



National Technical University of Athens  
Road Safety Observatory

[www.nrso.ntua.gr](http://www.nrso.ntua.gr)

Monday  
**15**  
May  
at 14:00

# Workshop

in the framework of the

FOURTH UNITED NATIONS GLOBAL ROAD SAFETY  
WEEK

8-14 May 2017



Save Lives  
#SlowDown

The future of road safety research

NTUA Zografou Campus, Athens

Railways Amphitheatre of the

Department of Transportation Planning and Engineering

The European  
Road Safety Observatory  
**ERSO**

**Petros Evgenikos**

Civil - Transportation Engineer, M.Sc.  
Research Associate, PhD Candidate

Website: [www.nrso.ntua.gr/pevgenik](http://www.nrso.ntua.gr/pevgenik)  
e-mail: [pevgenik@central.ntua.gr](mailto:pevgenik@central.ntua.gr)

Together with:

Eleonora Papadimitriou, Alexandra Laiou, Katerina Folla,  
Tassos Dragomanovits, Dimos Pavlou, George Yannis

# European Road Safety Observatory



- The **ERSO** is the information system of the European Commission with harmonised specialist information on road safety practices and policy in European countries.
- The framework of ERSO was developed within the **SafetyNet project** (2004-2008), in which 22 institutes from 17 countries cooperated.
- Its content was updated and expanded within the **DaCoTA project** (2010-2012), in which 17 institutes participated.
- Current **updates of the ERSO** (2015-2018) are carried out by NTUA, KFV and ERF for the EC DG-MOVE.

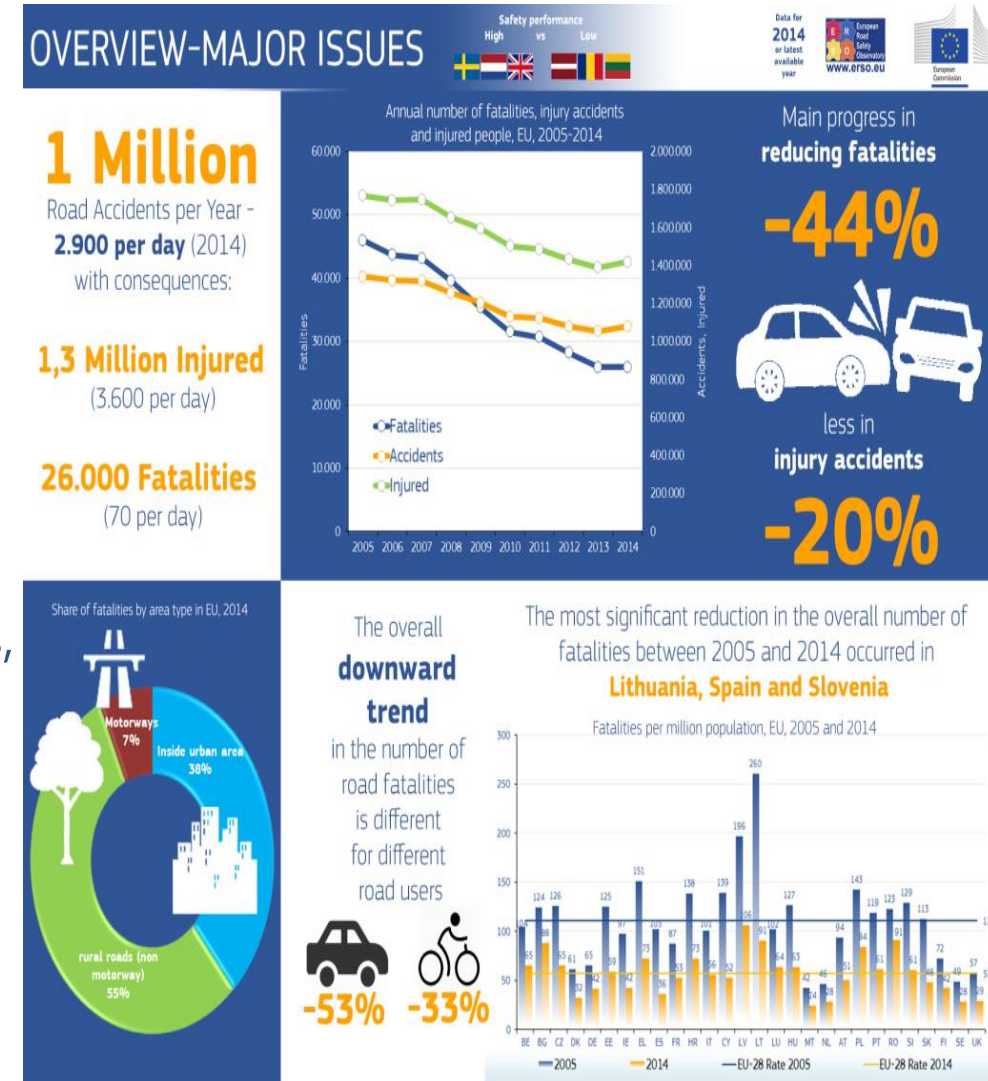




# Road Safety in the EU



- In 2010, the EU set a target of **reducing road deaths by 50% by 2020**, compared to 2010 levels, followed an earlier target set in 2001 to halve road deaths by 2010, which was almost accomplished.
- In 2016, about **25.500** people were killed and **135.000** people were seriously injured in road accidents in the EU.
- In 2016, EU road fatalities **were reduced by 2%** after two years of stagnation and **by 19% since 2010**.
- On average about **8%** of road fatalities occurred on motorways, **37%** in urban areas and **55%** on rural roads.
- Car occupants accounted for **46%**, pedestrians for **21%** and motorcyclists for **14%** of road fatalities.
- **Speeding, drink or distracted driving and non-use of safety devices** are the leading causes of death and serious injury in Europe.



# The role of the ERSO

- Data collection and analysis are essential for the **road safety management** process.
- Within the development of ERSO, **road safety related data and knowledge at European level** (28 EU and 4 EFTA countries) were gathered and made available to road safety professionals and decision makers.
- **Data** included in ERSO (macroscopic and in-depth) concern:
  - Road accidents
  - Risk exposure
  - Safety performance indicators
  - Under-reporting of accidents
  - Country characteristics
  - Social costs
  - Traffic laws and measures
  - Accident causation data
  - Accident injury data
- The **knowledge** section contains several reports on important road safety issues, as well as the road safety country profiles.



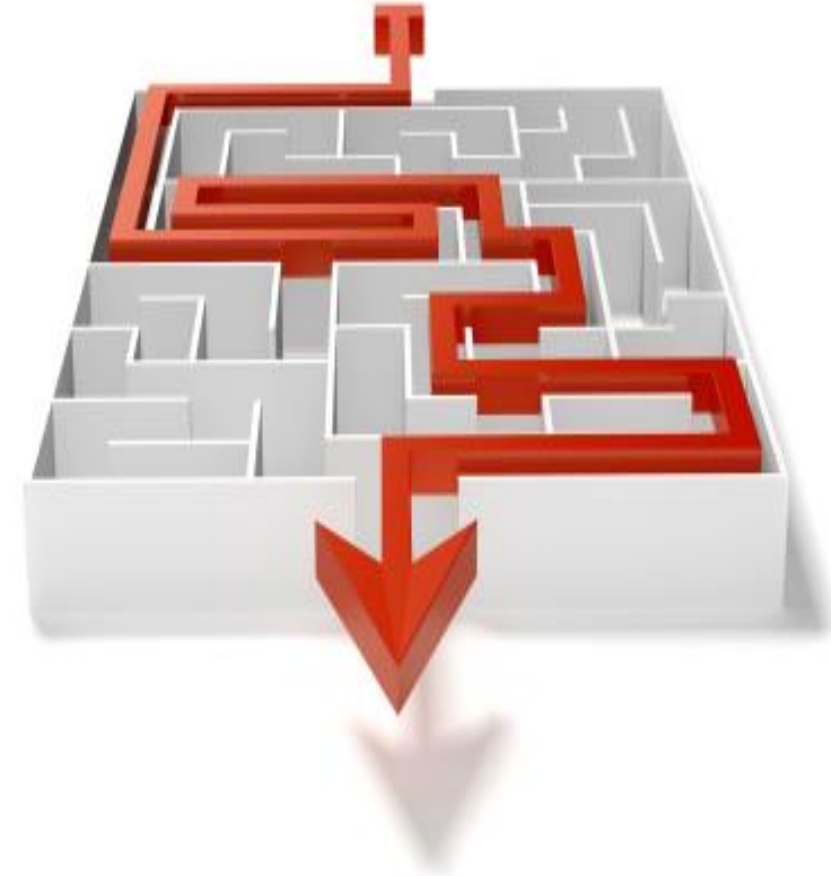


# Methodological challenges



Save Lives  
#SlowDown

- Definition of **common protocols** for data collection
- **Availability** of data
- Systematic **collection** of data and information
- **Analysing** data
- **Presentation** of the results responding to user's needs
- **Continuity** in making all results publicly available



# ERSO Data and Information



- **The Annual Accident Reports (AAR)**

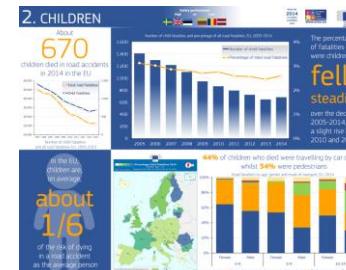
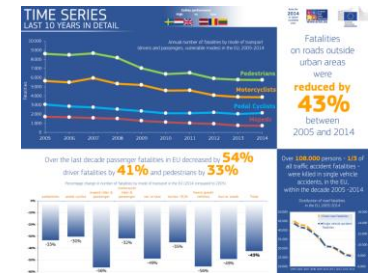
- Overview – major issues
- Time series – last 10 years in detail
- Fatalities of last year (People involved, Modes of transport, Accident characteristics, Periods of time, Type of area/road, Weather conditions etc.)

- **17 Traffic Safety Basic Facts (BFS)**

- |                      |                        |                             |
|----------------------|------------------------|-----------------------------|
| - Main Figures       | - Cyclists             | - Urban Areas               |
| - Children           | - Motorcycles & Mopeds | - Roads outside urban areas |
| - Young people       | - Car Occupants        | - Seasonality               |
| - Youngsters         | - HGVs & Buses         | - Single Vehicle Accidents  |
| - Elderly (aged >64) | - Motorways            | - Gender                    |
| - Pedestrians        | - Junctions            |                             |

- **Road Safety Country Overviews**

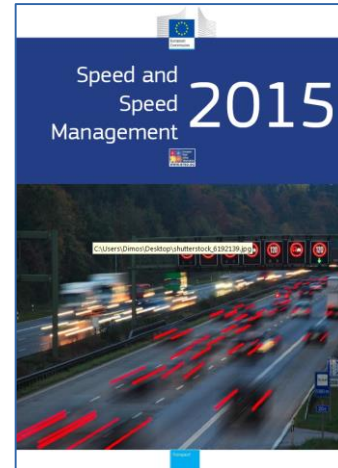
- Structure and Culture
- Programmes and Measures
- Road Safety Performance Indicators
- Road Safety Outcomes
- Social Cost
- Synthesis



- **22 Traffic Safety Syntheses**

- Pedestrians and Cyclists
- Work-related Road Safety
- Speed & Speed Management
- Cell Phone Use while Driving
- Fatigue
- Power Two Wheelers
- Novice Drivers
- Older Drivers
- Serious injuries
- Driver Distraction
- Children
- Alcohol
- eSafety
- Post Impact Care
- Roads
- Speed Enforcement
- Vehicle Safety
- Cost-Benefit Analysis
- Integration of road safety in other policy areas
- Quantitative Targets
- Road Safety Management
- Safety Ratings

- **64 Infographics** based on the above reports are available





# Speed and Speed Management



Save Lives  
#SlowDown

## SPEED AND SPEED MANAGEMENT

**Major contributory factor**  
in around  
**10%**  
of all accidents  
and in around  
**30%**  
of the fatal  
accidents

**Speed affects travel time**  
Higher speeds result in a **reduction of the travel time**. However, they lead to more accidents which are an important cause of congestion.

On short journeys, the perceived gain of time is much larger than the objective gain of time, which is in fact only marginal

Extra time taken for a **10 km journey** when speed is reduced by **5 km/h**

Original speed (km/h)	50	70	90	110	130
Extra time taken (minutes)	<b>1,33</b>	<b>0,66</b>	<b>0,39</b>	<b>0,26</b>	<b>0,18</b>



As an average,  
**1 km/h**  
increase in speed  
results in  
**3%**  
increase in accidents.  
However,  
**the larger**  
the increase in speed,  
**the steeper**  
the increase in accident risk

**Speeding:** a common violation

Typically  
**40-60%**  
of the drivers **exceed the limit**,  
and around  
**10-20%**  
exceed the speed limit  
by **more than 10 km/h**

**New technologies new opportunities**

- Intelligent Speed Adaptation (ISA)
- Dynamic speed limits





# Speed Enforcement



Save Lives  
#SlowDown

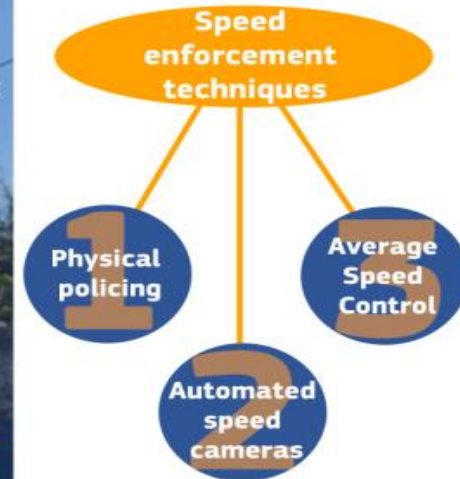
## SPEED ENFORCEMENT

**Speed enforcement** is most effective when it is **unpredictable** and difficult to avoid, when there is a mix of **highly visible** and **less visible** activities, and when **it is continued** over a long period of time

Public acceptance of speed cameras is increasing:

**76%** of EU drivers have a **positive attitude** on the installation of speed cameras

Data for 2015 or latest available year



Speed enforcement operations gain in **effectiveness** if they have specified objectives and success criteria, and are monitored in terms of both **process** and **product**



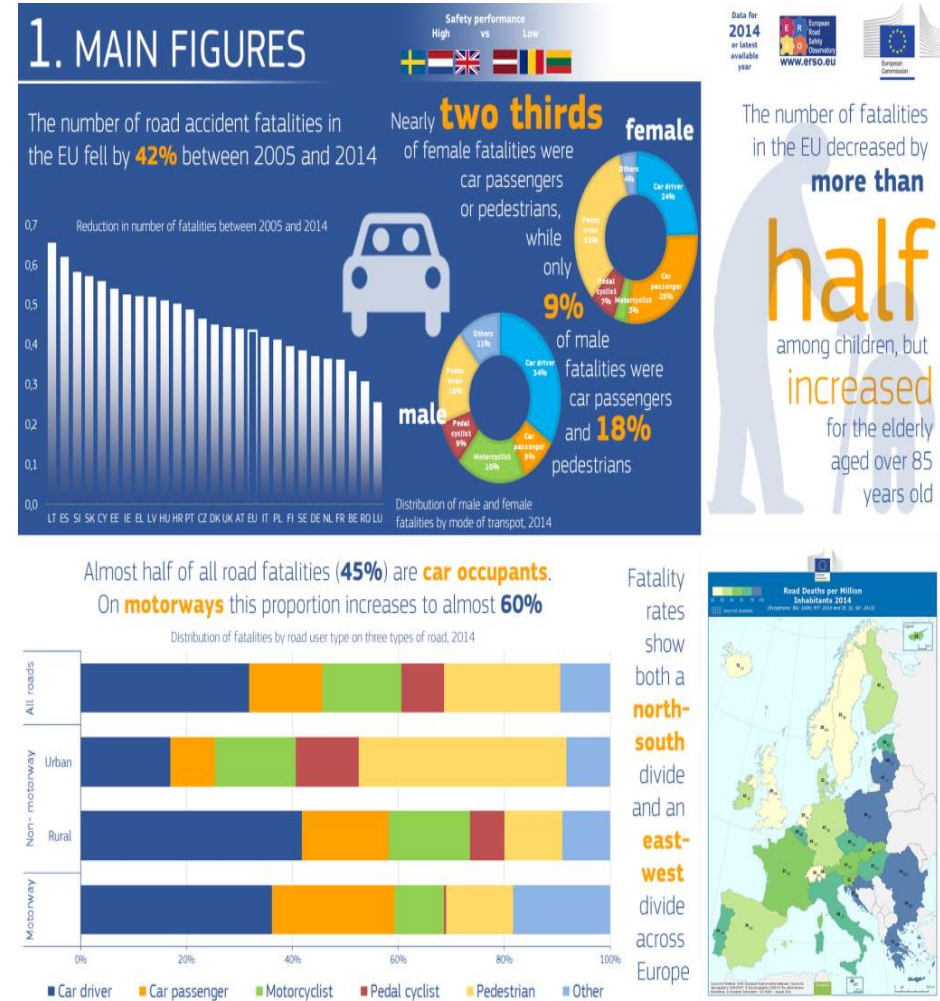
1. Event data recorders
2. Electronic Vehicle Identification (EVI)
3. Intelligent Speed Adaptation (ISA)
4. Smart Cameras

**Future possibilities**



# ERSO added value

- ERSO is a powerful road safety information system with **comparable information** among European countries.
- ERSO results can contribute significantly to:
  - **monitoring** road safety trends
  - **understanding** underlying road safety risk factors in combination with a more detailed analysis
  - **benchmarking** road safety performances
  - identification of **best practices**





# Future challenges

- High need to enrich ERSO with **more data and indicators** mainly concerning:
  - Exposure data
  - Road Safety Performance Indicators
  - Serious injuries (MAIS 3+)with data to be collected systematically by a uniform methodology.
- ERSO should guide European decision makers **to collect and exploit systematically** high quality road safety data in order to better support local, regional and national policies, programmes and measures.





National Technical University of Athens  
Road Safety Observatory

[www.nrso.ntua.gr](http://www.nrso.ntua.gr)

Monday  
**15**  
May  
at 14:00

# Workshop

in the framework of the

FOURTH UNITED NATIONS GLOBAL ROAD SAFETY  
WEEK

8-14 May 2017



Save Lives  
#SlowDown

The future of road safety research

NTUA Zografou Campus, Athens

Railways Amphitheatre of the

Department of Transportation Planning and Engineering

The European  
Road Safety Observatory  
**ERSO**

**Petros Evgenikos**

Civil - Transportation Engineer, M.Sc.  
Research Associate, PhD Candidate

Website: [www.nrso.ntua.gr/pevgenik](http://www.nrso.ntua.gr/pevgenik)  
e-mail: [pevgenik@central.ntua.gr](mailto:pevgenik@central.ntua.gr)

Together with:

Eleonora Papadimitriou, Alexandra Laiou, Katerina Folla,  
Tassos Dragomanovits, Dimos Pavlou, George Yannis