Improving data & statistics in road safety: EU perspective

George Yannis, National Technical University of Athens
Pete Thomas, Loughborough University

WhiteRoads EU Project
Brussels, 20\textsuperscript{th} March, 2013
The need for a comprehensive road safety data and knowledge tool

Lack of data
(accidents, injuries, exposure, performance indicators, ...)

Data not comparable

- Correlations but not Causations
- Data incompatible
- Lack of standard methodologies
- Insufficient data details
- Analyses not solution oriented
- Low reliability of data
The need for a comprehensive road safety data and knowledge tool

Necessity to:

- Consolidate and organise existing data and information
- Make data and information available (one-stop service)
- Provide a complete tool-kit (analyses, methodologies, benchmarking tools)
- Support road safety decision making at all levels

Brussels, 20th March, 2013
Timeline
European accident data development

1988
1989 IRTAD established
1990
1993 CARE established
1994
1995 Thomas and Otte Report on EU accident data
1996
1996 - 1999 STAIRS project In-depth: €2m
1998
2000
2002
2004
2006
2008
2010
2012
2013 ->

1999 – 2002 Pendant project In-depth €3m
2001 ERSO announced EC white paper
2001 ETSC SPI and accident data
2004 – 2008 SafetyNet Project Framework of ERSO €13m
2004 – 2008 TRACE Project €5m
2010 – 2012 DaCoTA Project Enhancing ERSO €7m

2011 European Parliament report

1989
1993
1995
1996 - 1999
1998
2000
2002
2004
2006
2008
2010
2012

2013 ->

Brussels, 20th March, 2013
The European Road Safety Observatory

- **ERSO** – initiated in 2001
  - “Objective is to coordinate all Community activities in the fields of road accident and injury data collection and analysis”
  - Central to new EU Road Safety Policy Orientations

- Many national Observatories now in operation
Road Safety Data

- Road accident data (CARE)

- Risk-exposure data (Eurostat, IRTAD, national sources, etc.)

- Safety Performance Indicators

- Health data/indicators (Eurostat, EU Injury Database)

- In-depth accident data (Accident Causation Database)
Disaggregate road accident data for a decade on specific road safety topics and few basic comments.

- Tables and Figures
- Maps from the CARE/CADaS database
- Worth-noticing comments in “highlight boxes”
- In-depth accident/causation data for 6-7 countries
- Health indicators

www.erso.eu

Basic Road Safety Fact Sheets (2/2)

Seasonality  
Main Figures
Junctions
Motorcycle and Mopeds
Children
Motorways
Urban Areas
Pedestrians
Cyclists
Gender
Roads outside urban areas
Youngsters (aged 15-17)
Young People (aged 16-24)
Causation
Single Vehicle Accidents
Heavy Goods Vehicles & Buses

Brussels, 20th March, 2013
Selection of **basic characteristics** of fatal road accidents related to:
Person class, Person killed, Area type, Motorway, Junction type, Weather conditions, Modes of transport, Month, Day of the week, Hour of day

Data from **27 European countries** for a decade

**52 Tables and 26 Figures** with the most interesting combination of road accident data

[www.erso.eu](http://www.erso.eu)

Brussels, 20th March, 2013
For each country all layers of the Road Safety Pyramid are covered:

- Structure & Culture
- Programs & measures
- Road Safety Performance Indicators
- Road Safety Outcomes
- Social Cost

A Synthesis Section at the end.
Road Safety Management Profiles

- Overview of road safety management good practice elements
- Structures, processes & outputs described according to the policy-making cycle
- Notes & Observations
  - Policy orientation
  - Medium-level intersectoral coordination
  - Stakeholders’ consultation
  - Funding
  - Monitoring and reporting
  - Relations between national/regional level
  - Knowledge production & use

Brussels, 20th March, 2013
Estimation of road traffic fatalities based on time-series analysis

- Road traffic fatalities
- Traffic volume
- Fatality risk
- Forecasts to 2020
- Forecasts according to mobility scenarios

Brussels, 20th March, 2013
Syntheses on key road safety issues
22 webtexts

Alcohol
Pedestrians and Cyclists
Cost-Benefit Analysis
Speeding
Mobile Phones
Work-Related Road Safety
Quantitative Road Safety Targets
Safety Ratings
Road Safety Management

Novice Drivers
E-Safety
Driver Distraction
Older Drivers
Vehicle Safety
Data Collection
Speed Enforcement
Fatigue
Post Impact Care

Integrated Paper
Powered Two-Wheelers

Brussels, 20th March, 2013
http://safetyknowsys.swov.nl/

A comprehensive and integrated road safety information system with aggregate data and information consolidating, organising and making available existing data and information, necessary for the support of road safety decision making in Europe.
Integrated Road Safety Knowledge System

Five main components

- **Safety issues** (overview, magnitude, prevalence, countermeasures)
- **Countries** (overviews, forecasts, composite index)
- **Statistics** (data, interactive browsing tool, fact sheets)
- **Methods** (methodologies, meta-data)
- **Links** (400 links organized alphabetically, by country, by organisation and by topic)
This pilot website is one of the final results of DaCoTA. Its basis is laid in the SafetyNet project. Both projects are funded by DG-TREN of the European Commission. The aim of both projects is to produce a framework and enhance road safety information for a European Road Safety Observatory (ERSO). ERSO helps policy makers, researchers and road safety advisers to find their way into the European road safety world.

The objective of SafetyNet, which was completed in October 2008, was to build the framework of a European Road Safety Observatory that should become the primary focus for road safety data and knowledge in Europe. When SafetyNet was finalised, the ERSO-website was transferred to the Road Safety section on the website of the European Commission, Directorate-General for Transport & Energy (DG-TREN). It is accessible by using the address www.erso.eu.

DaCoTA is the follow-up of SafetyNet and is also funded by DG-TREN (now: DG MOVE) of the European Commission. The objective of DaCoTA is to add to the strength and wealth of information in the Observatory by enhancing the existing data and adding new road safety information. This project will be finalised in 2013. During the project, the updates of the ERSO website will be available on this website.

Links:
- DaCoTA-project website
- Information about DaCoTA, its results and partners
- SafetyNet website
- Former European Road Safety Observatory (ERSO) hosted by SWOV
- European Road Safety Observatory (ERSO)
- Official ERSO on the website of the European Commission

Copyright © DaCoTA | Disclaimer | Contact
The White Roads Concept

Data and knowledge about both high and low risk sites should be made available to everybody.

The inclusion of the results of the White Roads project into the European Road Safety Observatory is a first step.

GIS technology can well facilitate data presentation and analysis at network level.

Brussels, 20th March, 2013
A common European definition of White Roads (absolute figures or accident rates or both).

Introduction of road network performance ranking and benchmarking across Europe - use of a common methodology, - gradually extended to the whole interurban and urban road network.

Learn from both the high and low risk sites.

In the future, why not introducing “Road Safety Charging Systems” of the road network.
Next steps for improved road safety data and knowledge in Europe

• More surveys for exposure, performance indicators, driver behaviour
• More large scale experiments (in-depth accident investigation, naturalistic driving, driving simulator)
• More research and analyses to support policy making
• More solutions to real life problems
• A more rigid European Road Safety Observatory
Improving data & statistics in road safety: EU perspective

George Yannis, National Technical University of Athens
Pete Thomas, Loughborough University

WhiteRoads EU Project
Brussels, 20th March, 2013