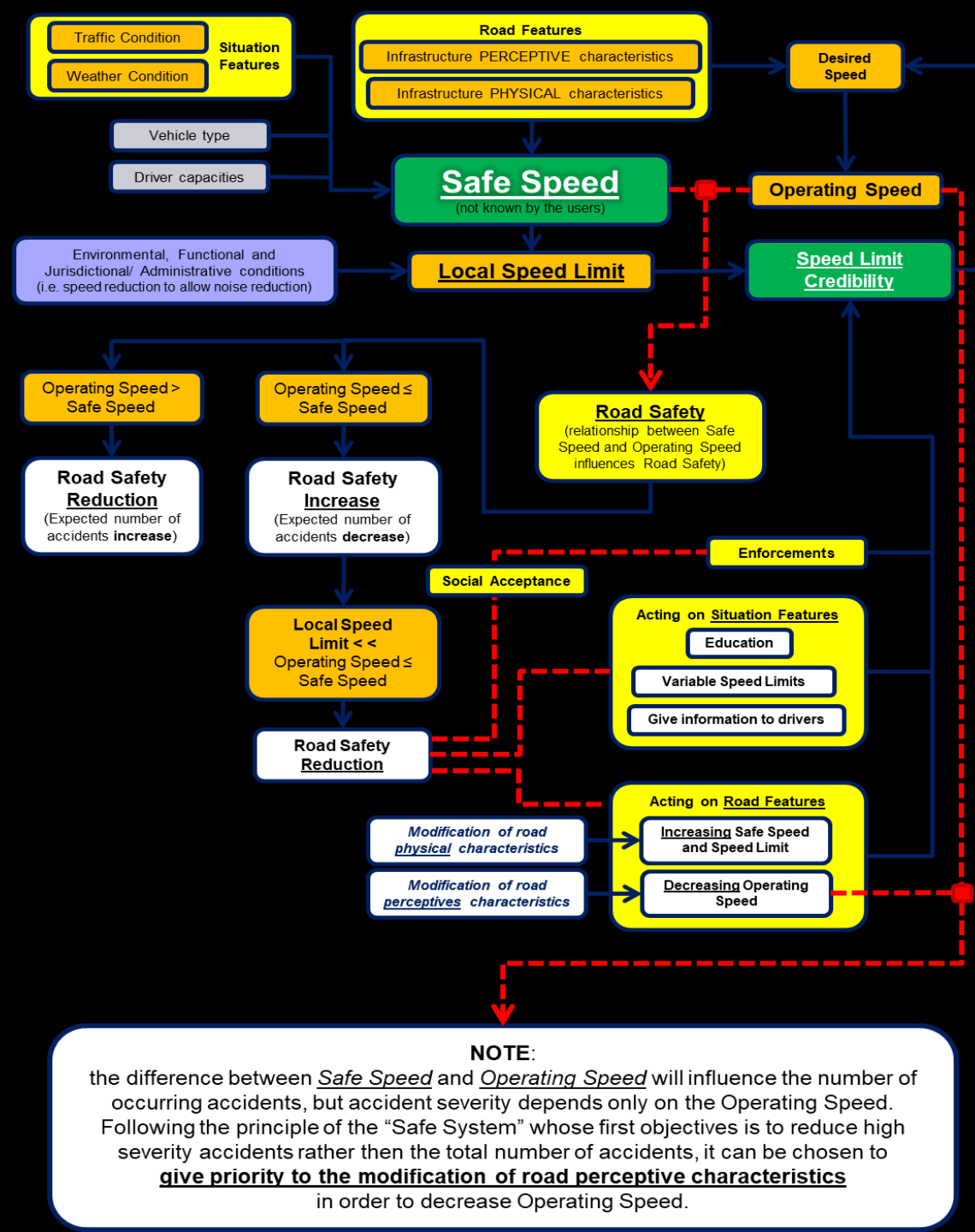


Figure 12: schematic flow chart on causes and consequences of 'safe speed' and credible speed limits



Features of road and road environment	Accelerators	Decelerators
PRIMARY		
1. Tangents?	Long	Short
2. Physical speed limiters?	Not present	Yes (many bends or intersections)
SECONDARY		
3. Openness of the situation	Open, clear road environment	Closed, inconveniently arranged road environment
4. Road width	Wide	Narrow
5. Road surface	Smooth	Rough



Open road environment strengthens the long sections accelerator.



A closed road environment thus strengthens the short sections decelerator.



Speed control of automobiles in streets by setting humps and narrowing

Country

Japan

Implementation Organization:

Road administrator

Roles and responsibilities in setting speed limits



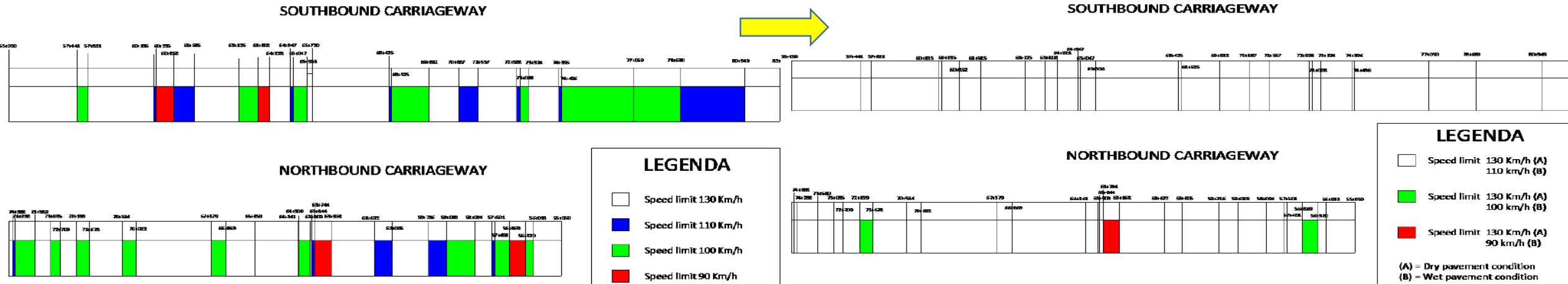
Winter and dark time season' speed limits, Finland

1. 36 accidents leading to bodily injury and 8 deaths are avoided every winter
2. the risk of the most severe safety issue – head-on collisions – is the greatest.
3. Road users support the concept of changing speed limits according season and lower limits are better accepted during the winter months.



Conclusions (1/3)

Setting more credible and uniform speed limits
Country: Italy
Organization: ANAS SpA – Motorway A2 ‘del Mediterraneo’
Subject: ... A2 motorway homogenize the posted speed limits, making them more credible for the motorway users.

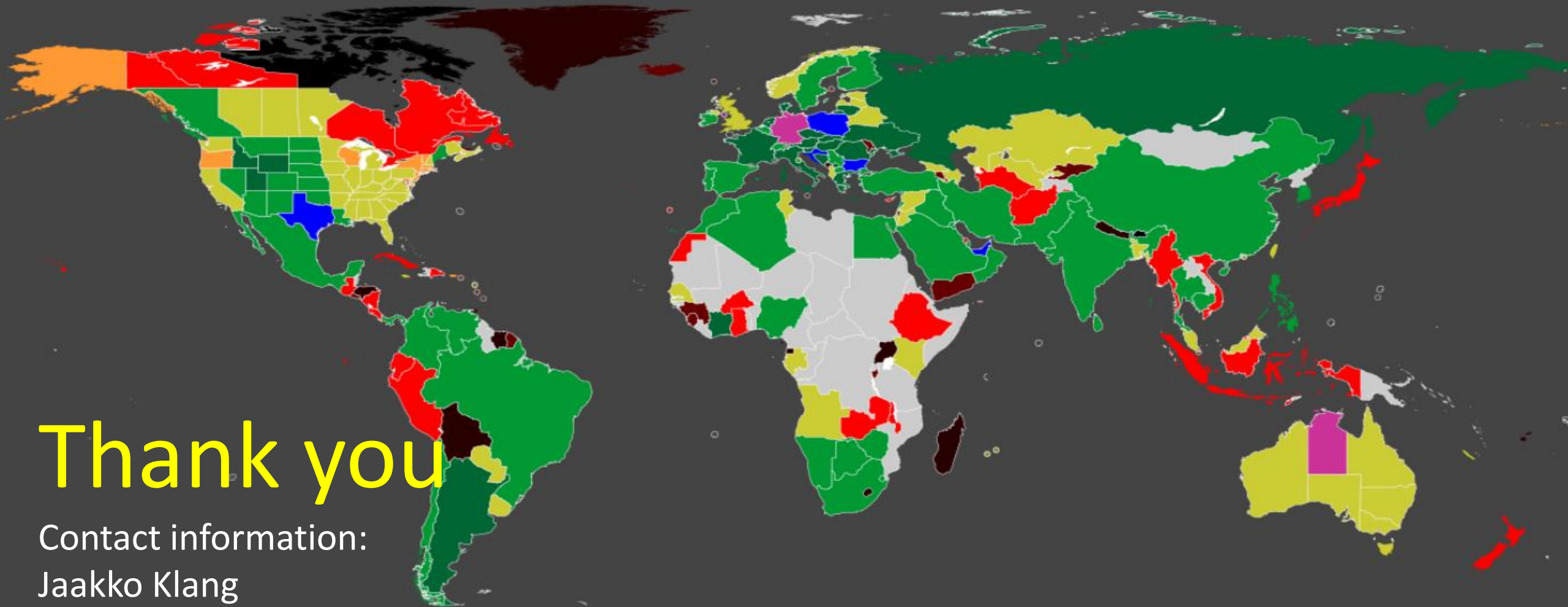


Conclusions (2/3)



Conclusions (3/3)





Thank you

Contact information:

Jaakko Klang

jaakko.klang@ely-keskus.fi

+358400824207

