



DaCoTA

Improving data & statistics in road safety: EU perspective

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WhiteRoads EU Project

Brussels, 20th March, 2013



The need for a comprehensive road safety data and knowledge tool

Lack of data

(accidents, injuries, exposure, performance indicators,...)

Data not comparable

Data incompatible

Insufficient data details

Low reliability of data



Correlations but not Causations

Lack of standard methodologies

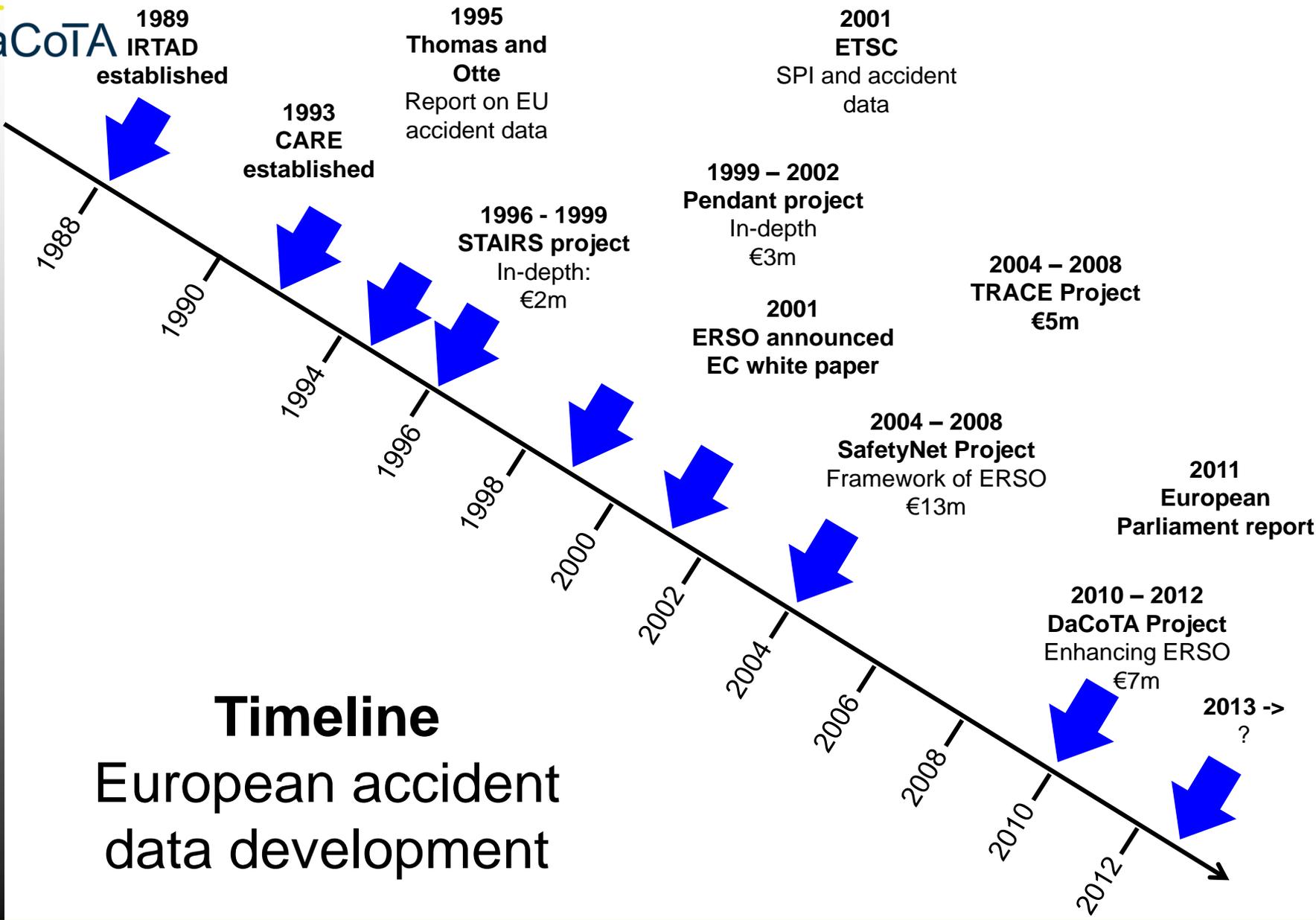
Analyses not solution oriented

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**



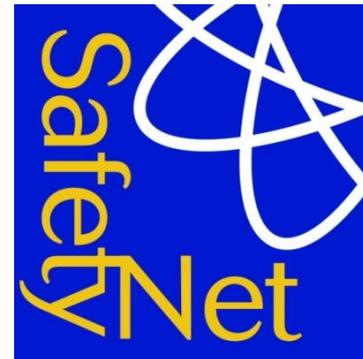


Timeline

European accident data development

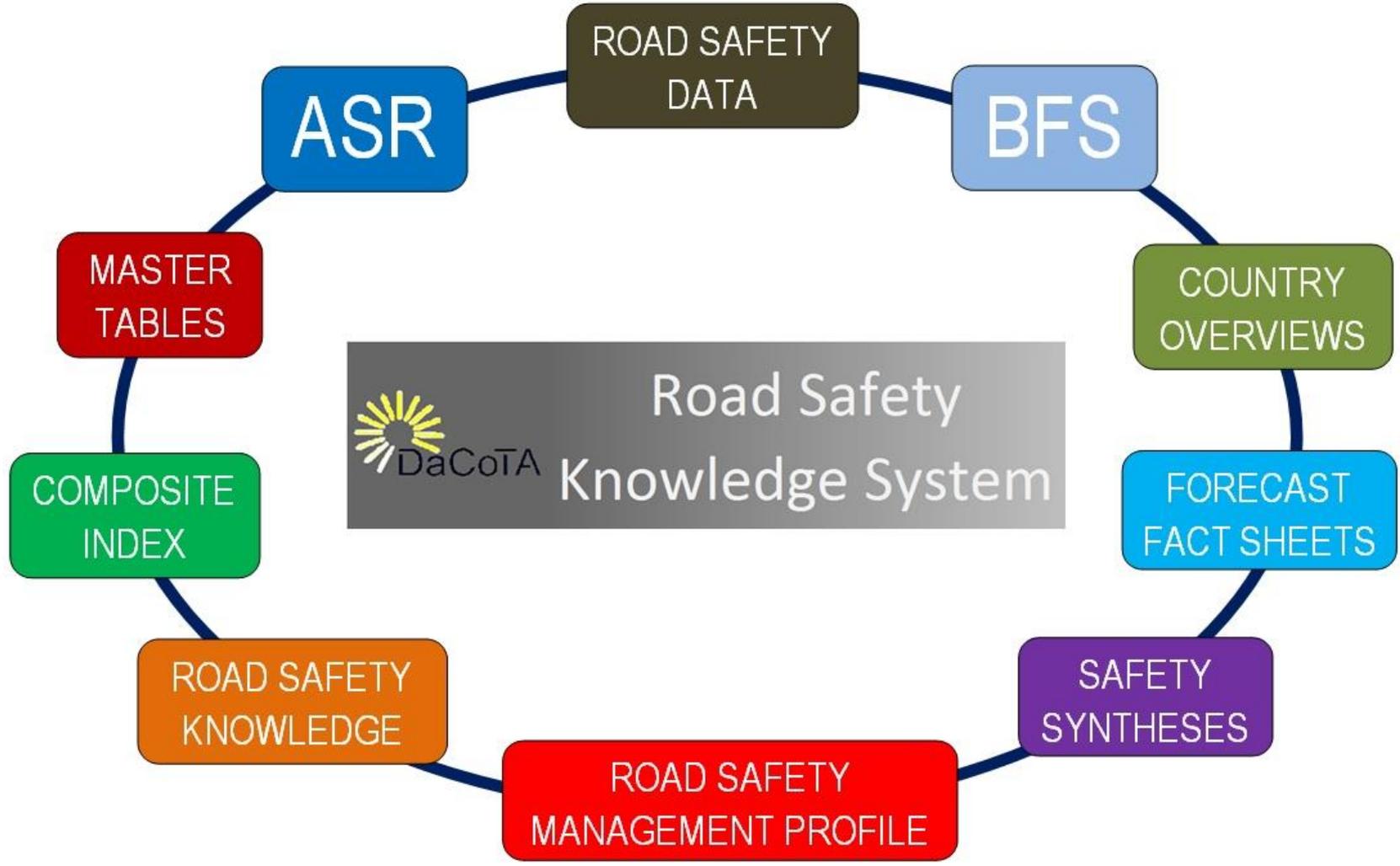
The European Road Safety Observatory

- 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



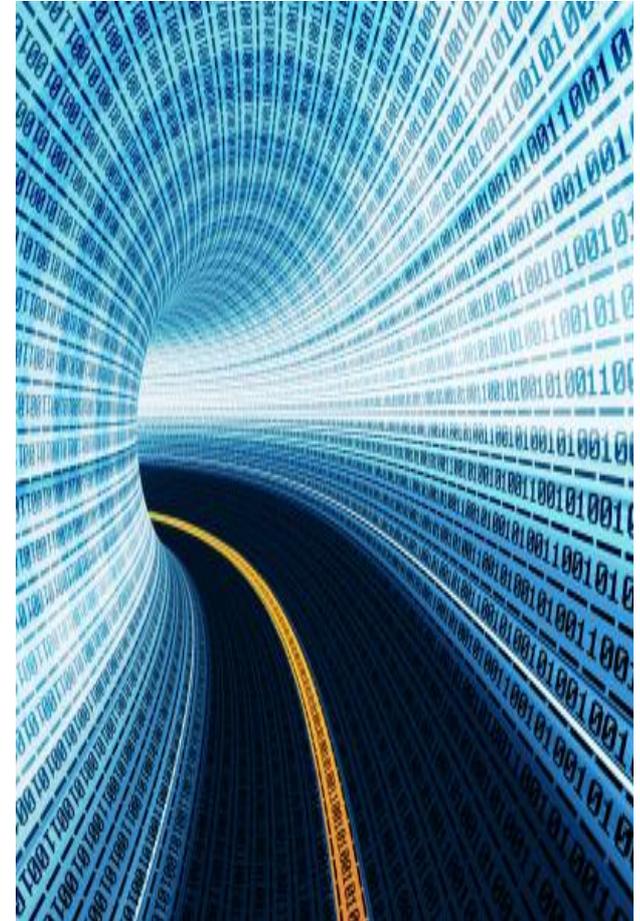


DaCoTA Integrated Road Safety Knowledge System



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

http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm




Traffic Safety Basic Facts 2012

Motorways

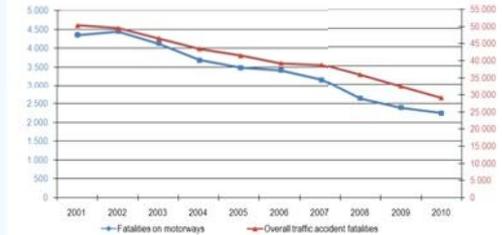
Almost 40.000 people were killed in traffic accidents on motorways in 19¹ European Union countries between 2001 and 2010². This number corresponds to 8% of all traffic accident fatalities in those countries.

There were 4.354 traffic accident fatalities on motorways in 2001, and the number fell by more than 48% by 2010² (2.244). The total number of traffic accident fatalities in the 19 European Union countries also fell significantly over the same decade, by 42%.

Although the overall number of road accident fatalities decreased rather steadily, the trend for motorway fatalities has been more variable. The most significant reduction of the number of fatalities on motorways in the 19 countries occurred between 2007 - 2008.

Note that in five countries (Greece, Hungary, Netherlands, Poland and United Kingdom) a significant number of fatalities are recorded in the CARE data as being on non-specified road network type (it is not known whether or not they occurred on a motorway).

Figure 1: Fatalities evolution in the EU-19¹, 2001-2010²



Source: CARE Database / EC
Date of query: October 2012

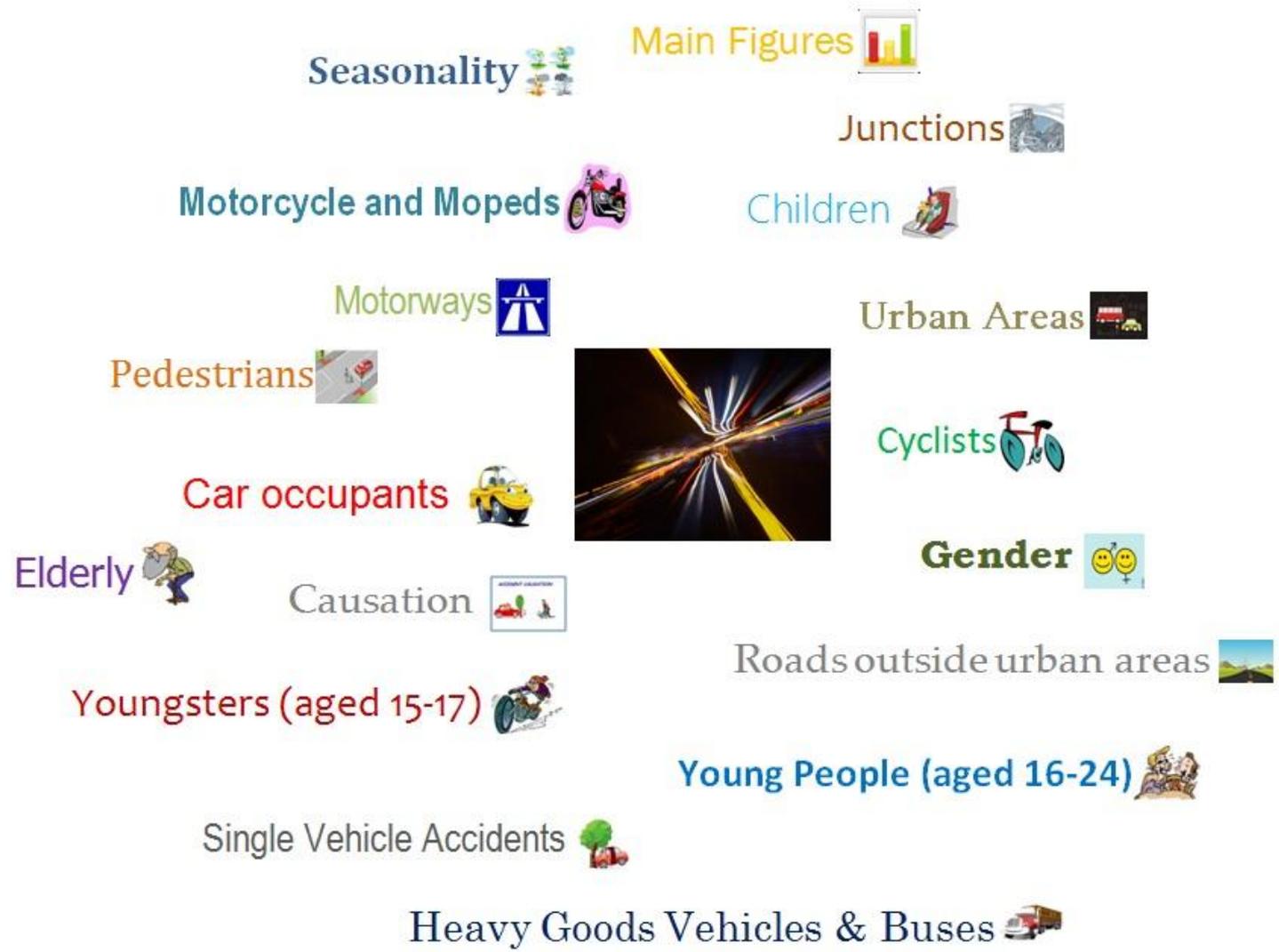
¹ See Table “Country abbreviations used and definition of EU-level” on page 20.
² Where a number is missing for an EU-19/20 country in a particular year, its contribution to the EU-19/20 total is estimated as the most recent known value. For UK data (2010) is the sum of GB (2010) and NI (2009).



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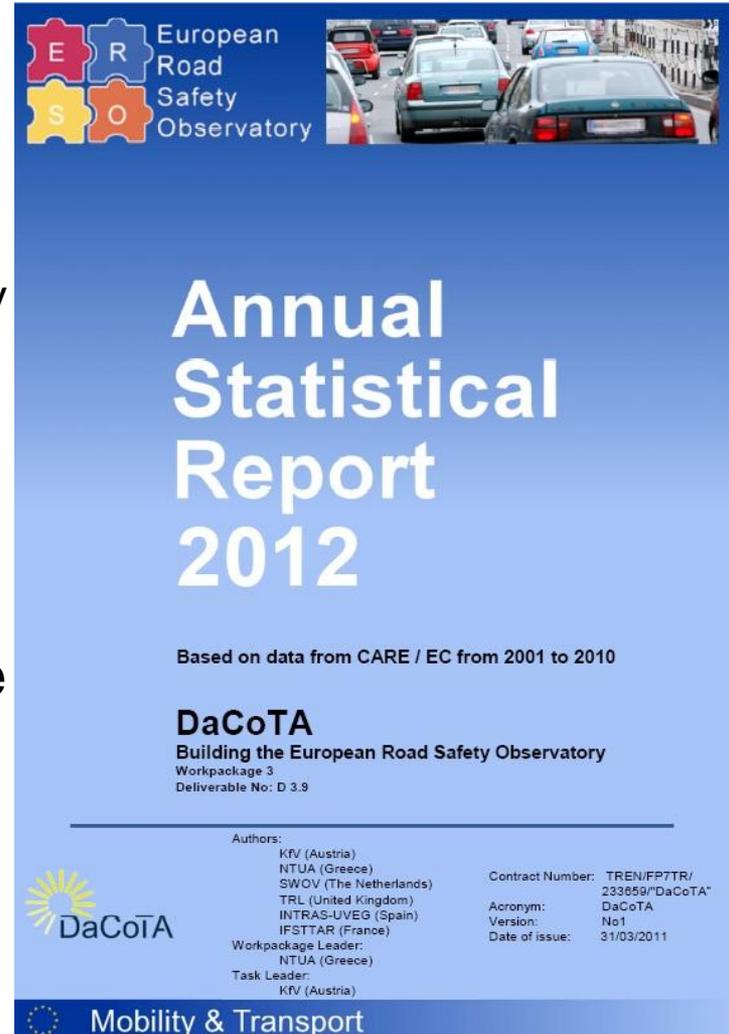
Basic Road Safety Fact Sheets (2/2)



- 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://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm



The cover of the Annual Statistical Report 2012 features a blue background. At the top left is the European Road Safety Observatory logo, consisting of four interlocking gears in red, blue, yellow, and orange, with the letters E, R, S, and O respectively. To the right of the logo is a photograph of a traffic jam on a road. The title 'Annual Statistical Report 2012' is written in large white font. Below the title, it states 'Based on data from CARE / EC from 2001 to 2010'. The DaCoTA logo and name are prominently displayed, followed by 'Building the European Road Safety Observatory', 'Workpackage 3', and 'Deliverable No: D 3.9'. A horizontal line separates the title information from the authors and contract details. The authors listed are KfV (Austria), NTUA (Greece), SWOV (The Netherlands), TRL (United Kingdom), INTRAS-UVeG (Spain), and IFSTTAR (France). The contract number is TREN/FP7TR/233050/'DaCoTA', the acronym is DaCoTA, the version is No1, and the date of issue is 31/03/2011. The DaCoTA logo is also present at the bottom left of the cover. At the bottom right, the text 'Mobility & Transport' is displayed next to a small circular logo.

European Road Safety Observatory

Annual Statistical Report 2012

Based on data from CARE / EC from 2001 to 2010

DaCoTA
Building the European Road Safety Observatory
Workpackage 3
Deliverable No: D 3.9

Authors:
KfV (Austria)
NTUA (Greece)
SWOV (The Netherlands)
TRL (United Kingdom)
INTRAS-UVeG (Spain)
IFSTTAR (France)

Contract Number: TREN/FP7TR/233050/'DaCoTA'
Acronym: DaCoTA
Version: No1
Date of issue: 31/03/2011

Workpackage Leader: NTUA (Greece)
Task Leader: KfV (Austria)

DaCoTA

Mobility & Transport

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 Country Overview October 2012

Lithuania



Structure and Culture

- Basic data

Table 1: Basic data of Lithuania in relation to the European average. (Sources: [1] OECD/ITF, 2011; [2] Eurostat; [3] DG-TREN, 2005; [4] CIA; [5] UNECE)

Basic data of Lithuania	European average
– Population: 3.3 million inhabitants (2010)	17.1 million (2010) [1,2]
– Area: 65 000 km ² (2010) (4% water) (2010)	156.225 km ² (2010) [1,3] 3% water (2010) [4]
– Climate and weather conditions (capital city; 2010): Average winter temperature (Nov. to April): -2°C Average summer temperature (May to Oct.): 15°C Annual precipitation level: 705 mm (2004)	(2010) 6°C 16°C 747 mm
– Vehicle fleet: data on vehicle km not available	168 billion vehicle km (2010) ^[1] 12 million vehicles (2010) ^[1]
1.8 billion vehicles (93% passenger cars, 1% lorries, trucks and tractors; 2008) [5]	
– 0.55 motorised vehicles per person (2008)	0.7(2010) ^[1] [1,2]

- Country characteristics

Table 2: Characteristics of Lithuania in comparison to the European average. (Sources: [1] OECD/ITF, 2011; [2] Eurostat; [3] national sources)

Characteristics of Lithuania	European average
– Population density: 51 inhabitants/km ² (2010)	110 inhabitants km ² (2010) [1,2,3]
– Population composition: is not available	16% children, 67% adults, 17% elderly (2009) ^[1] [1,2]
– Gross Domestic Product (GDP) per capita: €6 300 (2010)	€26 100 (2010) [1,2]
– 41% of population lives inside urban area (2010)	42% (2010) ^[1] [1,2]
– Special characteristics: tourism is growing in Lithuania.	

¹ Based on 30 European countries; data of HU = 2009.
² Based on 15 European countries (excl. BG, CY, EE, EL, ES, HU, IT, LT, LU, LV, MT, PL, PT, RO, SK); data of CZ, IE, SE, NO (2009); data of AT, BE, DK (2008); Data of UK (2006); data of NL (2003).
³ Based on 28 European countries (excl. CY and LT); data of EL, IT, PL, PT and UK = 2009; data of BE, EE, ES, RO and NO = 2008; data of IE = 2007; data of MT and SK (2002).
⁴ Based on 27 European countries (excl. LT, NO, PL); data of BE, UK (2008).
⁵ Based on 29 European countries (excl. IS).

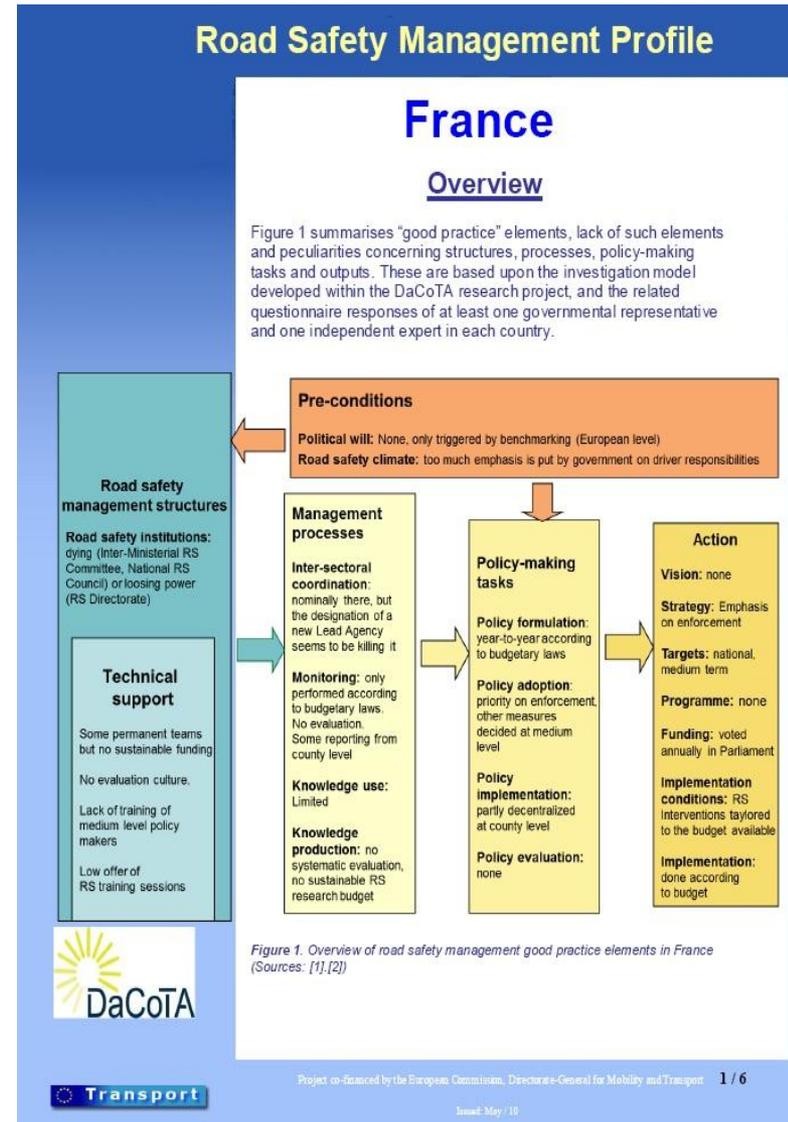
Lithuania has a low population density.



Transport

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- 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



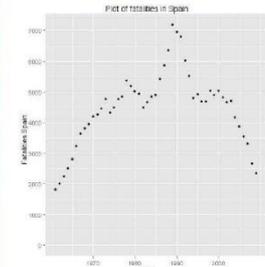
Estimation of road traffic fatalities based on time-series analysis

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

Road Safety Development

Spain (ES)

Fatalities (24h)



- Generally speaking, annual fatality numbers are characterized by important variation in Spain. However, it is clear that these numbers have been increasing up to 1993 (although with short periods of decrease), and have been decreasing thereafter (although with some periods of stagnation).
- The number of fatalities at 24h observed in 2009 (2,336) is around 3 times lower than in 1993 (7,168).

Registration of fatalities

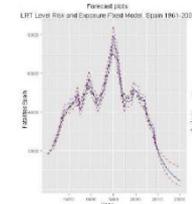
The registration of the Spanish traffic fatalities is based on forms filled in by the police. There have been changes in the registration method in the period of study. In 1993, the 30-days criterion has been adopted to define fatalities at 30 days. However, given that only fatalities occurring within the 24 hours after the accident are included in these analyses, it is unlikely that the series at hand could have been affected by this registration change. Fatalities at 24h represent around 93% of fatalities at 30 days.



Road Safety Development - Spain

Forecasts to 2020

If the change in slope seen in 2009-2010 returns to the trend seen prior to 2008 in 2012, the following forecasts can be made for the number of fatalities in 2020:



Forecast of road traffic fatalities in Spain up to 2020

Year	Prediction	Lower CI	Upper CI
2010	2,802	1,754	2,273
2011	1,729	1,369	2,191
2012	1,477	1,037	2,105
2013	1,269	771	2,059
2014	1,090	553	2,108
2015	936	406	2,158
2016	804	289	2,240
2017	691	203	2,354
2018	593	140	2,504
2019	509	95	2,593
2020	438	65	2,927

Disclaimer

- Statistical forecasting does not offer a definite prediction of what is actually going to happen in the future.
- The estimates are based on the "business as usual" assumption; no principal changes between past and future development.
- Even in these conditions future outcomes are uncertain. This uncertainty is represented in the confidence intervals (plotted in the red margins; 65% printed in table; 95%).



Syntheses on key road safety issues

22 webtexts

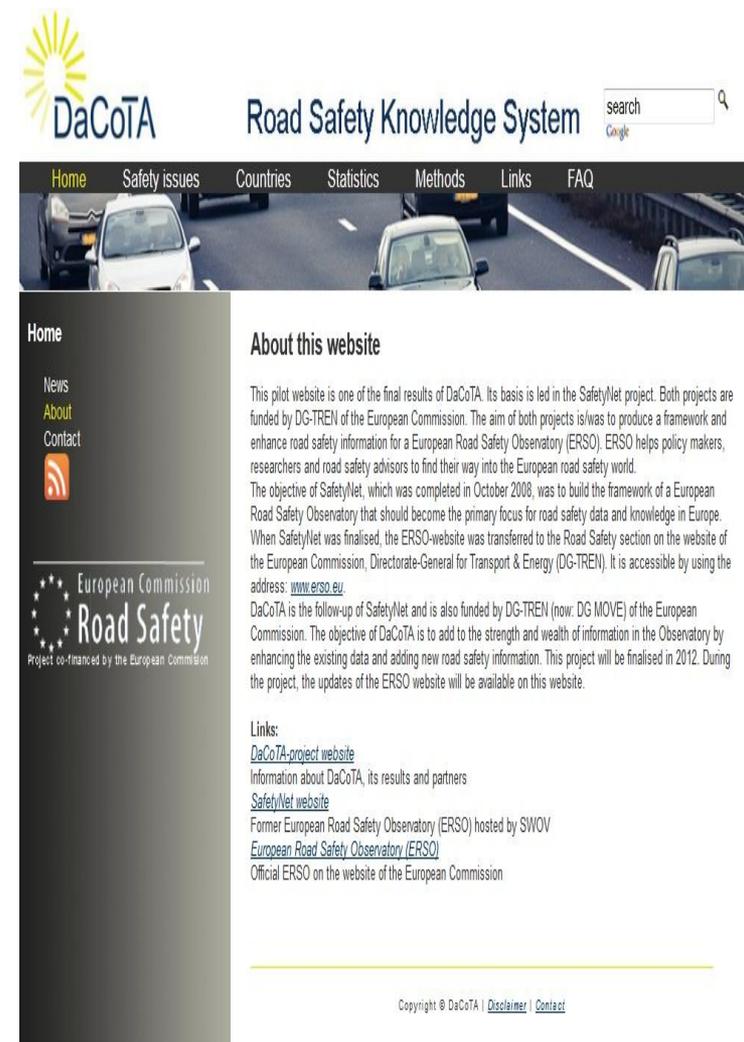




DaCoTA Integrated Road Safety Knowledge System

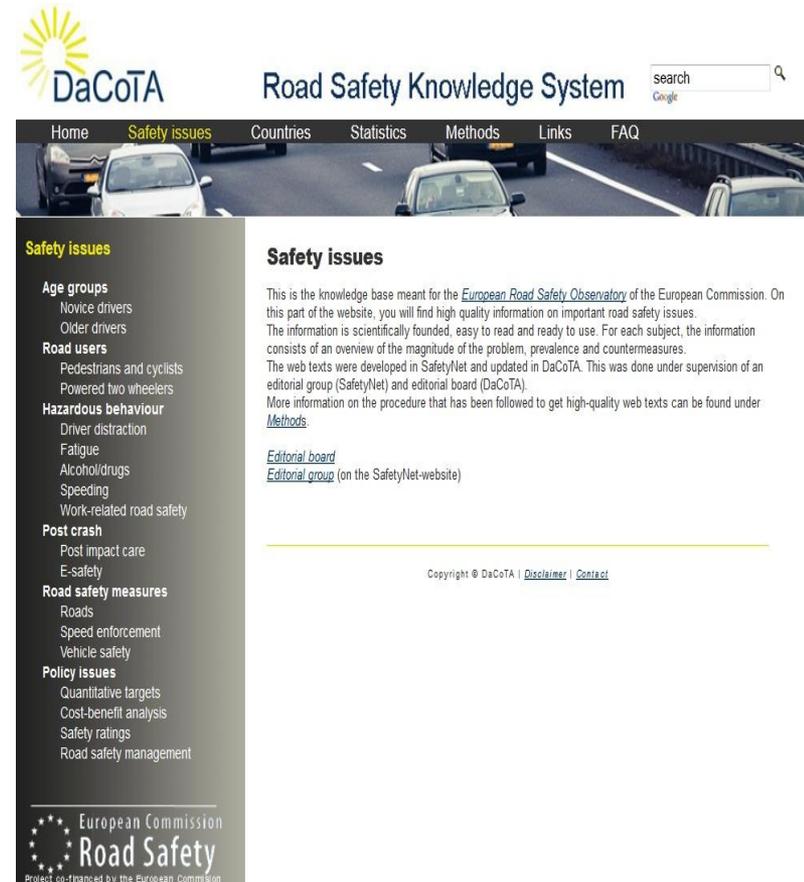
<http://safetyknowsys.swov.nl/>

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

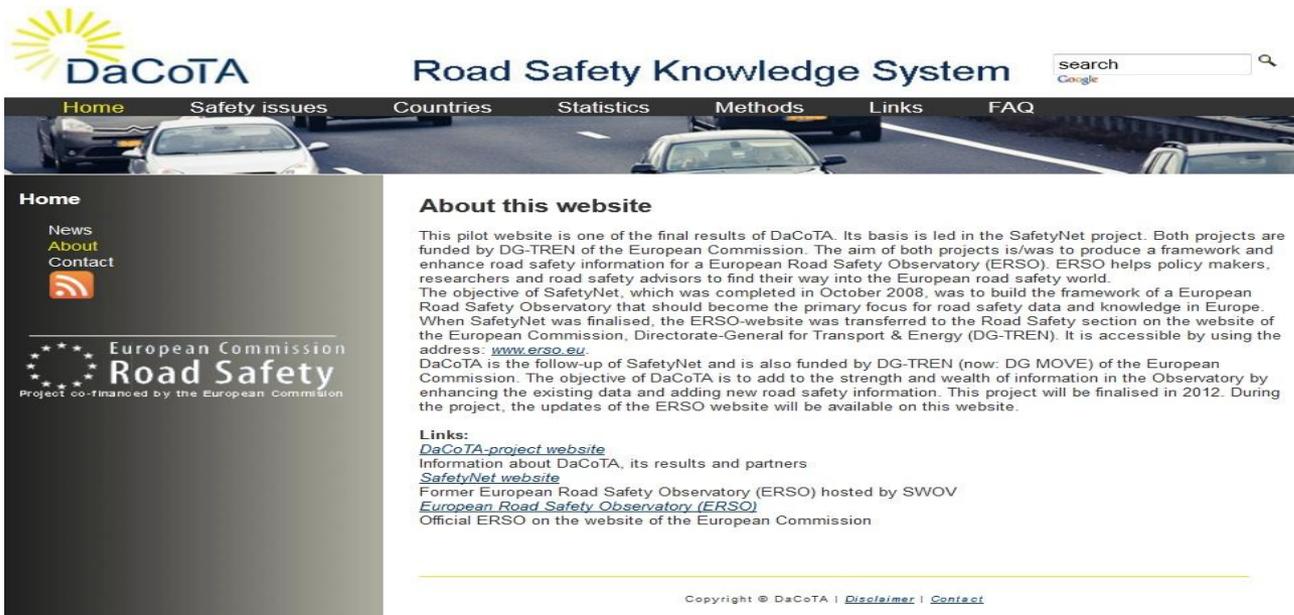


Five main components

- 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)



The screenshot shows the DaCoTA Road Safety Knowledge System website. The header includes the DaCoTA logo, the title "Road Safety Knowledge System", and a search bar. The navigation menu contains links for Home, Safety issues, Countries, Statistics, Methods, Links, and FAQ. The main content area is titled "Safety issues" and features a sidebar with a list of categories: Age groups (Novice drivers, Older drivers), Road users (Pedestrians and cyclists, Powered two wheelers), Hazardous behaviour (Driver distraction, Fatigue, Alcohol/drugs, Speeding, Work-related road safety), Post crash (Post impact care, E-safety), Road safety measures (Roads, Speed enforcement, Vehicle safety), and Policy issues (Quantitative targets, Cost-benefit analysis, Safety ratings, Road safety management). The main text area provides an overview of the knowledge base, stating it is meant for the European Road Safety Observatory and contains high-quality information on important road safety issues. It also mentions that the web texts were developed in SafetyNet and updated in DaCoTA, and that more information on the procedure can be found under "Methods". At the bottom, there is a copyright notice for DaCoTA and links to "Disclaimer" and "Contact". The footer of the website features the European Commission logo and the text "European Commission Road Safety Project co-financed by the European Commission".




Road Safety Knowledge System



[Home](#)
[Safety issues](#)
[Countries](#)
[Statistics](#)
[Methods](#)
[Links](#)
[FAQ](#)

Home

- [News](#)
- [About](#)
- [Contact](#)





Road Safety

Project co-financed by the European Commission

About this website

This pilot website is one of the final results of DaCoTA. Its basis is led in the SafetyNet project. Both projects are funded by DG-TREN of the European Commission. The aim of both projects is/was to produce a framework and enhance road safety information for a European Road Safety Observatory (ERSO). ERSO helps policy makers, researchers and road safety advisors to find their way into the European road safety world.

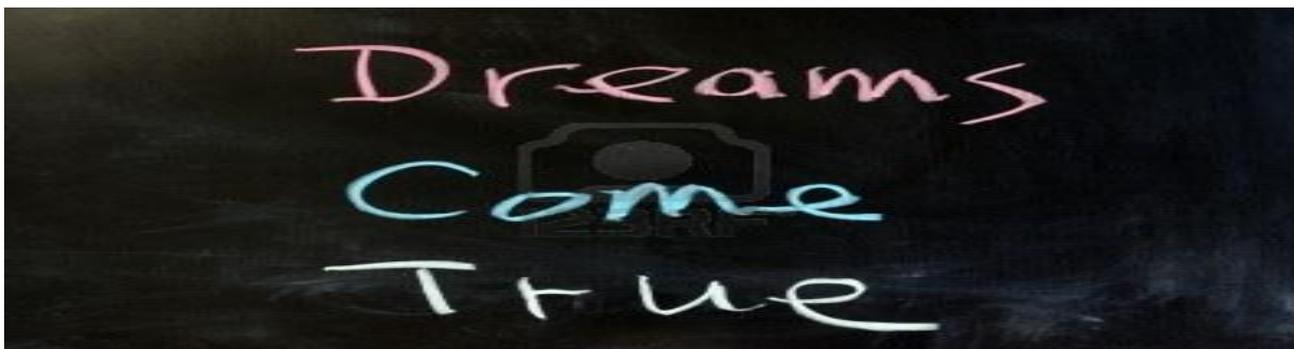
The objective of SafetyNet, which was completed in October 2008, was to build the framework of a European Road Safety Observatory that should become the primary focus for road safety data and knowledge in Europe. When SafetyNet was finalised, the ERSO-website was transferred to the Road Safety section 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 2012. 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

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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.



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





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