

Proposals for Road Infrastructure Safety Investments and Interventions in South East Europe

Final International Event and International Conference
“Infrastructures and Behaviours to Enhance Road Safety”

Brescia, 21 November 2014

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Scope of proposals on investments and interventions

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

- Professional development **courses on Road Safety Audit and Speed Management**
- Conduct of **Road Safety Audits/ Inspections**
- Identification of appropriate **low cost infrastructure improvements**



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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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Road Infrastructure proposals on investments and interventions matrix

Recommendations	Investment Proposals	Safety Benefit				Implementation Cost				Implementation Time			Implementation Barriers	
		4	3	2	1	4	3	2	1	>5y	1-5y	6-12m		<6m
Pedestrian crossings	New pedestrian crossing													
	Upgrade of existing pedestrian crossing													
Lighting treatment	Implementation of new street lighting													
	Improving of existing lighting													
Speed limits	Changing from unrestricted speed to speed limit													
	Lowering existing speed limit													
	Creation of speed transition zones													
Traffic control and operational elements	Traffic signs (regulatory)													
	Traffic signs (warning)													
	Traffic signs (guide)													
	Delineators and horizontal road markings													
	Raised road markers													
	Chevrons													
	Post-mounted delineators													
Traffic calming-Speed management measures	Rumble strips													
	Speed humps													
	Raised pedestrian crossings													
	Raised Intersections													
	Central islands													
Vertical curvature treatment	Lateral shifts													
	Reducing gradient													
	Improvement of sight distances													
	Increasing lane width													
Cross-section treatment	Introduction of shoulder													
	Increasing shoulder width													
	Introduction of median													
	Increasing median width													
	Development of bicycle lanes													
Roadside treatment	Development of pedestrian sidewalk													
	Implementation of safety barriers													
	Implementation of motorcyclist safety barriers													
Crossings treatment	Introduction of new pedestrian crossings													
	Upgrading of existing pedestrian crossings													
	Introduction of rail/road grade crossings													
Intersections layout	Protection of rail/road level crossings													
	Development of roundabouts													
	Intersection channelization													
Traffic control at intersections	Implementation of yield signs at intersections													
	Implementation of stop signs at intersections													
Parking Facilities	Implementation of traffic lights at intersections													
	Improvement of existing traffic lights													
	On street parking facilities introduction													

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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

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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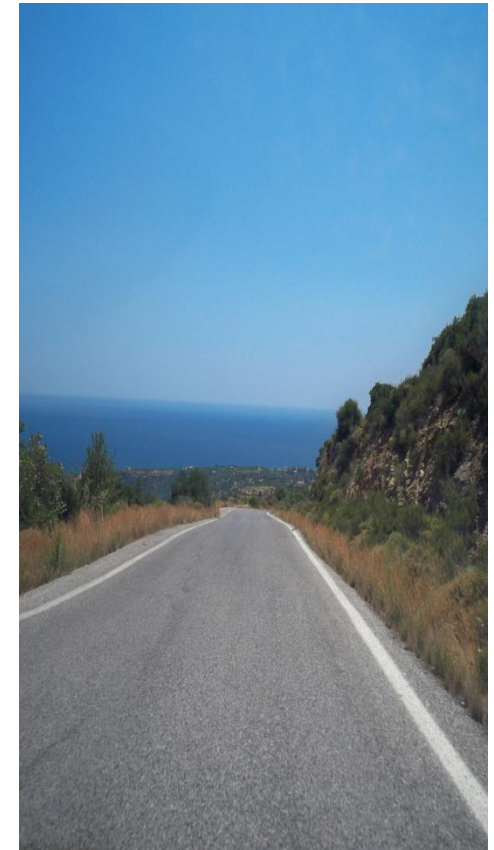
Road Infrastructure proposals on investments and interventions

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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ROSEE - Future challenges for the improvement of road infrastructure in South-East Europe



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