

Engaging Stakeholders towards Road Safety.
Ljubljana, 7th November 2013

Behaviour - Speed Management - Vulnerable Road Users (VRU)

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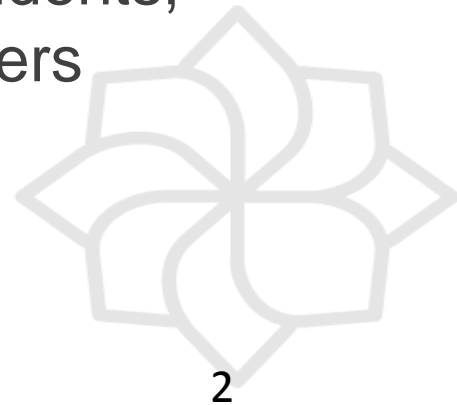
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Why focus on speed?

- Excessive or inappropriate speed contributes to about one third of all fatal accidents and is an aggravating factor in all accidents
- The level of exhaust emissions, fuel consumption and noise increase with speed
- Speed effects the quality of life of urban residents, especially the safe mobility of vulnerable users

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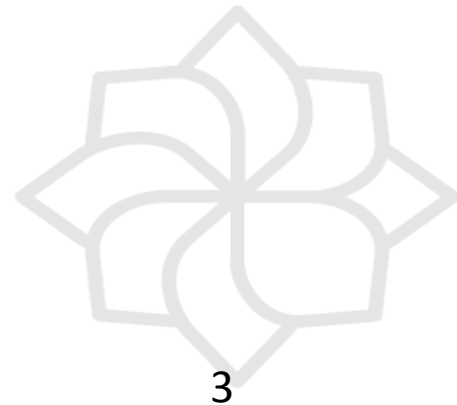


Why focus on speed?

Speed influences the number and the severity of crashes:

- Higher speed = higher likelihood of crash
- Higher speed = more serious injuries

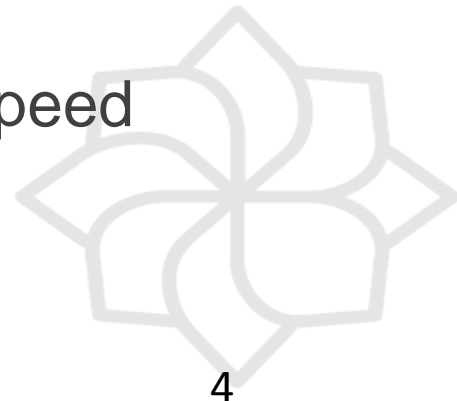
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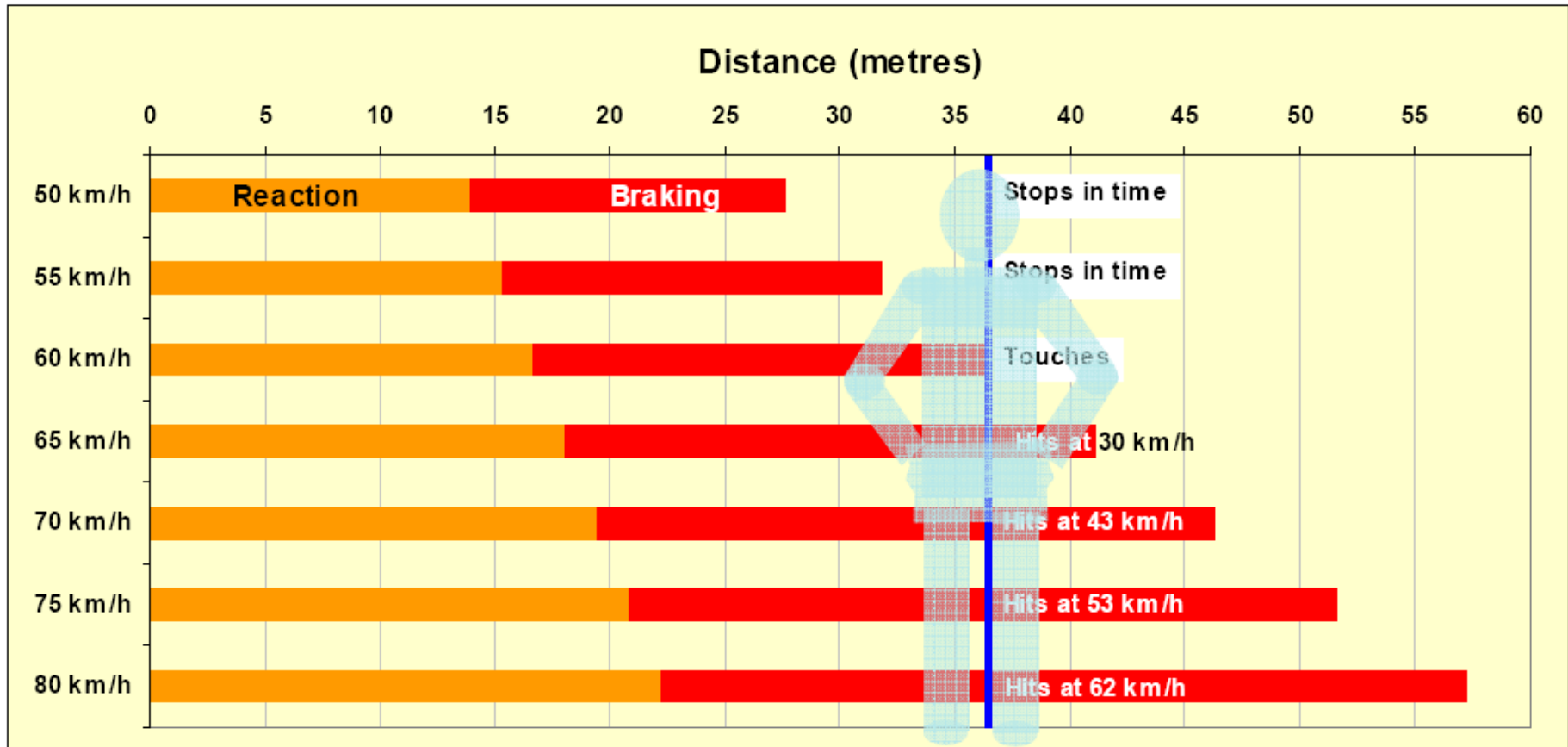
Why focus on speed?

- Longer distance travelled during driver perception / reaction time
- Longer distance travelled during emergency braking
- Driver more likely to lose control
- Less time to take preventive action
- Driver errors magnified
- Other road users more likely to misjudge speed

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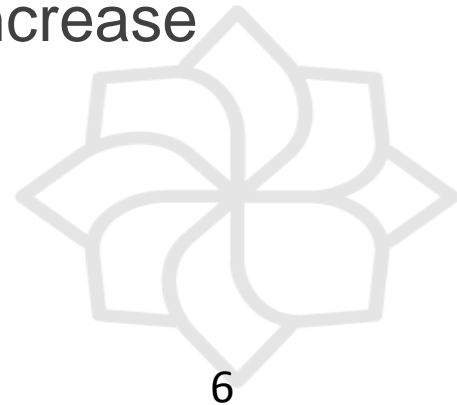
Why focus on speed?



Why focus on speed?

- Most modern cars are capable of high speeds
- Greater challenge to enforce limits
- Studies from different countries have shown:
 - Introducing new or reduced speed limit can result in a reduction of road crashes
 - Raising the speed limit can result in an increase in road crash deaths

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Why focus on speed?

Speeding encompasses:

- **Excessive speed** (driving above the speed limit)
- **Inappropriate speed** (driving too fast for the conditions, but within the limits)

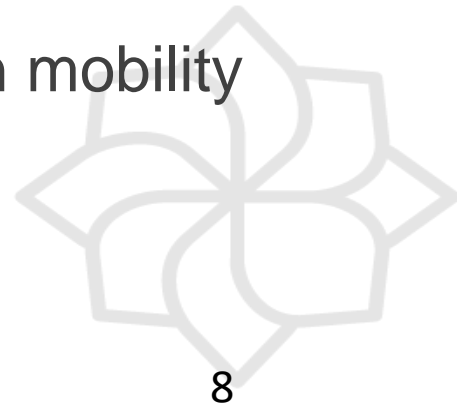
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Open Questions – Speed Management

- Which is more efficient in managing speeds: enforcement, campaigns or infrastructure interventions?
- Which are the appropriate enforcement techniques for speed management?
- How to manage road classification of existing roads and speed limits, both in urban and ex-urban environment?
- How to integrate speed management in urban mobility plans?

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Understanding the problem of VRU safety

- Walking and cycling are transport modes where relatively unprotected road users interact with traffic of high speed and mass. This makes pedestrians and cyclists vulnerable. They suffer the most severe consequences in collisions with other road users because
- Preventing collisions between fast and slow traffic is, therefore, one of the most important requirements for safe road use by pedestrians and cyclists. Other measures have to be sought in making the crash opponents less harmful to pedestrians and cyclists.

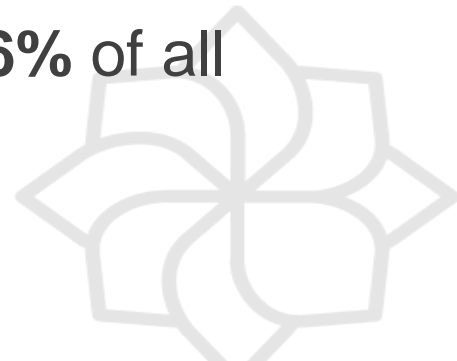
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Understanding the problem of VRU safety

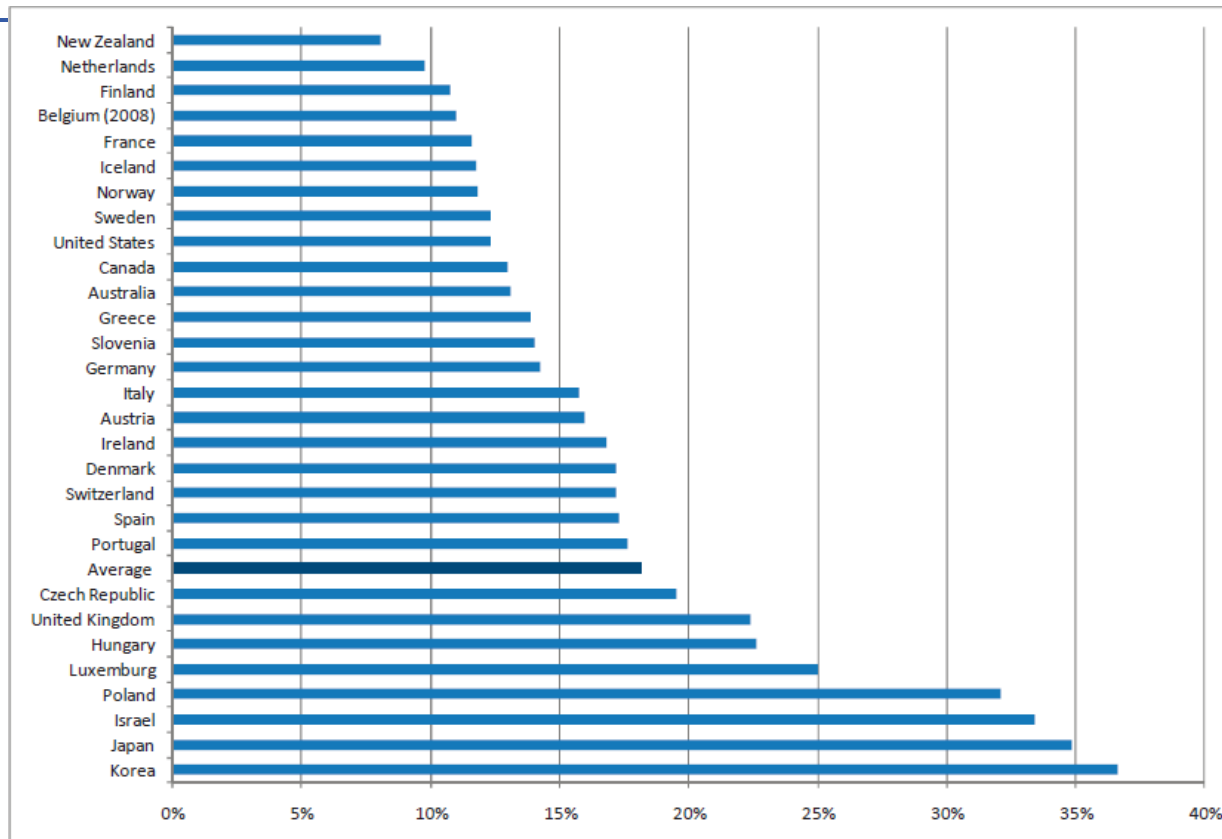
- Of all journeys, 20-40% are travelled by cycle or on foot, with the highest percentage in the Netherlands and the lowest in Finland. Trips on foot take place most frequently in Great Britain, whereas bicycle trips are most frequent in the Netherlands, Denmark and Sweden.
- Some groups of traffic participants walk or cycle more than others. These differences are also reflected in their crash involvement. Walking is particularly important for children below the age of 12 and adults aged 75 and above. The bicycle is used most frequently by adolescents (12-17 years of age)

Understanding the problem of VRU safety

- Between 2001 and 2009, some 107,700 pedestrians and cyclists were killed on EU roads, 9,250 of them in 2009 (6,900 pedestrians + 2,350 cyclists).
- Within this 9-year period, deaths among this category of road users have been decreasing at a lower rate than for vehicle occupants, respectively **34%** compared with **41%**.
- Pedestrian and cyclist accidents account for **26%** of all road fatalities!



Understanding the problem of VRU safety

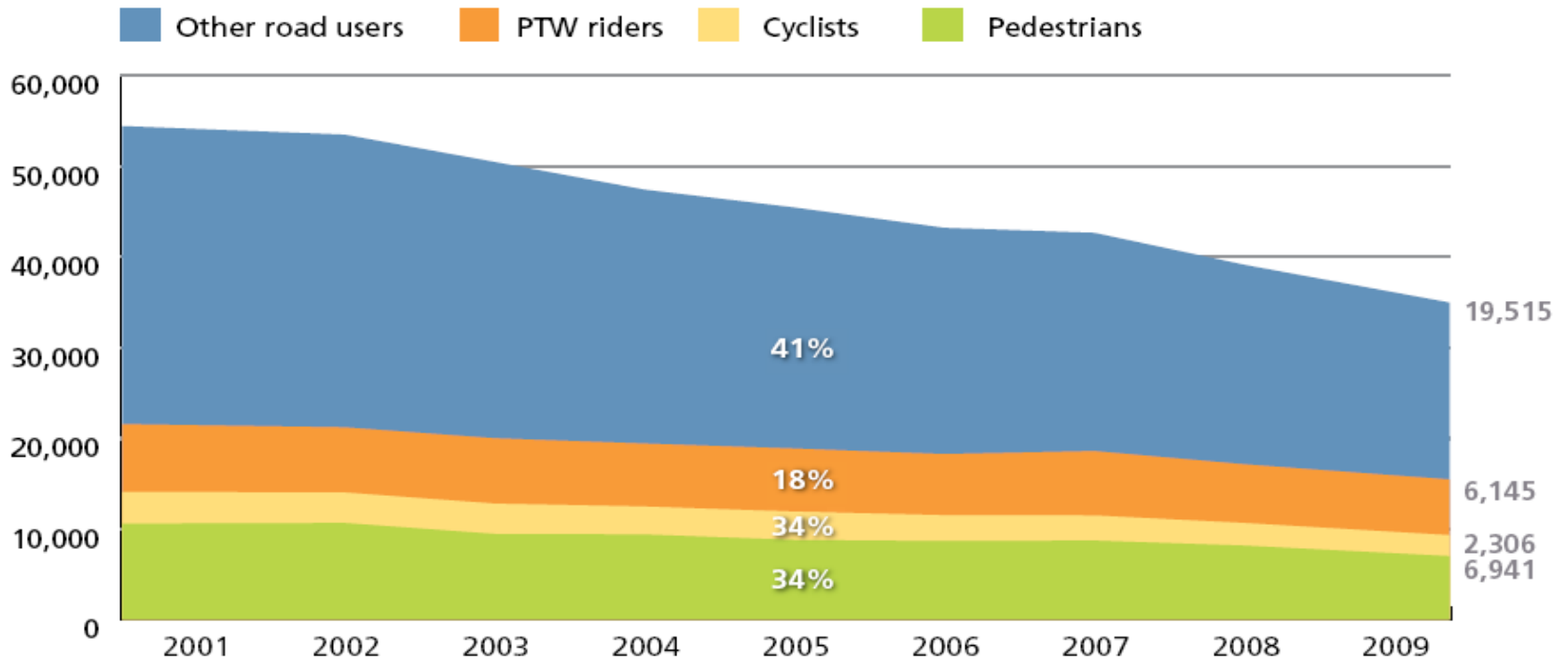


Pedestrian fatalities as a percentage of all road fatalities in 29 OECD countries

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Source: IRTAD/ITF

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Reduction in road deaths 2001- 2009 for pedestrians, cyclists, PTW and other road users in EU-27

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Source: ETSC

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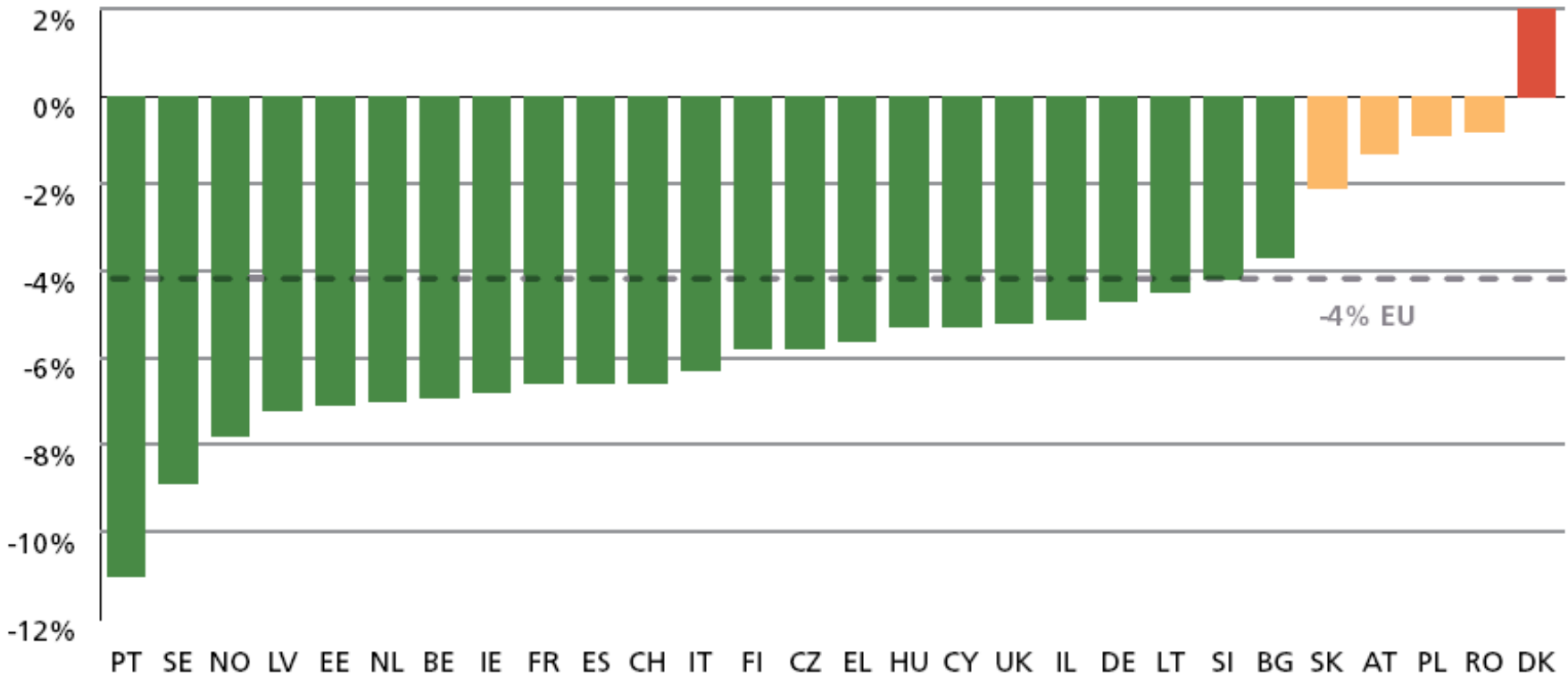


Fig. 10: Average annual percentage change in **pedestrian deaths** over the period 2001-2009.

Source: ETSC

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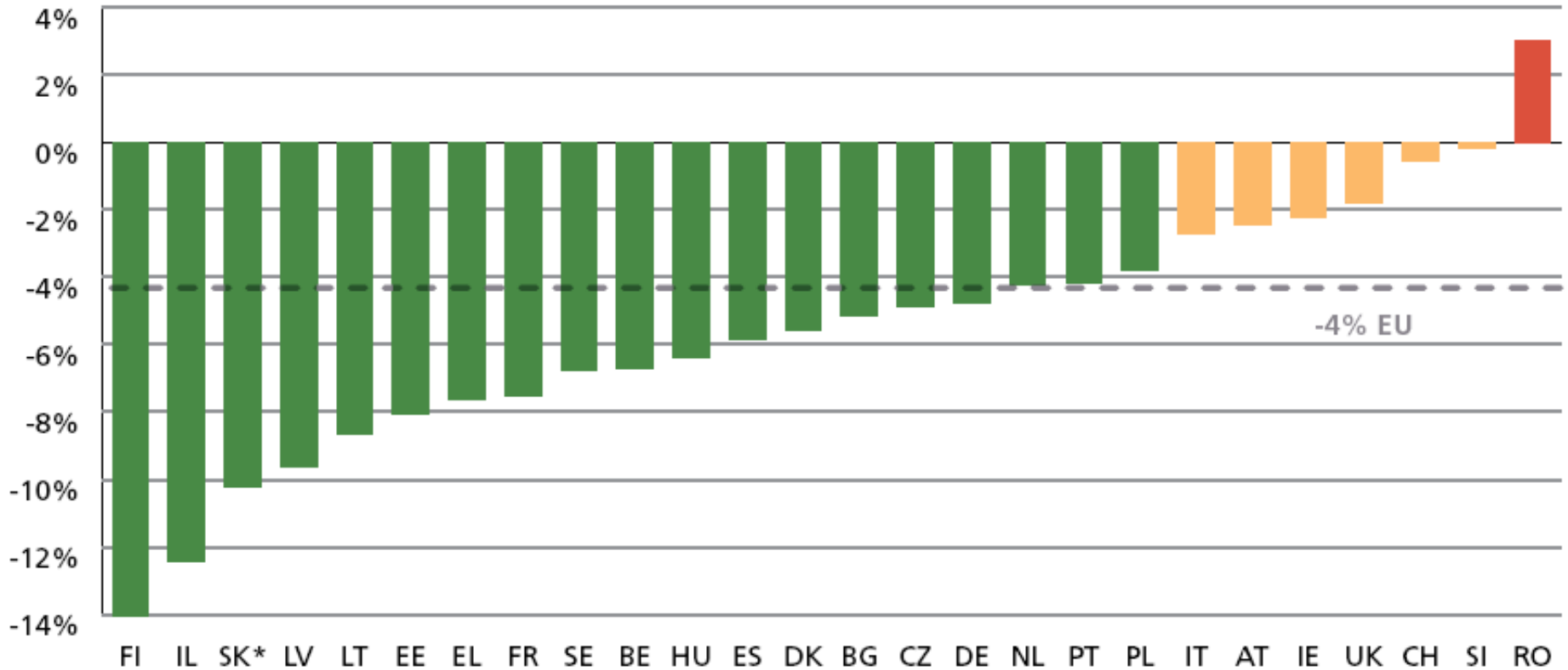


Fig. 11: Average annual percentage change in **cyclist deaths** over the period 2001-2009.

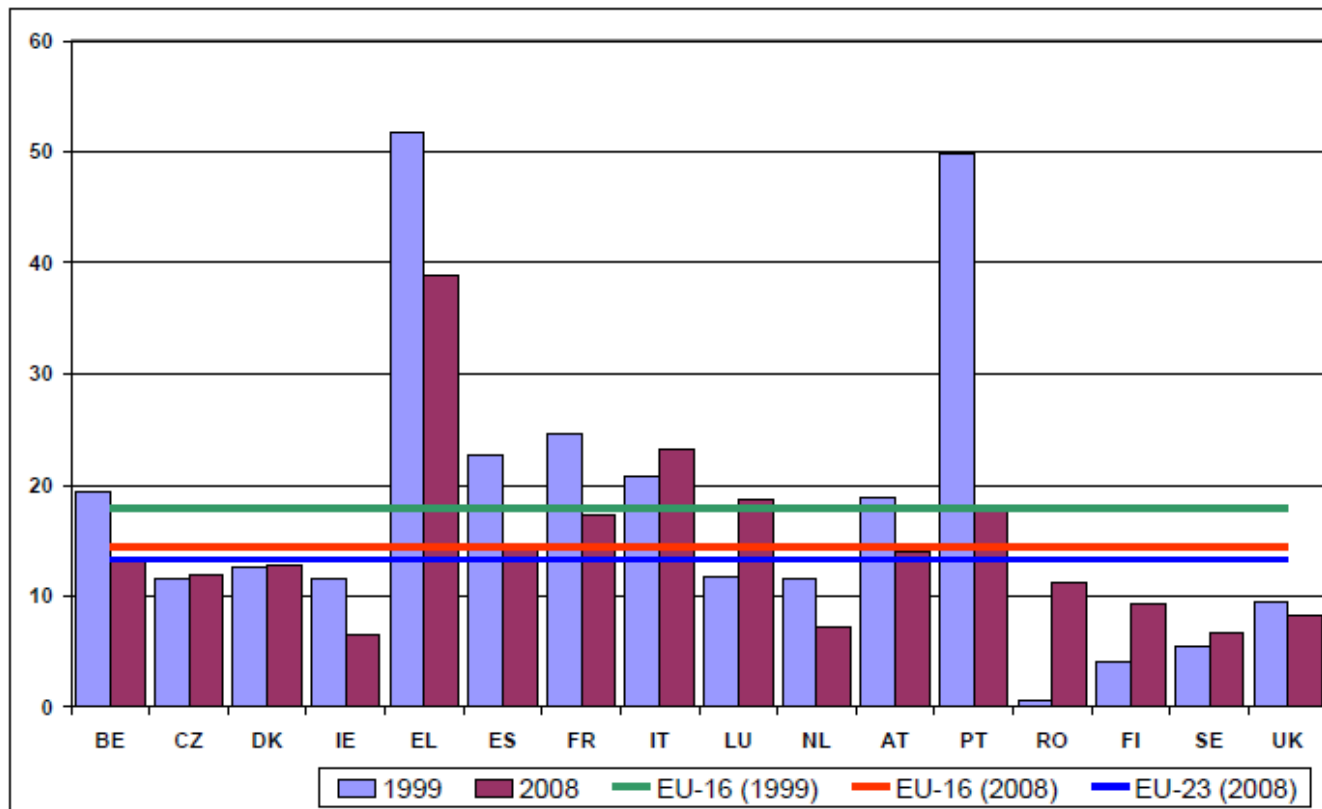
* SK 2002-2009.

CY, LU and MT are excluded from this ranking because the numbers of cyclist deaths in those countries are so small as to be subject to substantial random fluctuation.

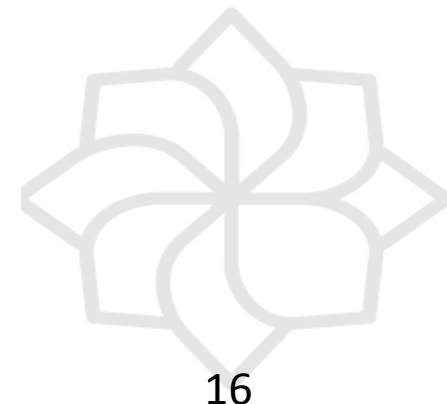
Source: ETSC

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Figure 1: Motorcycle and moped rider fatalities per million inhabitants, 1999 versus 2008



Source: CARE Database / EC
Date of query: November 2010
Source of population data: Eurostat



Open Questions – Vulnerable Road Users

- How to train and engage vulnerable road users in risk compensation techniques?
- How to design and manage junctions for the protection of vulnerable road users?
- How to integrate the protection of vulnerable road users in the urban mobility plans?
- How to cope with vulnerable road users in the complex urban design? What is the feed-back from the implementation of mixed use zones (living streets, residence zones, etc.)?

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