

# Road Safety Management in South East Europe

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Regional Road Safety Capacity Building Workshop

Belgrade, 15-16 October 2014

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## South East Europe



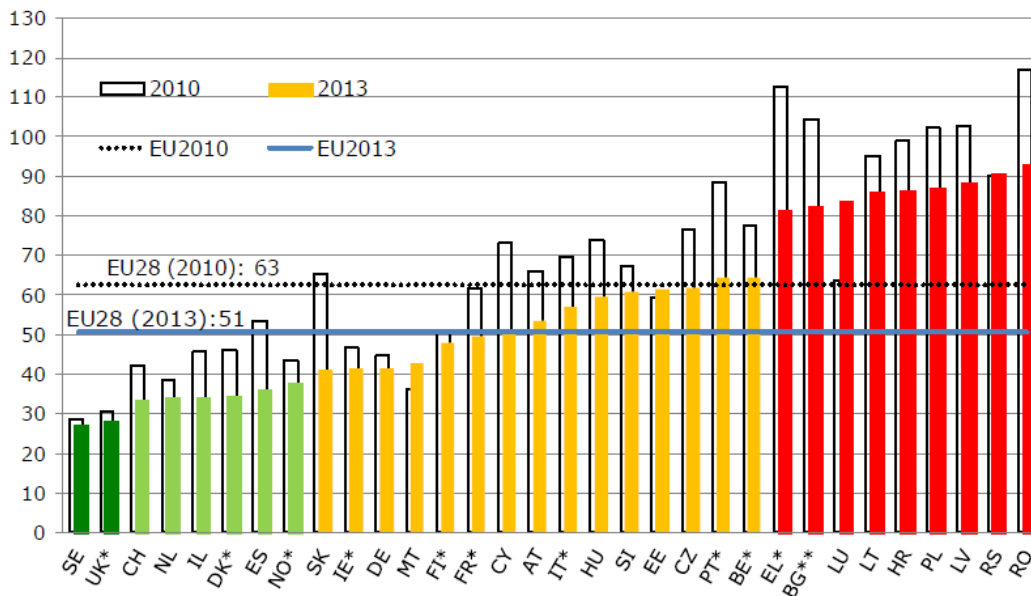
- **Priority Axis:**  
Improvement of the accessibility
- **Area of intervention:**  
Improve co-ordination in promoting, planning and operation for primary & secondary transportation networks

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## Main Problem addressed

South-East Europe regions are among the **worst road safety performers** in Europe.

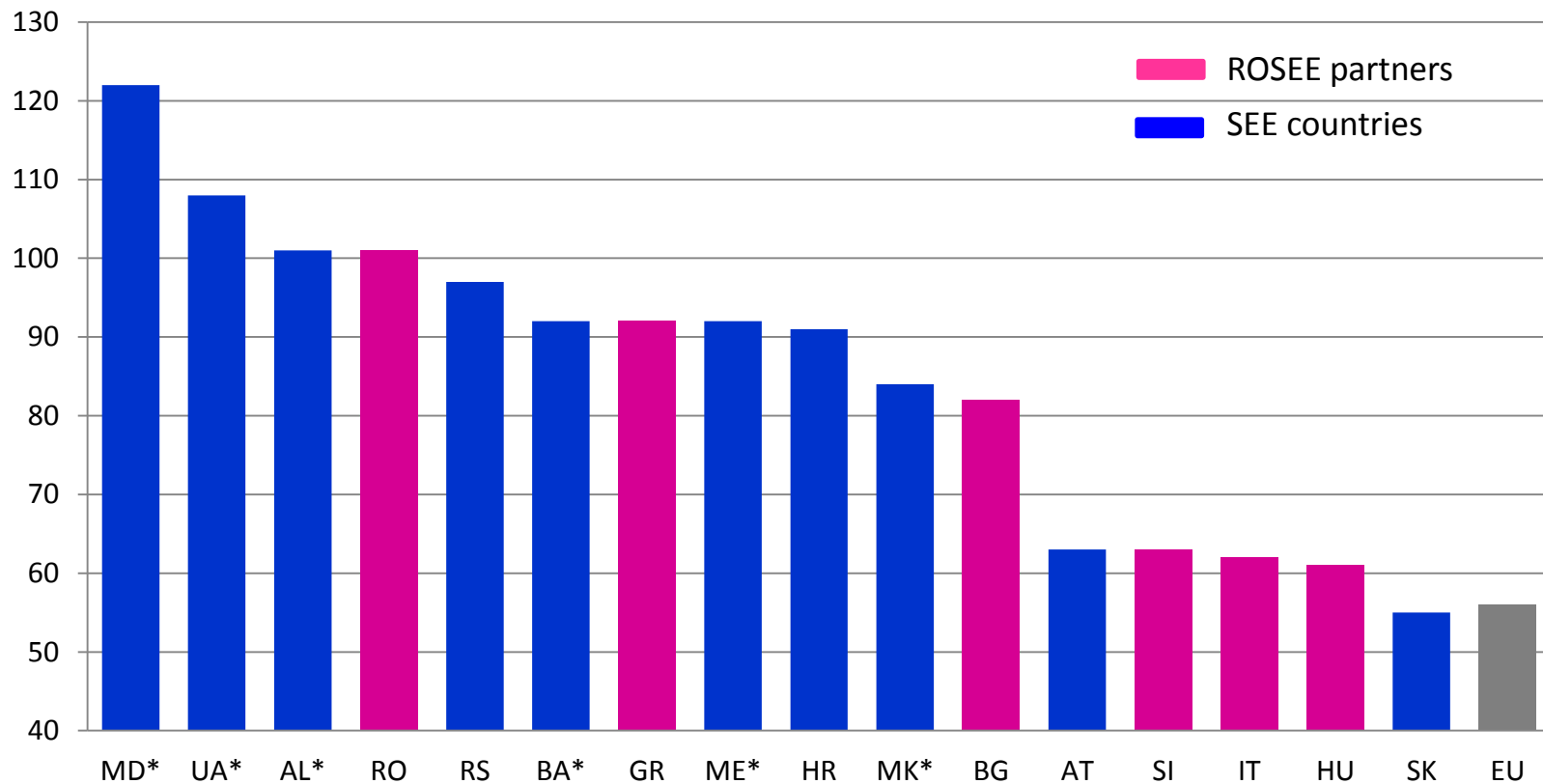
Greece, Bulgaria, Romania, and to a less extent, Slovenia and Hungary, have a fatalities/population rate **by far above the EU average** (source: ETSC).



Reduction in road fatalities (2001-2013) ranging from 64% in Slovakia to 24% in Romania while the average EU reduction was 53%.

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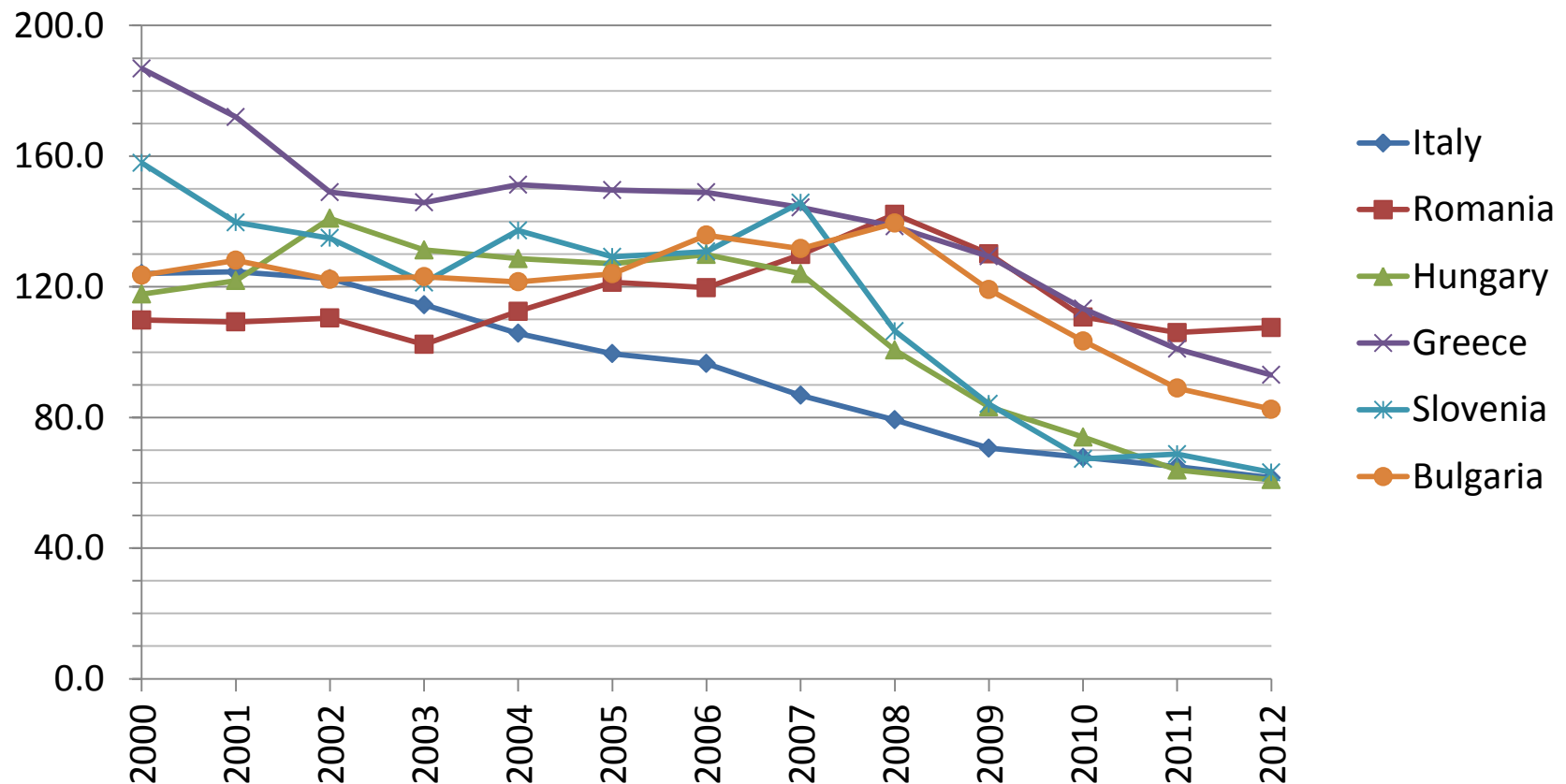
## Road fatalities per million population in SEE countries (2012) (\*2011)



Sources: CARE, IRTAD, IRF

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## Road fatalities per million population in ROSEE countries 2000-2012



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## Road fatalities by user gender & age in ROSEE countries (2012) (\*2011)

	IT	RO	HU	GR*	SI*	BG
Age group <15	1%	4%	3%	2%	4%	3%
Age group 15-17	2%	3%	2%	2%	3%	2%
Age group 18-24	11%	11%	7%	14%	12%	<b>16%</b>
Age group 25-49	<b>37%</b>	<b>36%</b>	<b>39%</b>	<b>40%</b>	<b>44%</b>	59%
Age group 50-64	17%	23%	<b>28%</b>	16%	21%	
Age group 65+	<b>29%</b>	22%	20%	23%	16%	20%
Unknown	2%	0%	1%	2%	0%	0%

Sources: CARE, National Sources

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## Road fatalities by user type & road type in ROSEE countries (2012) (\*2011)

	IT	RO	HU	GR*	SI*	BG
Drivers	<b>70%</b>	40%	54%	62%	<b>70%</b>	49%
Passengers	15%	24%	20%	18%	16%	<b>28%</b>
Pedestrians	15%	<b>36%</b>	26%	20%	15%	23%

	IT	RO	HU	GR*	SI*	BG
Motorway	9%	1%	5%	7%	<b>14%</b>	3%
Rural	48%	38%	<b>60%</b>	44%	52%	<b>61%</b>
Urban	43%	<b>61%</b>	35%	49%	33%	35%

Sources: CARE , National Sources

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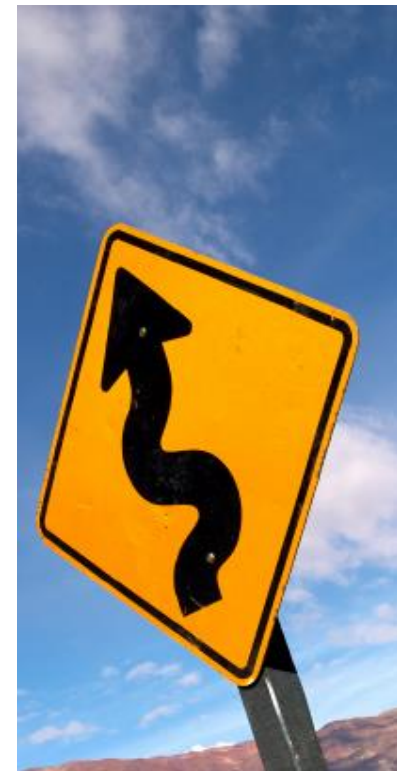
## Project Objectives

Main objective:

**improve coordination** in promoting, planning and operation at national and regional road networks in terms of road safety.

Additional objectives :

- **Strengthen institutional capacity** to plan and operate the network from a road safety perspective and contribute to increased future funding for enhancing institutional capacity.
- **Contribute to safer roads and mobility** and increased future funding possibilities for safe infrastructure.
- **Increase capacity to deliver** effective and multi-component road user **behavior interventions** and **strengthen transnational cooperation** and dialogue on road safety.



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## Project approach

On **Primary Networks** the project worked with relevant national stakeholders to develop or strengthen mechanisms for including road safety as a standard in the planning and operation of the network and to define road safety objectives for the primary network in each country.

On **Secondary Networks** the project worked with relevant national, regional and municipal stakeholders to design and test a model approach for strengthening road safety in the planning and operation of key segments of the secondary networks.



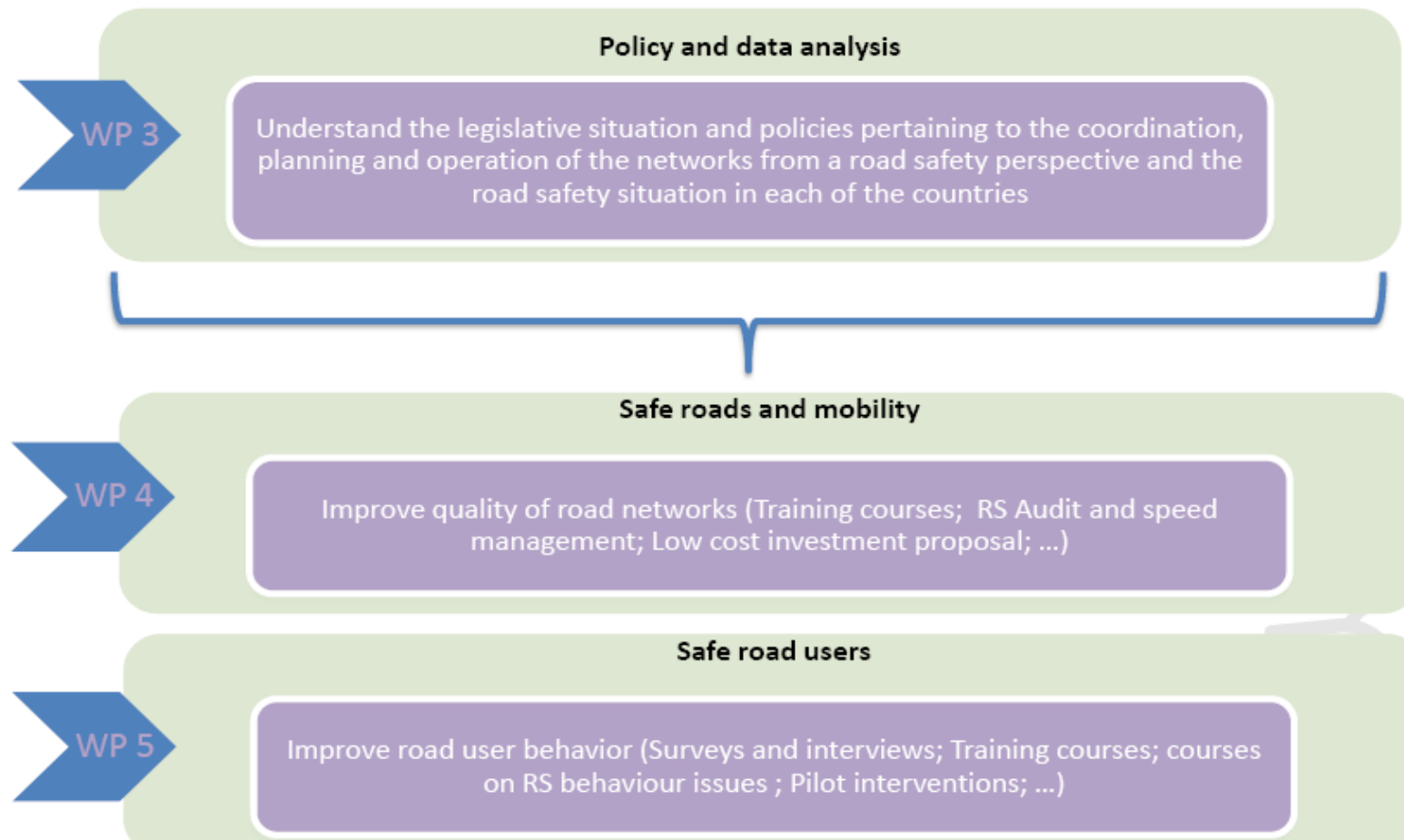
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## Project Partners - Observers

Role	Official name in English	Country
<b>LP</b>	ALOT s.c.a.r.l., Agency of East Lombardy for Transport and Logistics	<b>Italy</b>
<b>PP1</b>	EUCon, Association EU CONCEPTS R&D	<b>Romania</b>
<b>PP2</b>	GRSP Hungary Association	<b>Hungary</b>
<b>PP3</b>	UniBS, DICATAM Department of Civil Engineering, Architecture, Land, Environment and Mathematics	<b>Italy</b>
<b>PP4</b>	KTI Institute for Transport Sciences Non Profit Ltd.	<b>Hungary</b>
<b>PP5</b>	NTUA, National Technical University of Athens / School of Civil Engineering / Department of Transportation Planning and Engineering	<b>Greece</b>
<b>PP6</b>	AMZS, Automobile and Motorcycle Association of Slovenia	<b>Slovenia</b>
<b>PP7</b>	AVP, Slovenian Traffic Safety Agency	<b>Slovenia</b>
<b>PP8</b>	UL FGG-PTI, University of Ljubljana, Faculty of Civil and Geodetic Engineering	<b>Slovenia</b>
<b>PP9</b>	iRED, Open Youth Institute for Research, Education and Development	<b>Bulgaria</b>
<b>OP1</b>	ABS-RTSA, Road Traffic Safety Agency of the Republic of Serbia	<b>Serbia</b>
<b>OP2</b>	RSBSP, National Council for Road Traffic Safety	<b>FYROM</b>

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## Core work-packages



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## Project activities

- Establishment of **Advisory Groups** for road safety at national and transnational level
- **Assessment** of road safety **legislation, policy and institutional capacity** in the partner countries.
- Development of **National Reports** on road safety.
- Development of **Transnational Report** on road safety.
- Development of relevant **recommendations and investment proposals**.



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## Project activities

- Development of material and delivery of **professional development courses** on:
  - speed management
  - enforcement
  - occupational road safety
  - road safety advocacy
  - road safety management
  - social marketing
  - vulnerable road users
- Proposal of appropriate **low cost measures**.
- Development of **speed management strategies**.
- **Surveys** on road user behaviour and attitudes.
- Implementation of **13 pilot projects** on road infrastructure and/or road user behaviour.
- Development of relevant **recommendations** and **investment proposals**.



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### Promote road safety and improve road network accessibility in South East Europe.

In the South East Europe area, injuries and road crashes are answerable for social and economic losses. South-East Europe regions are among the worst road safety performers in Europe: countries such as Greece, Bulgaria, Romania and, to a less extent Slovakia and Hungary, have a road deaths rate per population by far above the EU average of 62 deaths per million population in 2010 (source: CARE database and national data). In the South-East Europe (SEE) countries that are currently not members of the European Union crash and fatality rates are even higher: in Bosnia-Herzegovina, Serbia and Croatia rates are above 100 deaths per million populations in 2009 (Source: OECD-ITF). This situation is holding down the development of the SEE region and requires urgent improvements. In order to reach the 2020 EU road safety target.



<http://www.rosee-project.eu/>

» About the project » Pilot Areas » South East Europe » Communication

ROSEE is a project that involves 6 countries: Italy, Romania, Hungary, Greece, Slovenia, Bulgaria. The project aims to improve road safety performances on primary and secondary networks in the South East Europe area and is financed by "South East Programme – Transnational Cooperation Programme".

» Italy  
» Romania  
» Hungary  
» Greece  
» Slovenia  
» Bulgaria

The South East Europe programme is a unique instrument which, in the framework of the Regional Policy's Territorial Cooperation Objective, aims to improve integration and competitiveness in an area which is as complex as it is diverse. *Jointly for our common future* is the slogan chosen by the 16 participating countries in the programme.  
<http://www.southeast-europe.net/en/>



## Road Safety Legislation, Policy and Institutional Capacity (1/4)

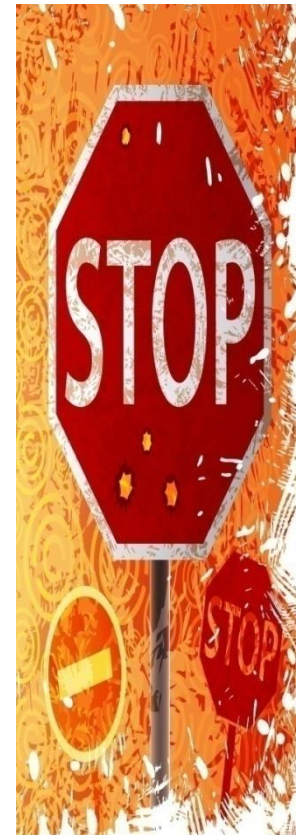
- Although a number of “good practice” elements can be identified, **it is not possible to identify one single “good practice”** model at national level.
- There are **differences** between expert’s and government’s **responses**, the latter tending to be more positive.
- **Variation in the structures** and processes at the higher level of road safety management.
- **Implementation** of programmes and measures seems to be the weakest component of road safety management systems in SEE. Coordination and budget are the most critical factors for effective road safety management.



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## Road Safety Legislation, Policy and Institutional Capacity (2/4)

- **Similarities** on institutional organization, coordination and stakeholders' involvement as well as policy formulation and adoption issues.
- Policy implementation and funding, monitoring and evaluation, scientific support and information and capacity building are addressed in various ways.
- Road safety action **advocated** by government agencies, public authorities and NGOs. Local authorities have a more or less active role.
- An **Inter-ministerial Committee or Council for Road Safety** has been legally created in all the examined countries but in most countries they have a general consulting character and their authority on road safety stakeholders is limited.



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## Road Safety Legislation, Policy and Institutional Capacity (3/4)

- In all the examined countries, except from Hungary, a **national "vision"** for improved road safety performance in the long term has been adopted (compelling only in Slovenia and Bulgaria).
- **An Inter-ministerial Committee** or Council for Road Safety has been legally created in all the examined countries but in most countries they have a general consulting character with limited authority.
- In Romania, Greece and Bulgaria, although national road safety programs have been elaborated, the **budget needed** for program implementation has **not** been **estimated**.



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## Road Safety Legislation, Policy and Institutional Capacity (4/4)

- A **national Observatory** centralizing the data systems for road safety is available in Italy, Hungary and Bulgaria however; data included in it vary per country.
- A **reporting procedure** to monitor the road safety interventions carried out in the country has been set up in Hungary and Slovenia.
- In all countries but Italy, **results of safety analyses and research** are used in formulating the national road safety policy and the research teams are systematically requested by policy-makers to contribute knowledge for policy formulation.



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## Road Safety Related Data and Information

More than 100 stakeholders from the partner countries filled-in the STA questionnaire.

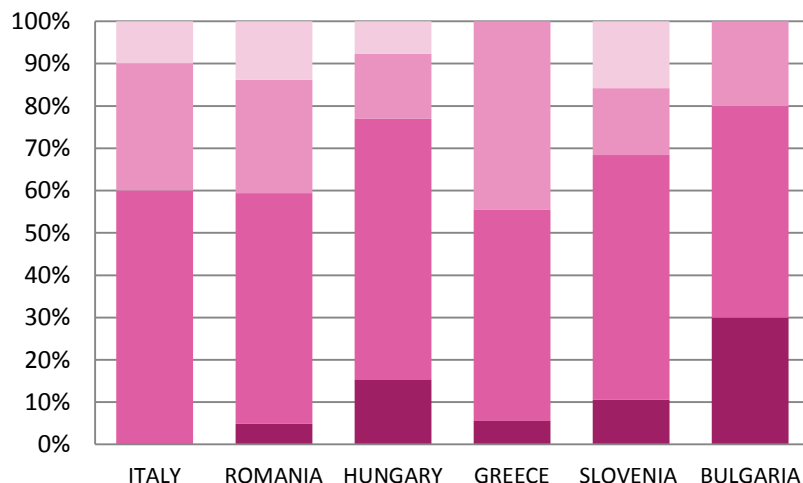
- Stakeholders expressed **significant demand for data and knowledge** in road safety-related decision making.
- Stakeholders expressed **discontent** about the **current poor availability** of such information.
- Stakeholders also seem to be **poorly informed** about the availability of data and tools in general.



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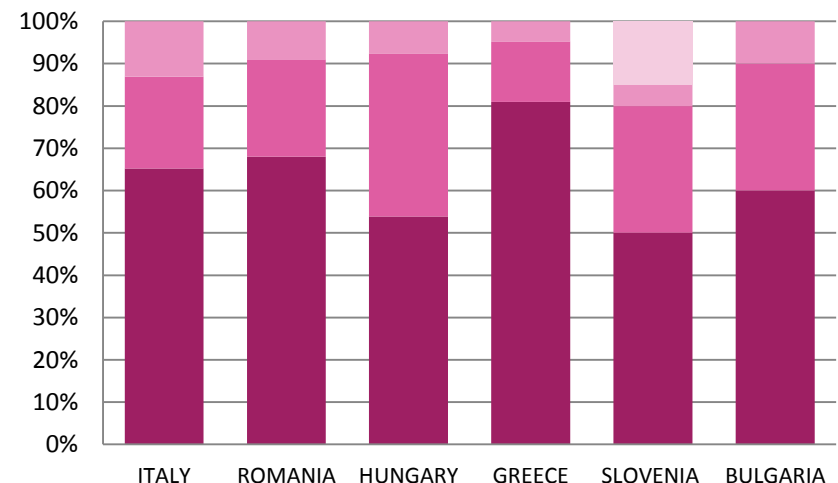
## Information on road users' behaviour and attitudes

Information on road users' behaviour and attitudes



■ Already available ■ Partially available ■ Currently not available ■ Don't know

Information on road users' behaviour and attitudes



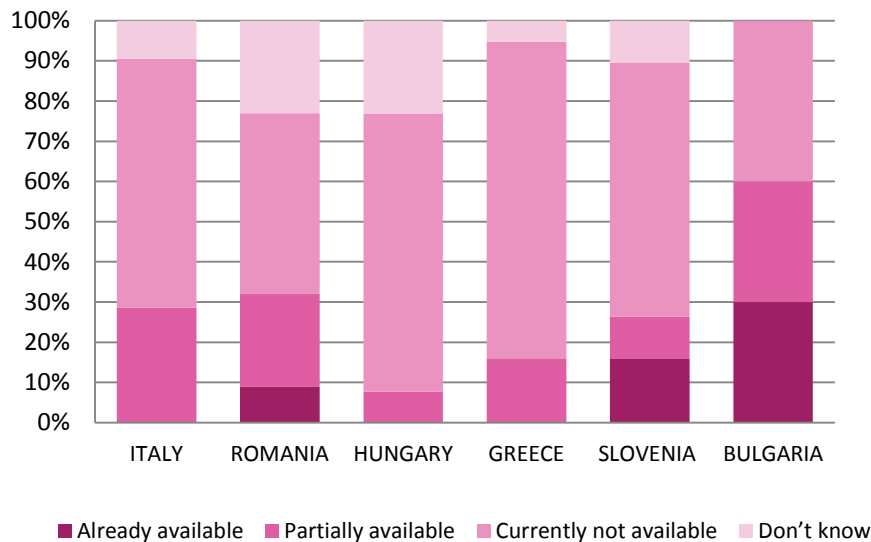
■ High priority ■ Medium priority ■ Low priority ■ Not relevant

Road safety stakeholders expressed **great need** for available information on road user's behaviour and attitudes and consider this an issue of **high priority**.

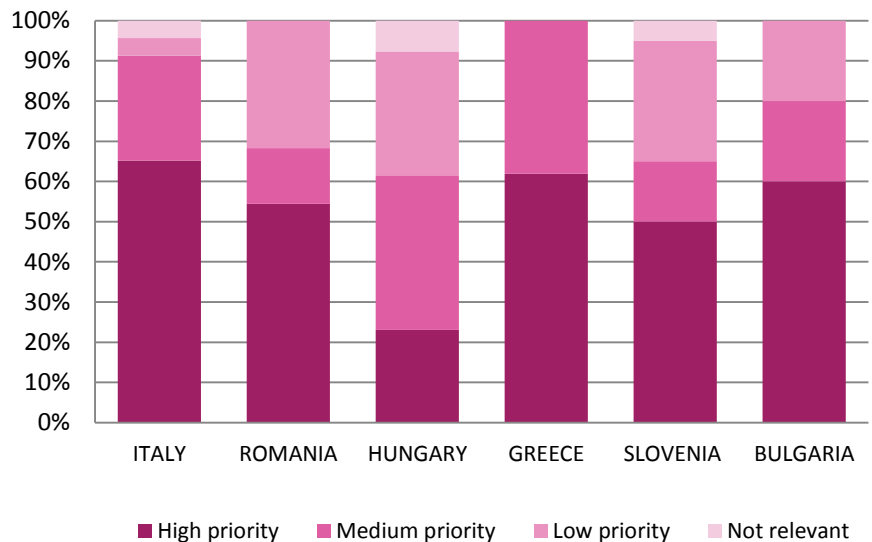
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## Linking Police and hospital data

Accident databases that link police and hospital data



Accident databases that link police and hospital data



**Availability** of accident databases that link police and hospital data is **low** in most countries.

Road safety stakeholders consider such databases an issue of **high priority**.  
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## Scope of proposals on investments and interventions

Exploitation of the ROSEE project results for the development of proposals on investments and interventions for the improvement of road safety in South-East European regions with regard to:

- **road safety legislation, policy and institutional capacity**
- **road infrastructure**
- **road user behaviour**

Proposals on investments and interventions drafted:

- **separately** for each of these three subjects
- using a **common methodology**



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## Methodology

A **three step** methodology:

1. Use of measures and priorities identified within the ROSEE project
2. Exploitation of input from existing lists of proposals and recommendations
3. Assessment and ranking of road safety measures based on:
  - the estimated safety benefit
  - the implementation cost
  - the implementation timeby **more than 100** road safety stakeholders



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# Legislation, Policy and Institutional Capacity proposals

## Overall results

Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Legislation for infrastructure safety management	6	4	0
Legislation for efficient enforcement	6	4	1
Evaluating measures effectiveness	6	2	0
Development of road safety national Plan	6	1	1
Road safety inspection (RSI)	6	1	0
Setting up dedicated road safety budget	6	0	1
High risk site treatment program	6	0	1
Road Safety Audits (RSA)	5	2	0
Monitoring implementation progress of measures	5	2	0
Improved Emergency Medical Service	5	0	2
Emergency Call system (eCall)	5	0	1
Legislation for training, licensing, education	4	4	0
Setting up road safety targets	4	3	1
Road accident analyses	4	0	1
Operation of national road safety agency	4	0	0
Accident data collection system	4	0	0
Monitoring road safety indicators	3	2	0
European Road Assessment Programme (EuroRAP)	3	1	0
trauma management performance	3	0	3
Legislation for new offences	2	5	0
Coordinate enforcement and promotion campaigns	2	1	3
Campaigns supporting the national programme	2	0	3
Emergency lanes in congestion	2	0	2

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# Legislation, Policy and Institutional Capacity proposals

## Overall results

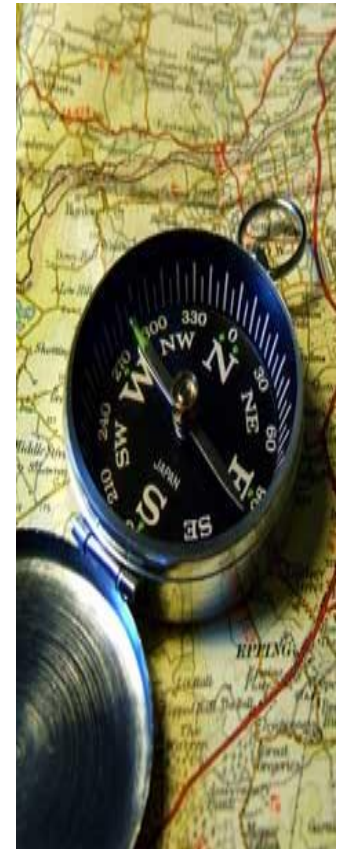
- In many partner countries most Legislation, Policy and Institutional Capacity investments are related to **high safety benefit**.
- However, most such proposals are considered relatively **expensive** to implement and **effective on the long-term**.
- The proposals considered to provide **high safety benefit at low cost**, in most partner countries are:
  - legislation for infrastructure safety management
  - legislation for efficient enforcement
- However, both investments **need time** to show their effect on the improvement of road safety.



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## Legislation, Policy and Institutional Capacity proposals on investments and interventions

- **Institutional issues, legislative issues and infrastructure safety** management concentrate most of the highly effective investment proposals.
- **Legislative issues** are considered the **easiest to implement** in most partner countries.
- Almost **half** of the examined **proposals** were related to **high implementation cost**.
- Almost **all** of the examined proposals are considered **effective in the long-term** in all partner countries.
- In half countries, **communication and trauma management performance** proposals are the only ones considered to need a **short implementation time** to provide benefit.



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## Road Infrastructure proposals – overall results

Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Implementation of safety barriers	6	0	2
Development of roundabouts	4	0	0
Implementation of motorcyclist safety barriers	4	0	2
Speed humps	3	2	4
Raised pedestrian crossings	3	1	4
Creation of speed transition zones	3	1	3
Implementation of traffic lights at intersections	3	0	4
Improvement of sight distances	3	0	2
Delineators and horizontal road markings	2	4	3
Upgrade of existing pedestrian crossing	2	2	3
Traffic signs (regulatory)	1	4	5
Chevrons	1	4	4
Changing from unrestricted speed to speed limit	1	4	4
Raised road markers	1	3	3
Improvement of existing traffic lights	1	1	4
Rumble strips	1	1	3
Traffic signs (warning)	0	5	6
Traffic signs (guide)	0	4	4
Implementation of stop signs at intersections	0	4	5
Lowering existing speed limit	0	4	3
Post-mounted delineators	0	3	4
Implementation of yield signs at intersections	0	3	3

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## Road Infrastructure proposals – overall results

ROSEE countries differ widely in regard to:

- road network conditions
- road maintenance and managing
- road user behavior
- vehicle fleet and ownership
- general social and economic background
- legislation
- enforcement



Thus, **different measures act differently between countries.**

Generally, measures with the highest safety benefit are neither the fastest nor the cheapest to implement.

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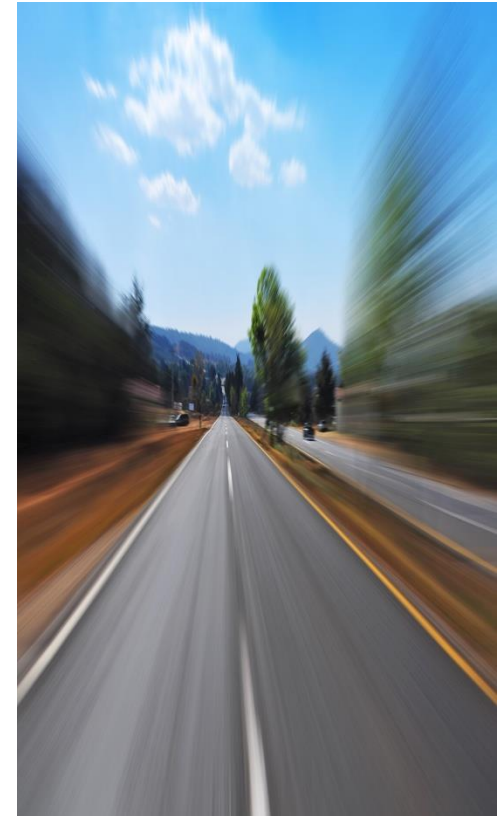
## Road Infrastructure proposals on investments and interventions

The **highest safety benefit** is related to:

- the implementation of safety barriers
- the development of roundabouts
- the implementation of motorcyclist safety barriers

Installation of traffic signs, such as stop signs at intersections, yield signs at intersections, warning and guide signs is related to the **lowest cost** and **implementation time**.

Cross-analysis of all criteria showed that **speed humps** are the most effective measure, related to high safety benefit, low cost and short time to take effect.



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## Road User Behaviour proposals – overall results

Investment Proposals	Partner countries recording high safety benefit	Partner countries recording low implementation cost	Partner countries recording short implementation time
Intensive police enforcement of child restraint use	6	4	4
Intensive police enforcement of helmet use	6	4	3
Traffic enforcement programs at high-risk times and locations	6	2	3
Improving bicycle visibility	5	5	3
Penalties for drunk driving	5	4	5
Mandatory wearing of helmets for moped and motorcycle riders	5	4	4
Intensive police enforcement of mobile use while driving	5	3	4
Intensive police enforcement of seat belt use	5	3	3
Education, training for young drivers	5	2	1
Intensive police enforcement of drink-driving	5	1	4
Increased random breath testing	5	1	2
Installation of speed cameras	5	1	2
Mobility and safety education at all school levels	5	0	0
Use of reflective devices by pedestrians	3	6	3
Road safety campaign against drinking and driving	3	2	1
Road safety campaign addressing young road users	3	2	1
Campaigns for the use of mobiles while driving	3	2	1
Using health professionals as advocate for road safety	3	2	1
Promoting walking and cycling	3	1	2
Campaigns for seat belt and helmet use	3	1	2
Campaigns for speeding	3	1	2
Campaign against dangerous and risky driving	3	1	2
Road safety television advertising supporting police enforcement	3	0	2
Lowering of speed limits	2	6	5
Introduction of speed limits	2	6	3
Licensing for mopeds	2	4	1
Periodically first aid education and training at school, for drivers	2	2	1
Gradual driver license	1	2	1
Voluntary training for bus and truck drivers	0	3	1

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## Road User Behaviour proposals – overall results

- The **highest safety benefit** was related to measures focusing on **speed, enforcement and visibility** while the **lowest, to voluntary training** for bus and truck drivers, **first aid training and campaigns**.
- Measures of **enforcement, legislation, penalties and reflective devices for pedestrians and cyclists** are considered to be of **low cost** for achieving the desired safety benefits.
- **Campaigns and education** are related to **high cost** and **long implementation time** in most countries.
- **Lowering speed limits and strengthening penalties for drinking and driving are measures fast to implement** and will have the **quickest positive safety benefit**.



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## Road User Behaviour proposals on investments and interventions

- **Not all measures** considered to have the largest safety benefits are the fastest to implement or are of low cost.
- **Legislative measures** such as enforcing traffic laws and increasing penalties for drinking and driving **scored high** overall.
- Most measures with **low overall scores** focus on **education** and **campaigns**.
- These measures were ranked as having **low safety benefit, high costs** and taking generally a **long time to show impact**.



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## ROSEE - Overall proposals for road safety improvement in South-East Europe

- Focus on **road safety management** and **administrative structure** at national, regional and local level
- Emphasis on systematic **reporting** and **monitoring** of road safety data, measures and results
- **Infrastructure safety management**
  - integrated approach (RSA/RSI, road safety impact assessment, high risk sites' treatment)
  - systematic implementation of low cost measures
- **Focus on the five killers:**
  - speed
  - drink-driving
  - non use of seat belts
  - non use of helmets
  - use of mobile phone while drivingthrough **enforcement, training, campaigns**



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