Safety culture in Europe: Characteristics of successful programs

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Characteristics of effective SC programs

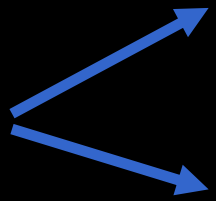
1. **System approach versus individual responsibility of road users**
2. **The role of perceived legitimacy in policy making**
3. **Strategy to increase perceived legitimacy**
4. **The need for leadership in implementation policies**
5. **The role of safety targets**

Safety culture in Europe

Two approaches

Individual responsibility of road users

System safety



Sweden

Netherlands

Most effective !!

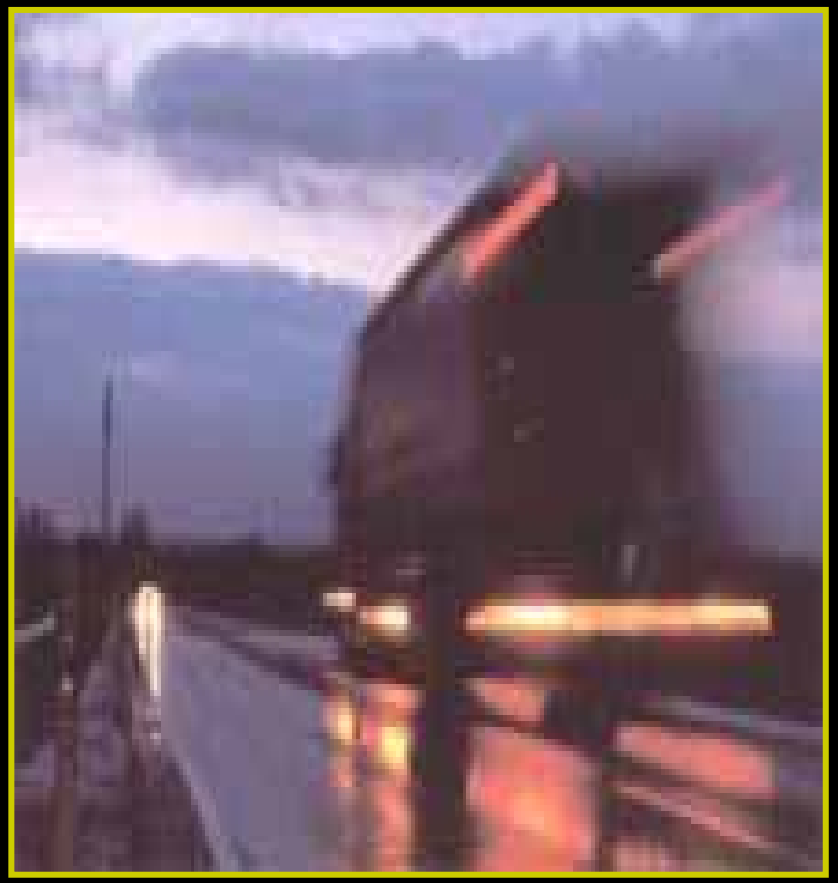
Human error and violations

- **Human unsafe acts***
  - **In 96% a contributing role**
  - **In 65% of crashes directly responsible**

***Sabey&Tailor (1980)**

- **Conclusion**
  - **Reduce unsafe acts to improve safety**

Safe systems



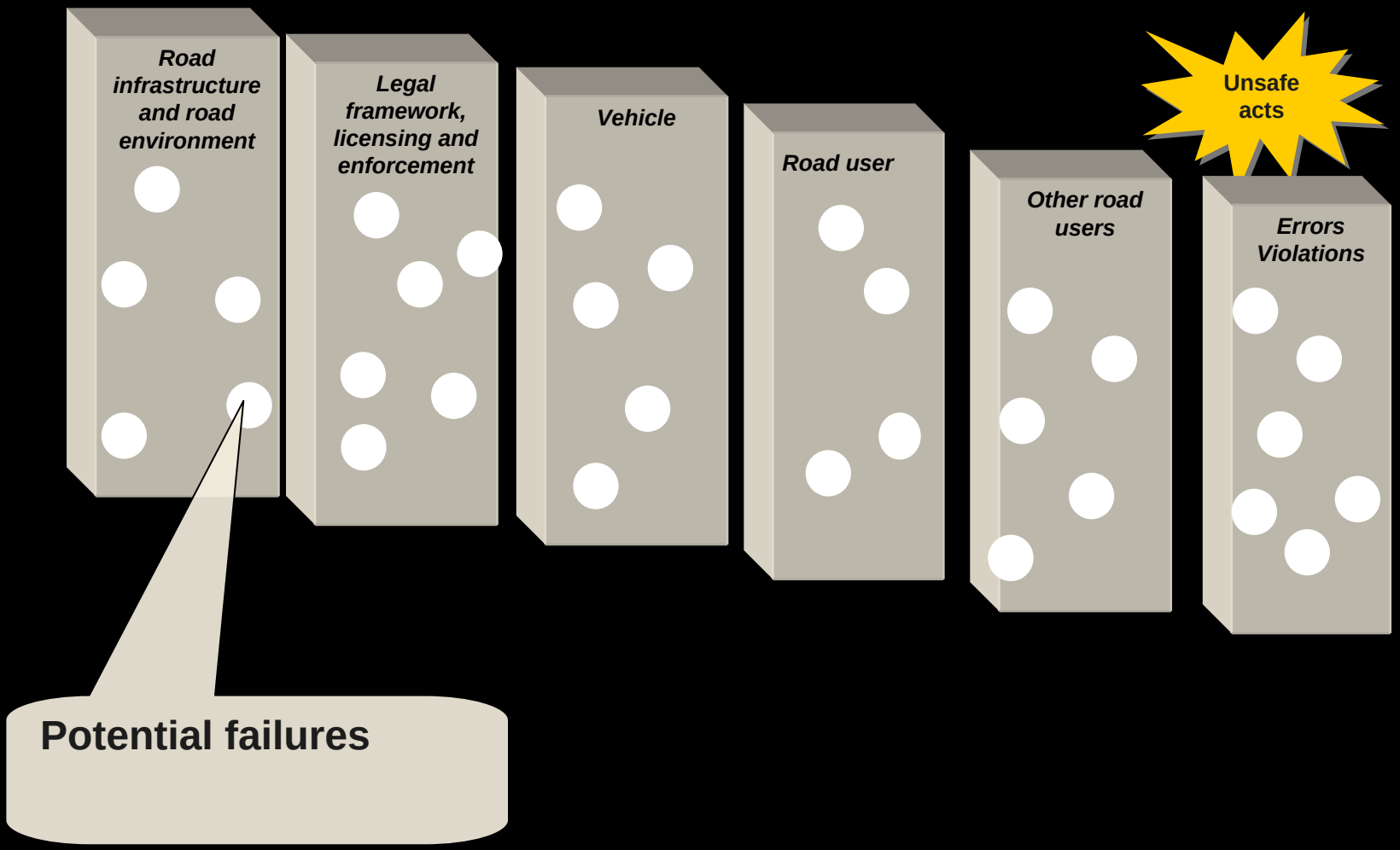
- Road traffic today is *inherently* dangerous
- Not designed with safety in mind
- Unintended unsafe acts hard to eliminate.

Down memory lane !

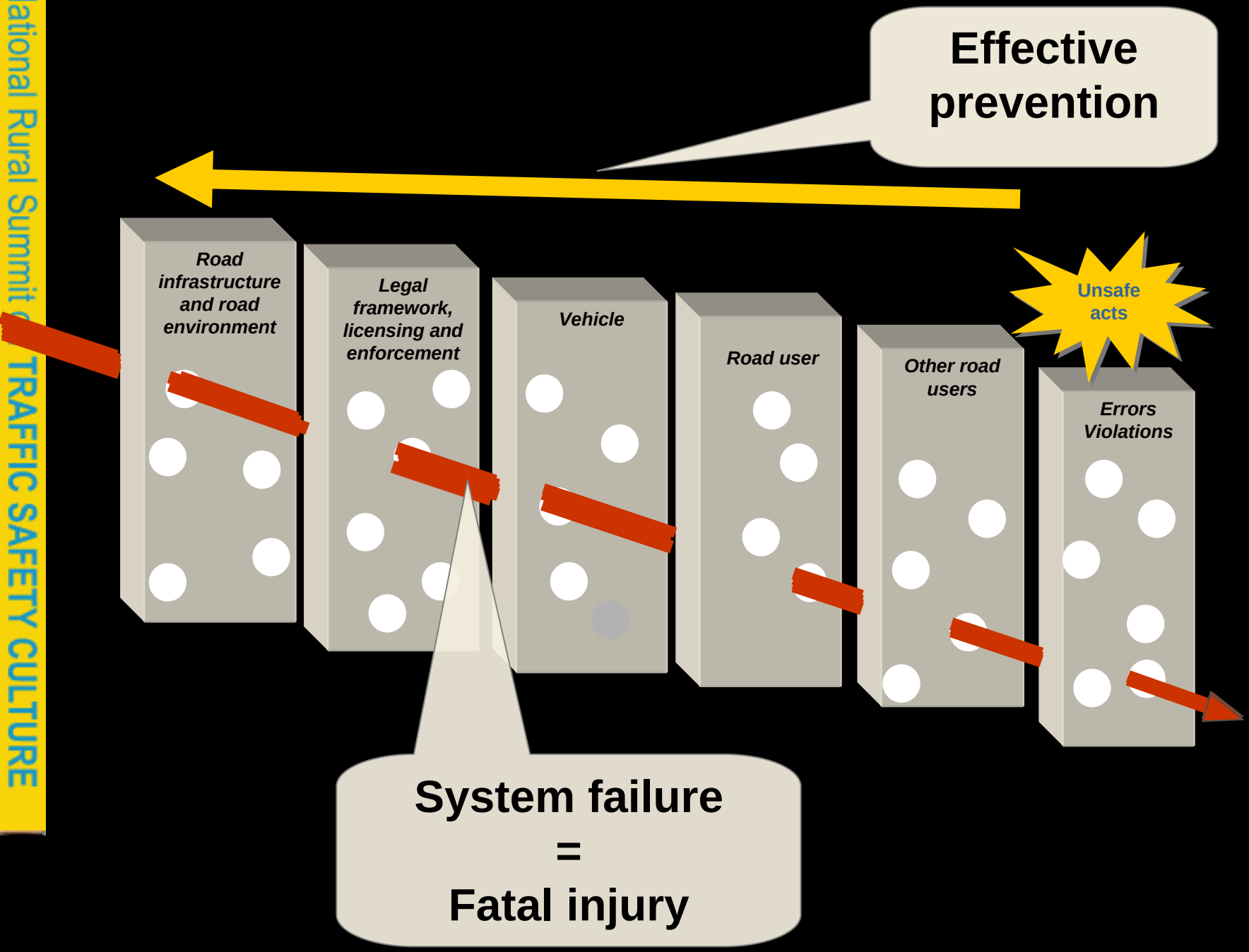
1958

2008

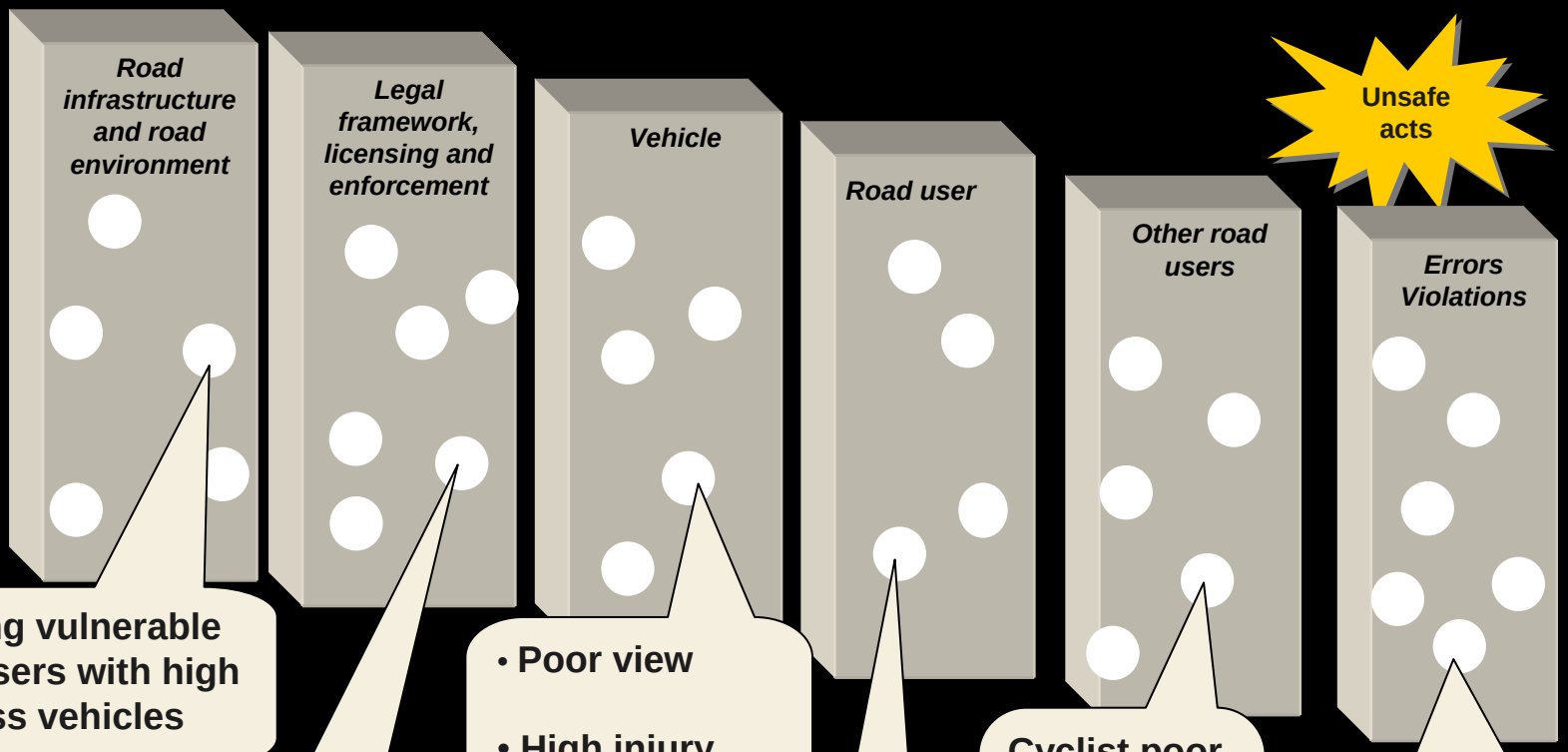
Reason, 1990 (applied by SWOV to traffic safety)



National Rural Summit on TRAFFIC SAFETY CULTURE



Piet Ruizeveld
KIPPER
RUIZEVELD
KIPPER



•Mixing vulnerable road users with high mass vehicles

•Effective mirrors not compulsory
•Priority rules not safe

• Poor view

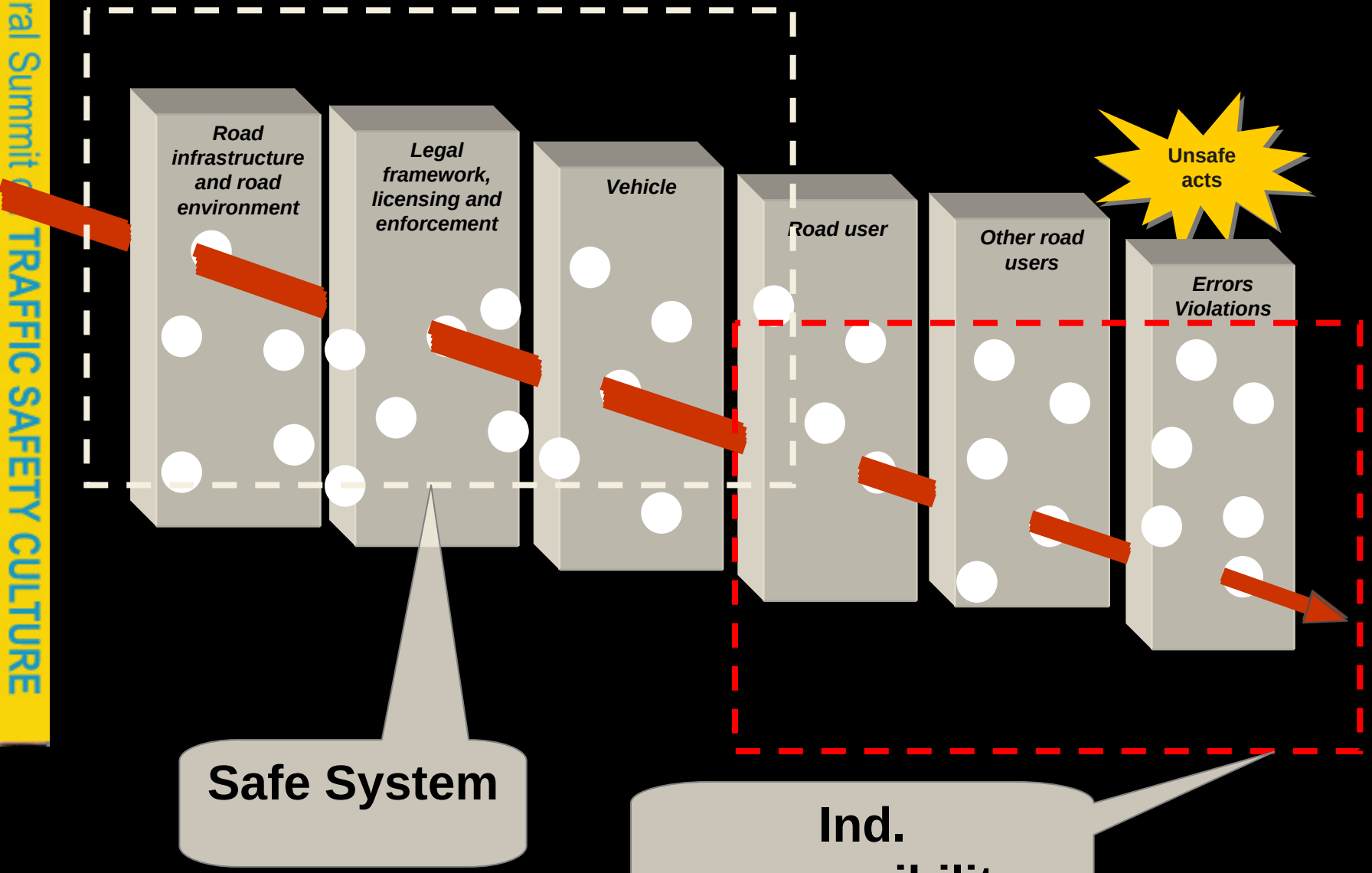
• High injury potential

• too high task demands for driver

Cyclist poor Hazard perception skills

•Cyclist is overlooked (laps)

•Cyclist is not given priority (violation/error?)


Road infrastructure and road environment
Legal framework, licensing and enforcement
Vehicle
Road user
Other road users
Errors Violations
Unsafe acts
Safe System
Ind. responsibility

Sustainable safety

- Make man the measure of all things
- Use human factors/ cognitive ergonomics/ physical tolerance to design the systems
- Bend the tool, not the person
- Make system forgiving for human

System approach: Safe speeds

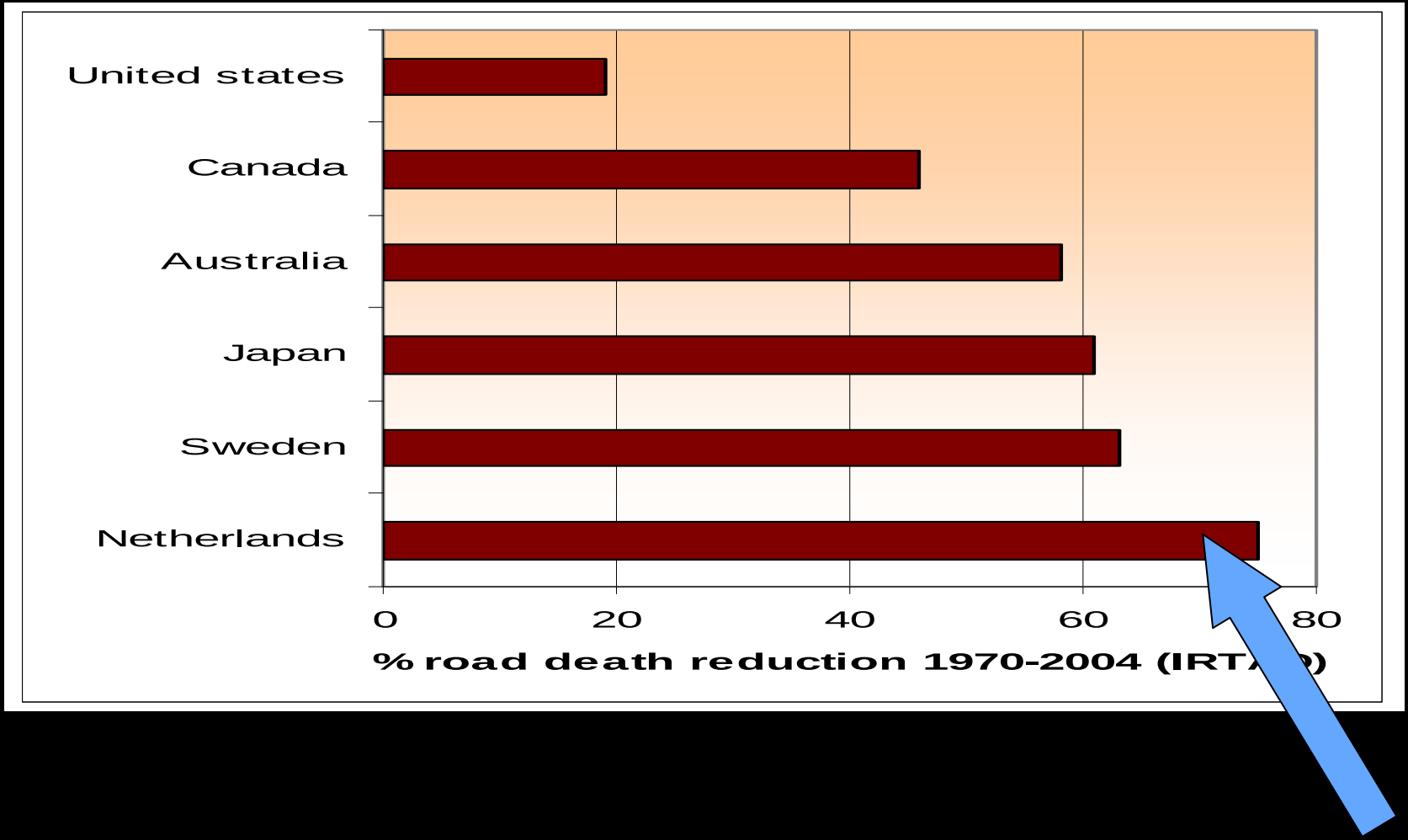
Conflict types	Safe speed (km/h)
Possible conflicts Cars unprotected road users	30
Intersections conflicts right angles between cars	50
Possible frontal conflicts cars	70
No frontal and lateral conflicts	100

(Tingfall and Haworth,1999)

Does it work in NL ?

- 50->30 zones - 22%
- 80 ->60 zones - 25%
- Intersect -> roundabouts - 63%

NL: Traffic safety gains



Implementation: Perceived legitimacy

Low risk perception if risk is:

- Voluntary
- No Clusters of fatalities (high numbers)
- Under control of the individual
- Highly familiar
- Risk is believed to be observable
- The victim is blamed (he acted stupid, he is not like me)
- Low media attention

Road users are not operating as fully informed decision makers

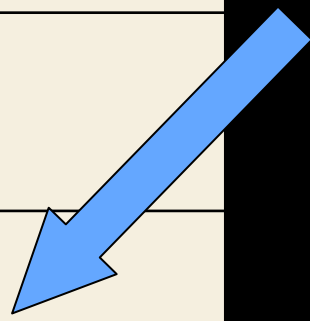
Social contract "give rights to an authority to receive or maintain social order". (Sweatman and Howard)

Road user behaviour

- Camera’s
- Alcohol lock

Perceived legitimacy

Very in favour	USA Culture safety index AAA 2008	NL SARTRE 3,2004	Sweden SARTRE 3,2004
Red light cams	56%	43%	25%
Speed cams	54%	29%	20%
Alcohol lock	31%	23%	64%



How to gain support: Graz (Austria)

- 1992: 75% of all roads 30 zones
- Big opposition (64%)
- 2 year successful trial
- Now majority support

Leadership: France

Speech of the French President

on 14 July 2002

The strongest political will Expressed at the highest level

- high enforcement levels
- automatic speed cameras

Development 2002 - 2003

- fatalities -20%
- Injuries -20%

Success of outcome targets

- Countries with targets perform better
- Ambitious targets work better than non-ambitious ones
- Increases political will and stakeholder accountability
- Leads to closer management of strategies and programmes,
- Leads to better use of public resource
- Increases motivation of stakeholders

Source: www.erso.eu

Characteristics of effective programs

- ***An evidence based vision*** **on avoidable accidents is a prerequisite**
- **Safety ought not to dependent on "safe" choices of individuals**
- ***Public Risk assessment*** **is inaccurate**
- ***Perceived legitimacy*** **should not dominate policy**
- **Implementation needs *leadership***
- ***Perceived legitimacy*** **: run successful pilots**
- ***Ambitious Targets*** **improve safety performance**