

Road Safety Best Practices: Towards Zero Vision in Lithuania

10th September 2015



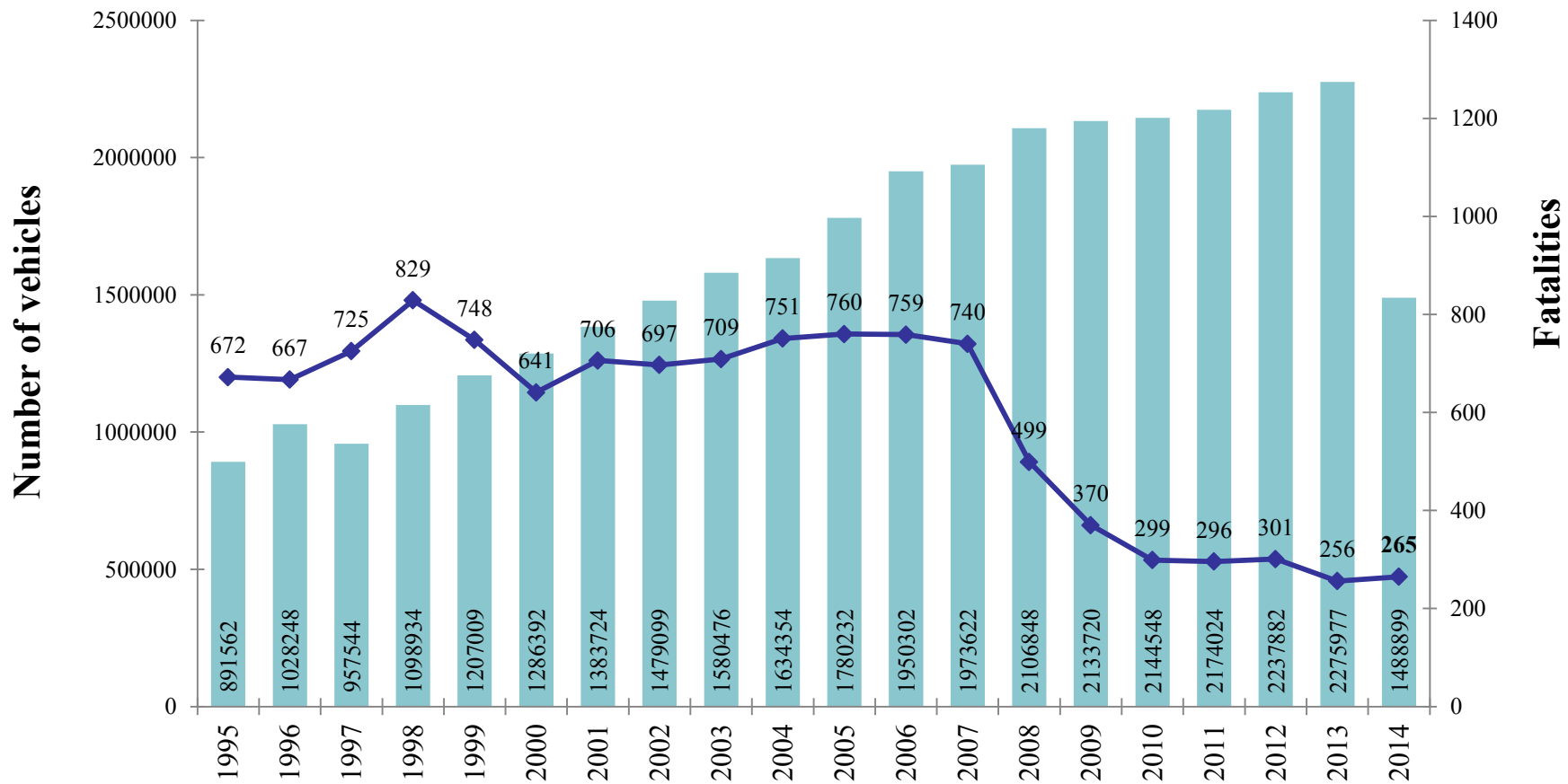
Egidijus Skrodenis
Director
Lithuanian Road Administration



**LITHUANIAN ROAD
ADMINISTRATION**

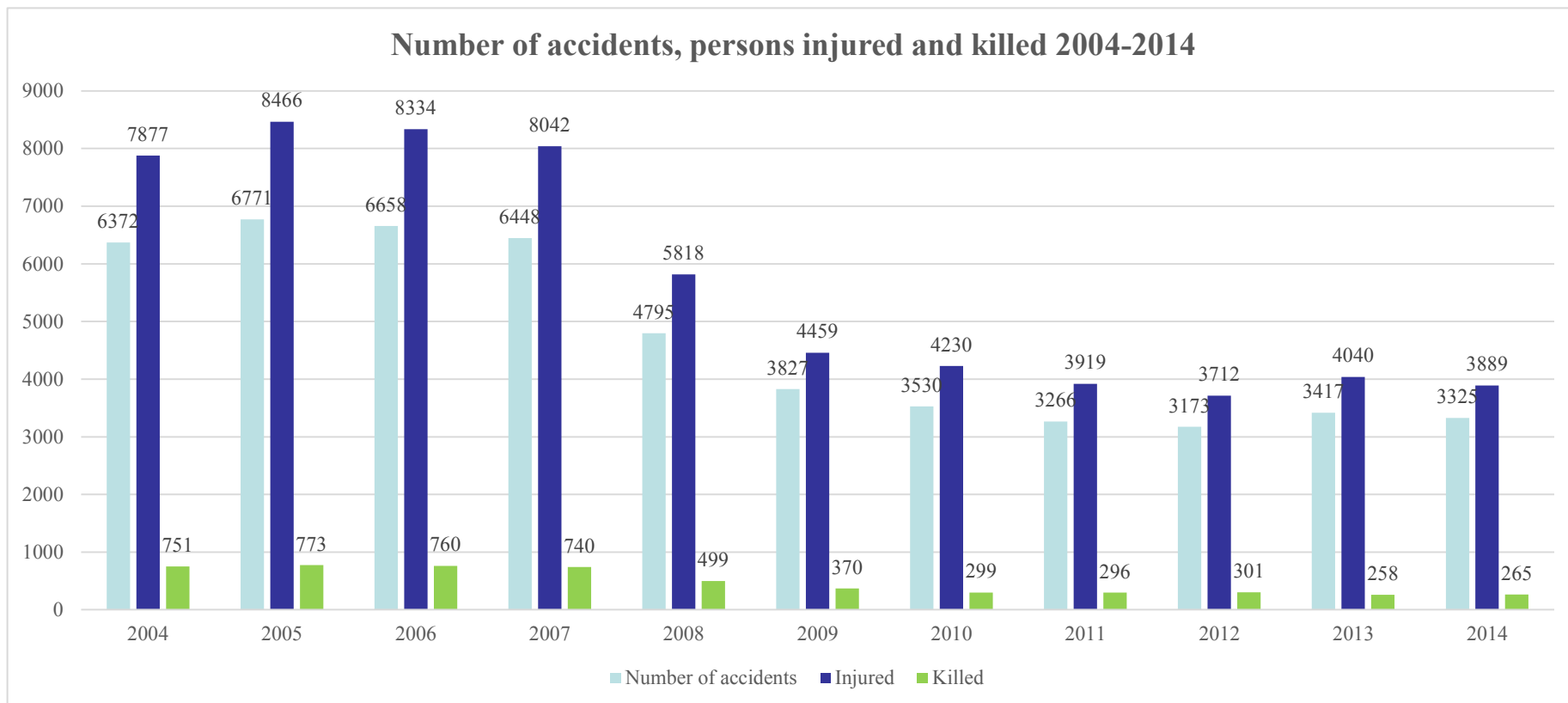


Number of Vehicles and Fatalities in 1995-2015



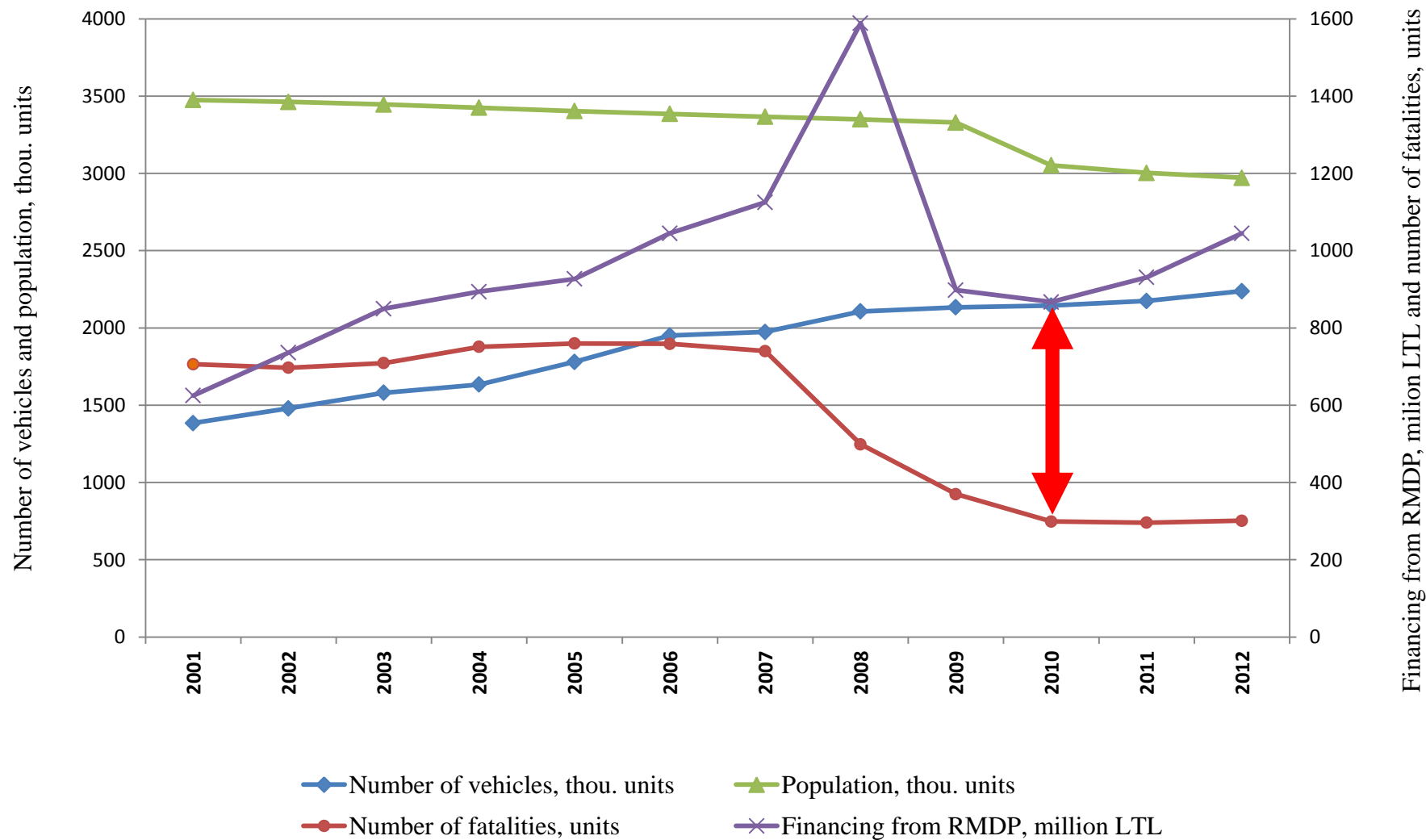


Number of accidents, persons injured and killed 2004-2014



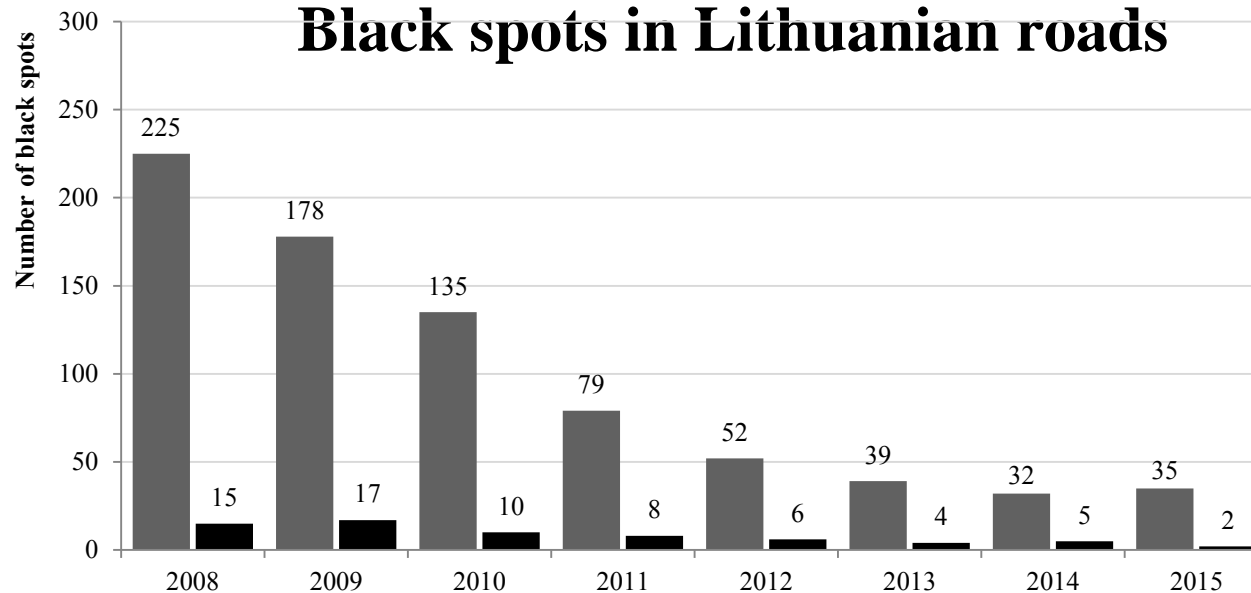


Impact of Road Sector Financing on Accident Rate

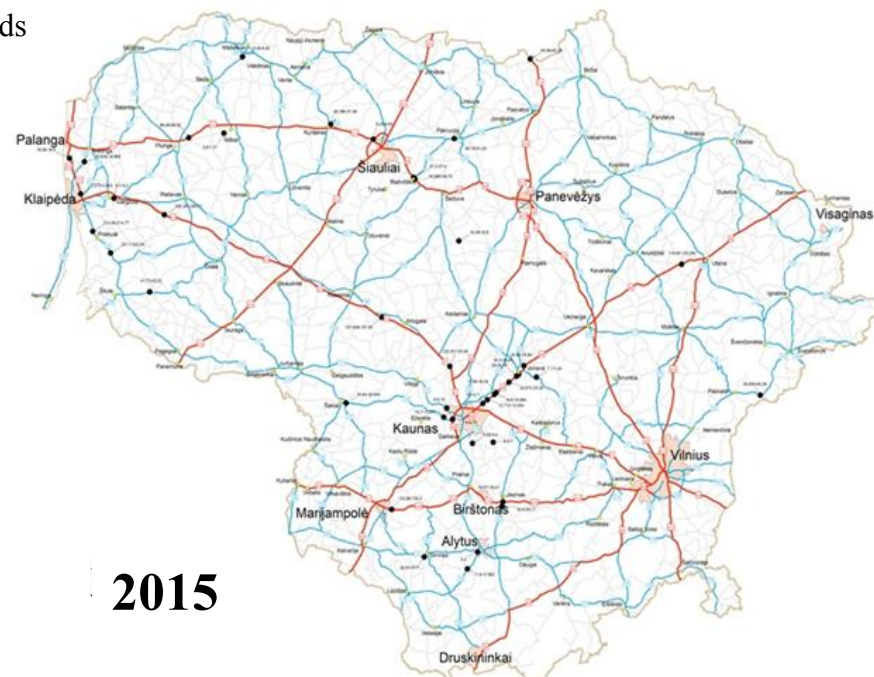
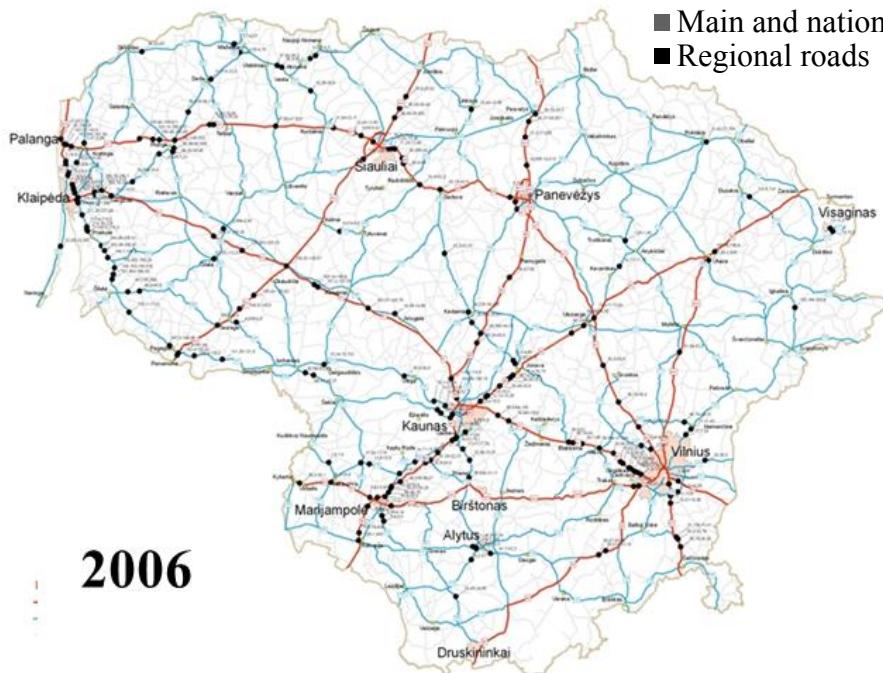




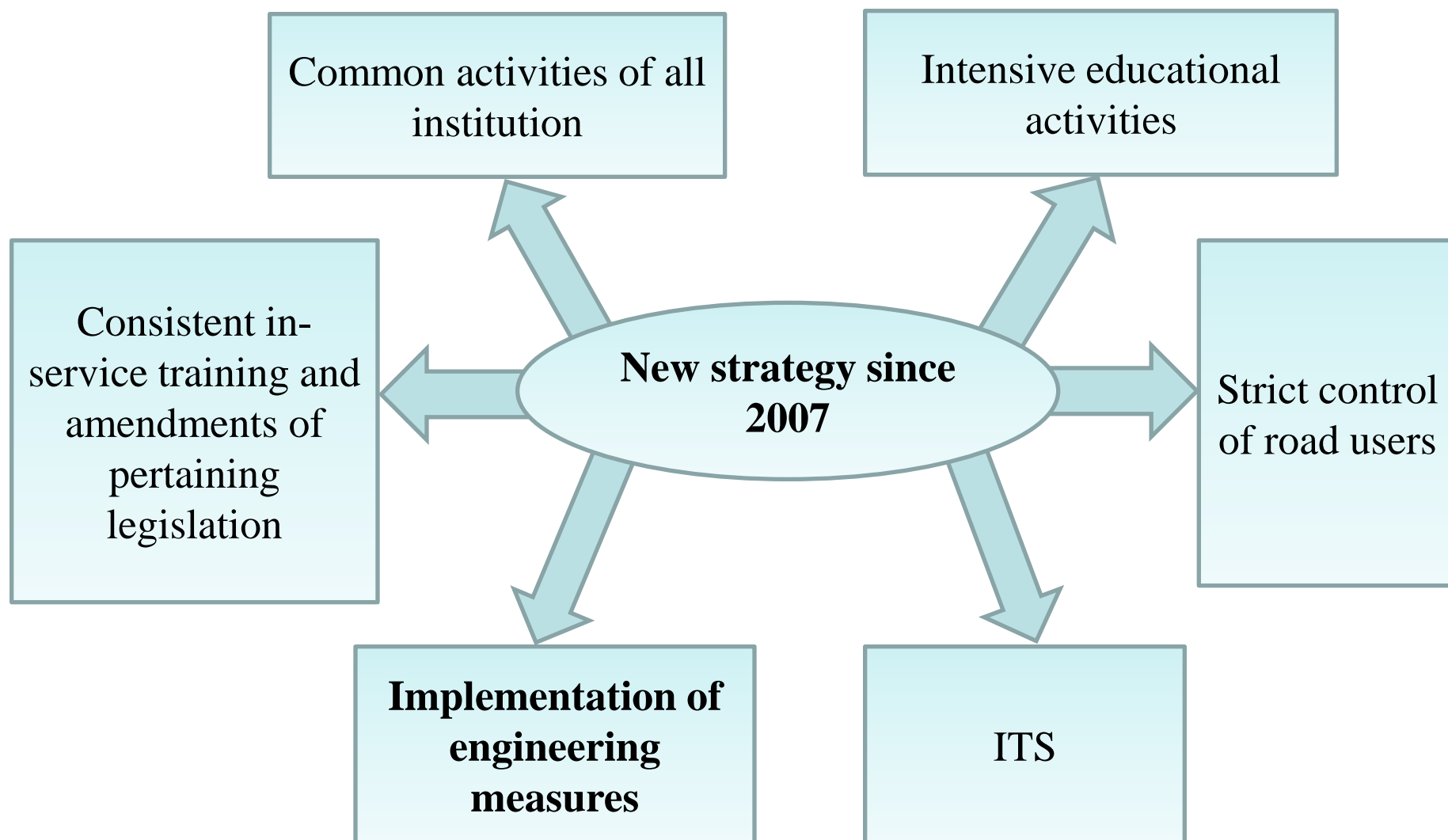
Black spots in Lithuanian roads



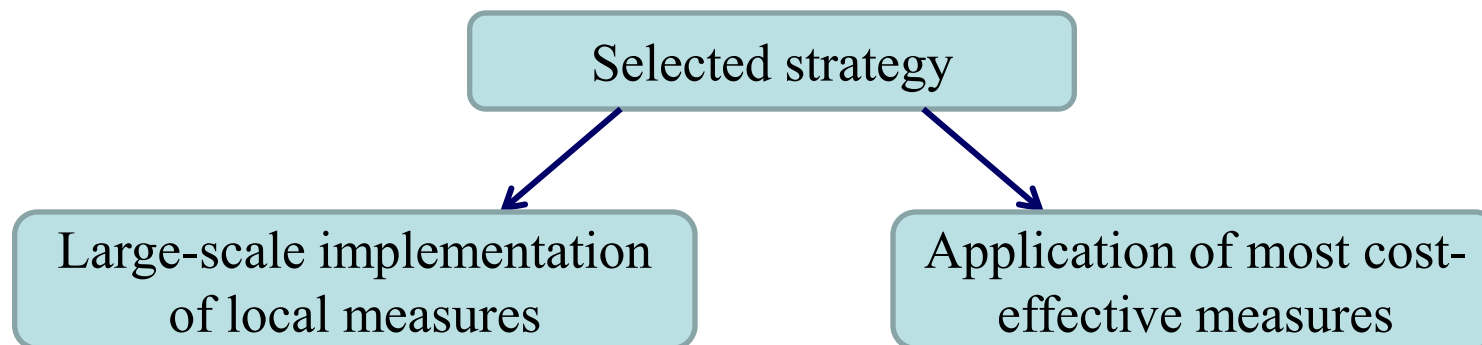
■ Main and national roads
■ Regional roads



Factors Influencing on Accident Rate Reduction



Type and strategy of engineering activities in Lithuania since 2007



- Implementation of cheaper measures enabled to implement engineering activities in almost all accident-prone and dangerous localities;
- Implementation of minor measures enabled to reduce design and installation time;
- Extremely large dissemination of engineering measures was ensured;
- Significant improvement of general traffic safety conditions was achieved;
- Significant economic effect was obtained.

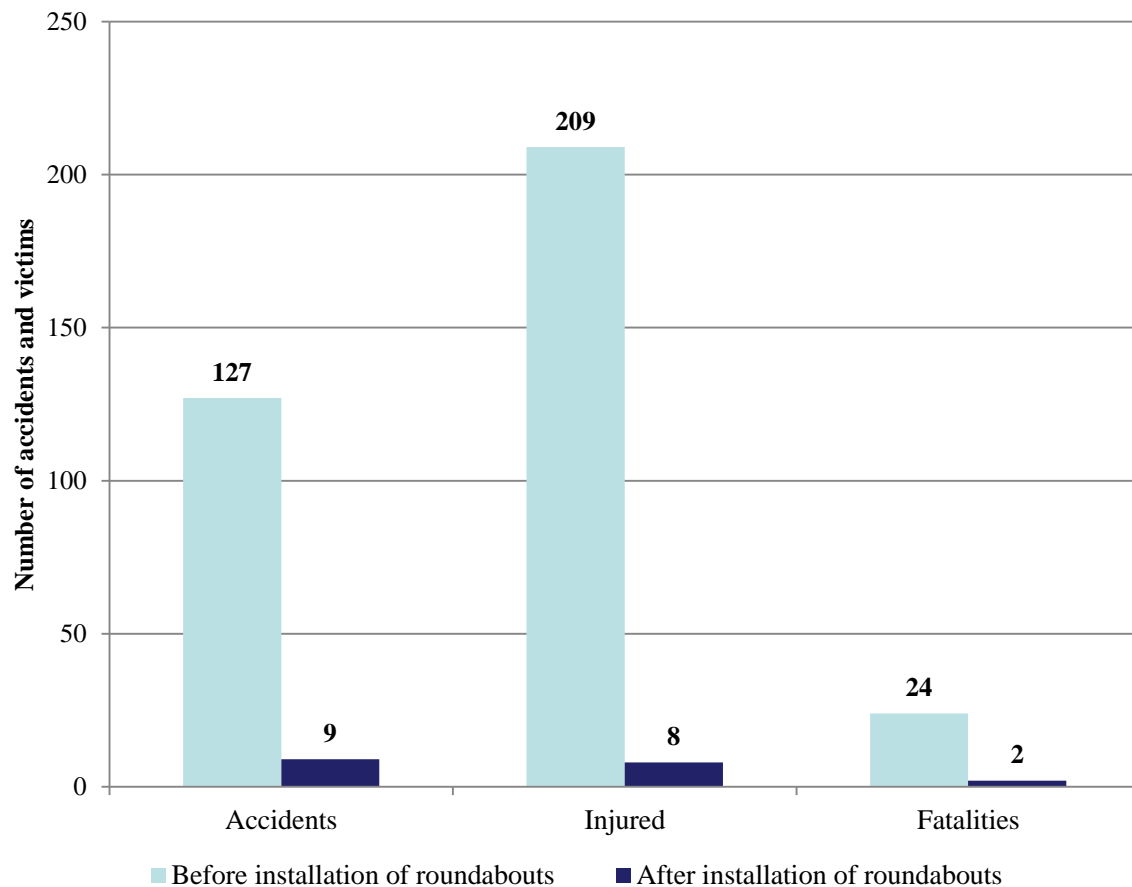
Speed management solutions and their influence on effectiveness



- Roundabouts;
- Engineering upgrading of dangerous junctions (safety islands);
- Infrastructure for vulnerable road users (road crossings);
- Traffic calming, speed humps and bumps;
- Speed cameras;
- Additional road safety measures.



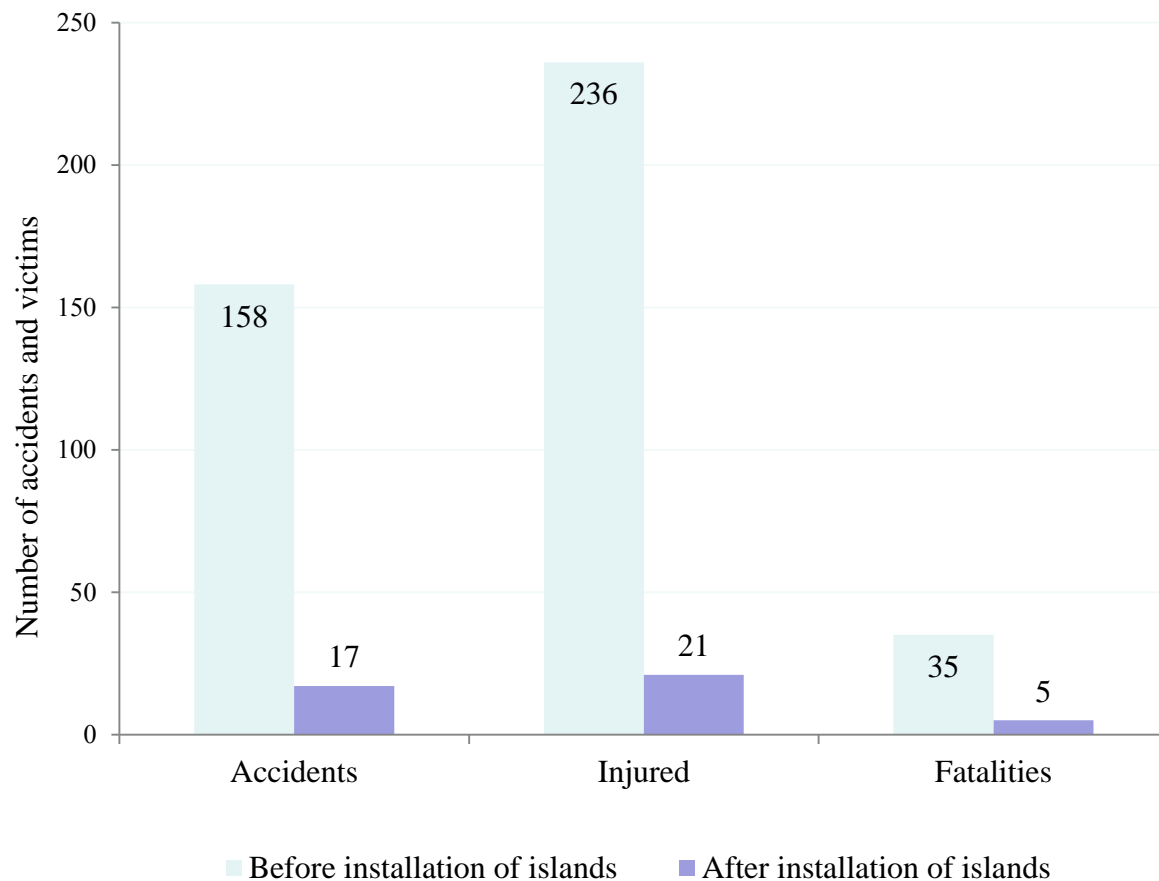
Roundabouts



	Change, %
Injury accidents	-92,91
Injured	-91,67
Fatalities	-96,17



Safety Islands

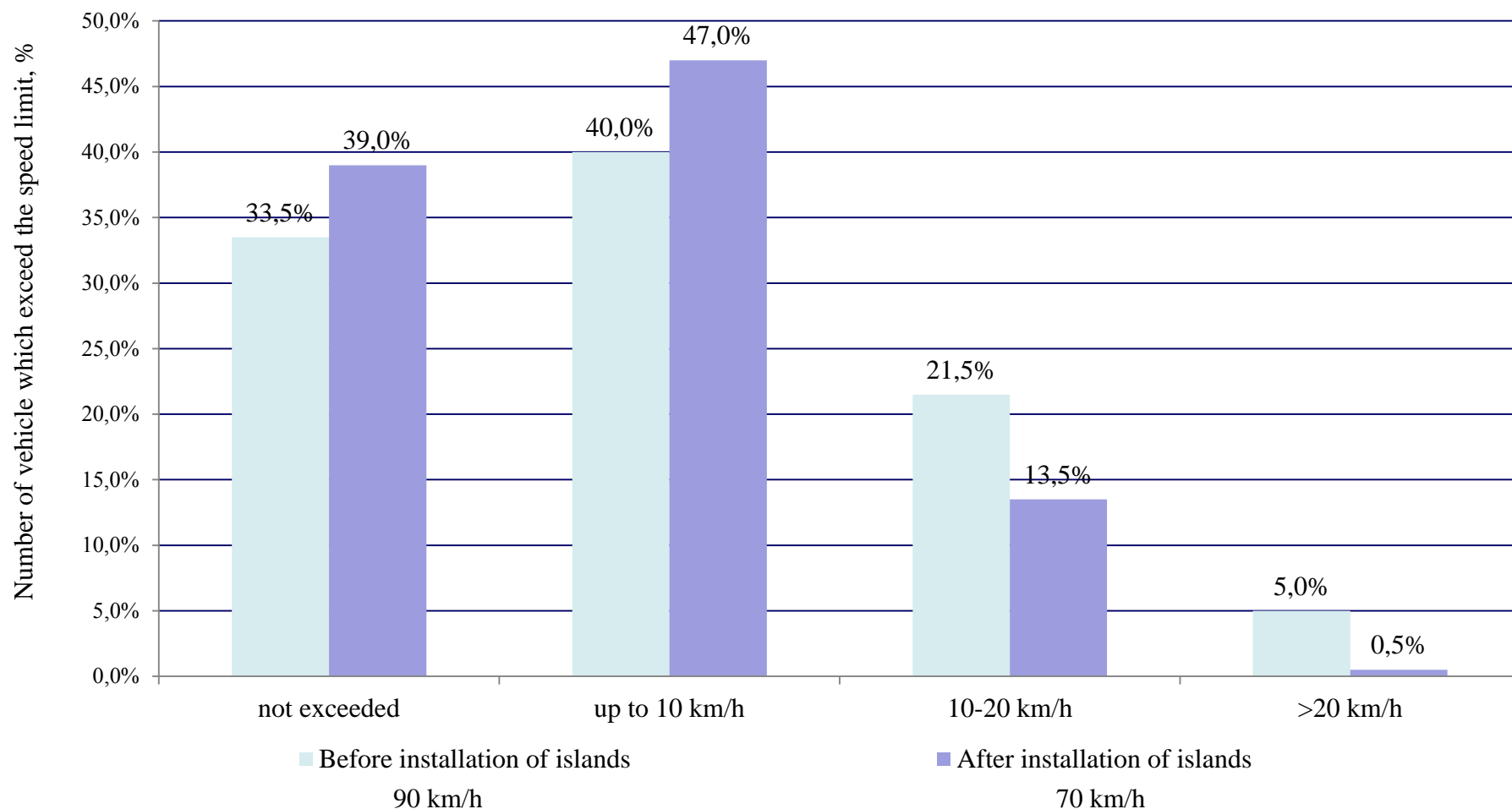


	Change, %
Injury accidents	-89,2
Injured	-91,1
Fatalities	-85,7

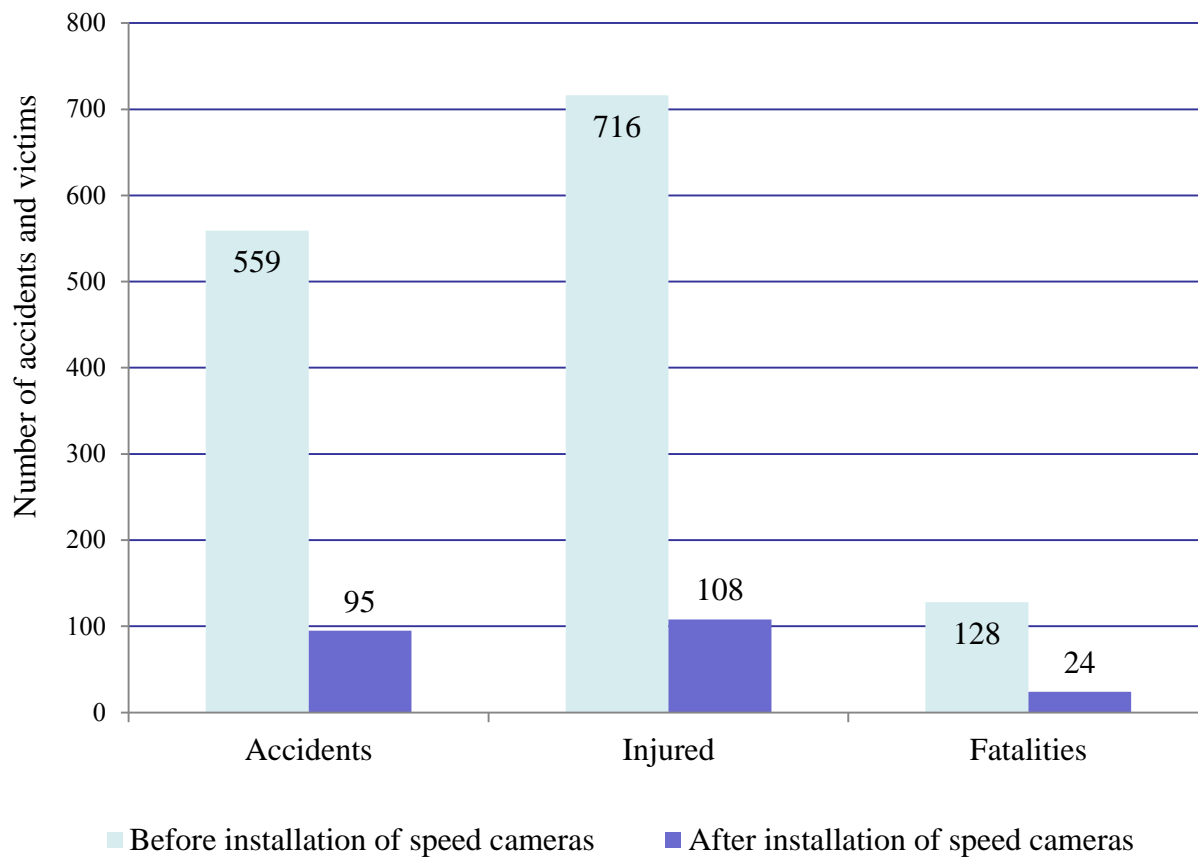




Driving Speed Changes on Intersection Zones Before and After Installation of Road Safety Islands



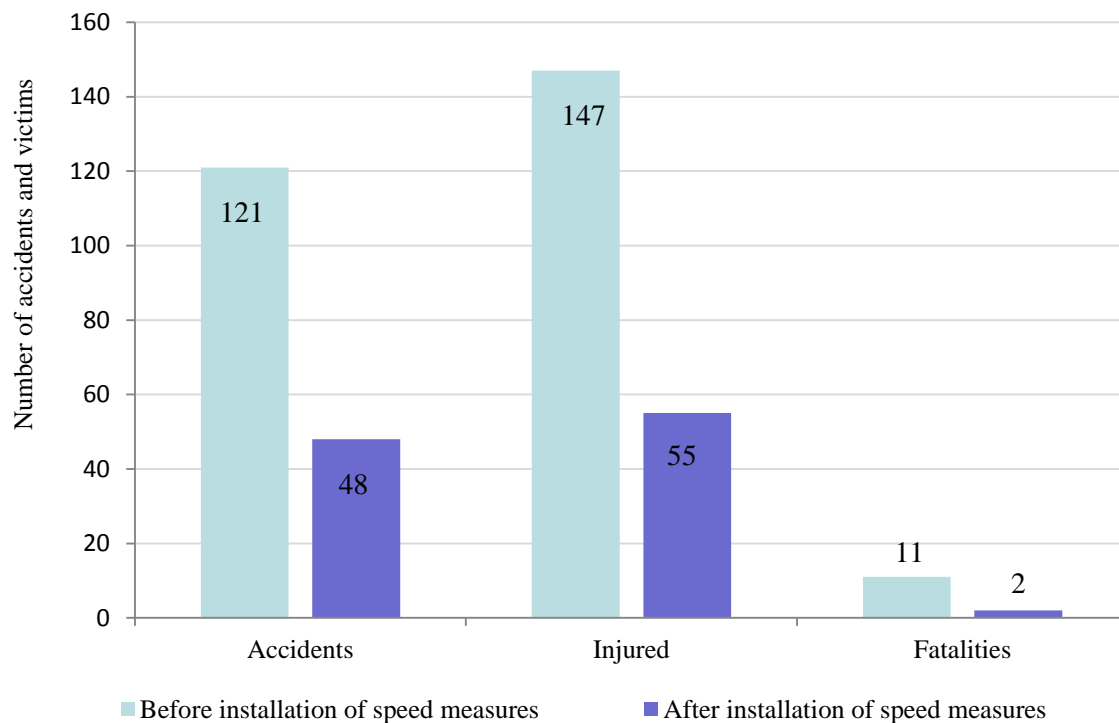
Speed Cameras



	Change, %
Injury accidents	-83,0
Injured	-84,9
Fatalities	-83,3



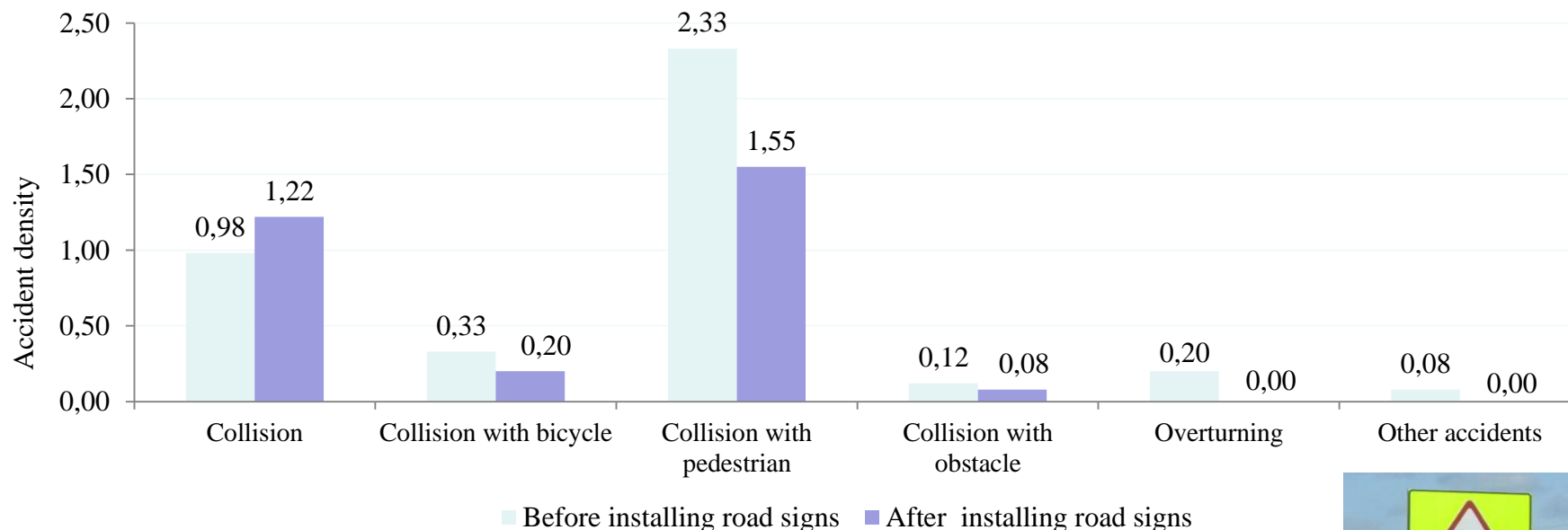
Traffic calming, speed humps and bumps



	Change, %
Injury accidents	-60,3
Injured	-62,5
Fatalities	-81,8



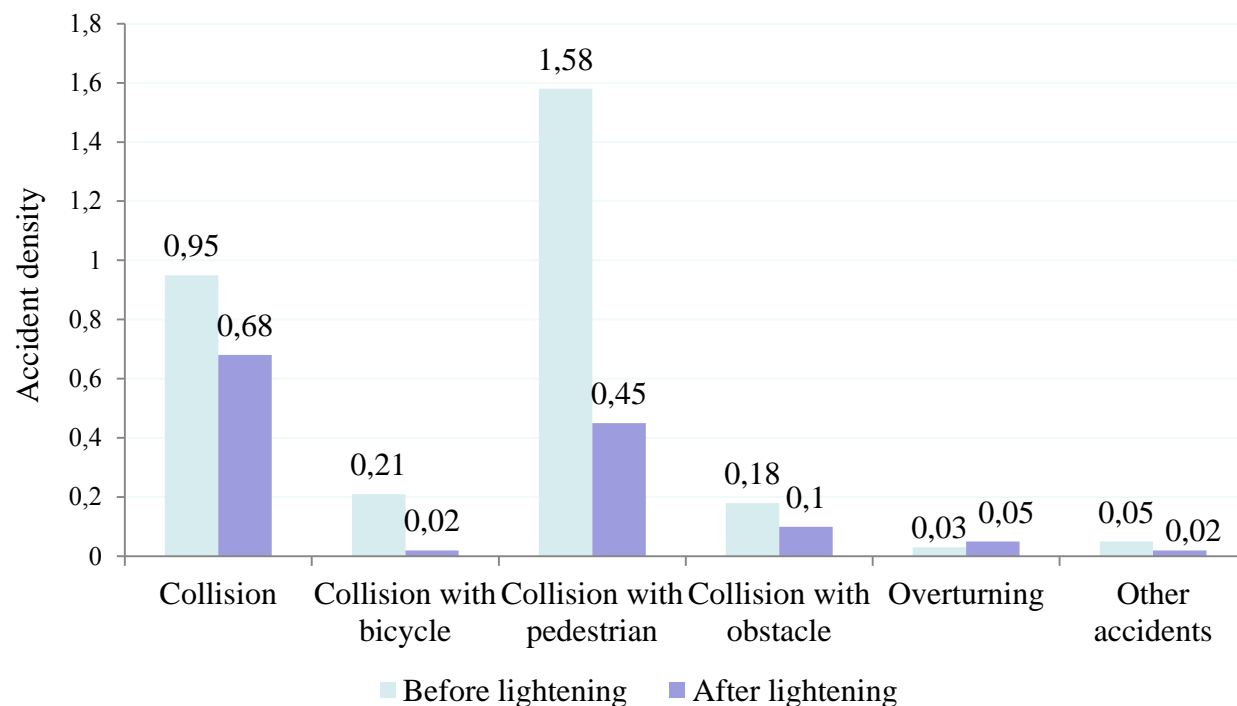
Accident Density by Accident Type Before and After Installing Road Sign



Accident type	Before installing road signs	After installing road signs
Collision	0,98	1,22
Collision with bicycle	0,33	0,20
Collision with pedestrian	2,33	1,55
Collision with obstacle	0,12	0,08
Overturning	0,20	0,00
Other accidents	0,08	0,00

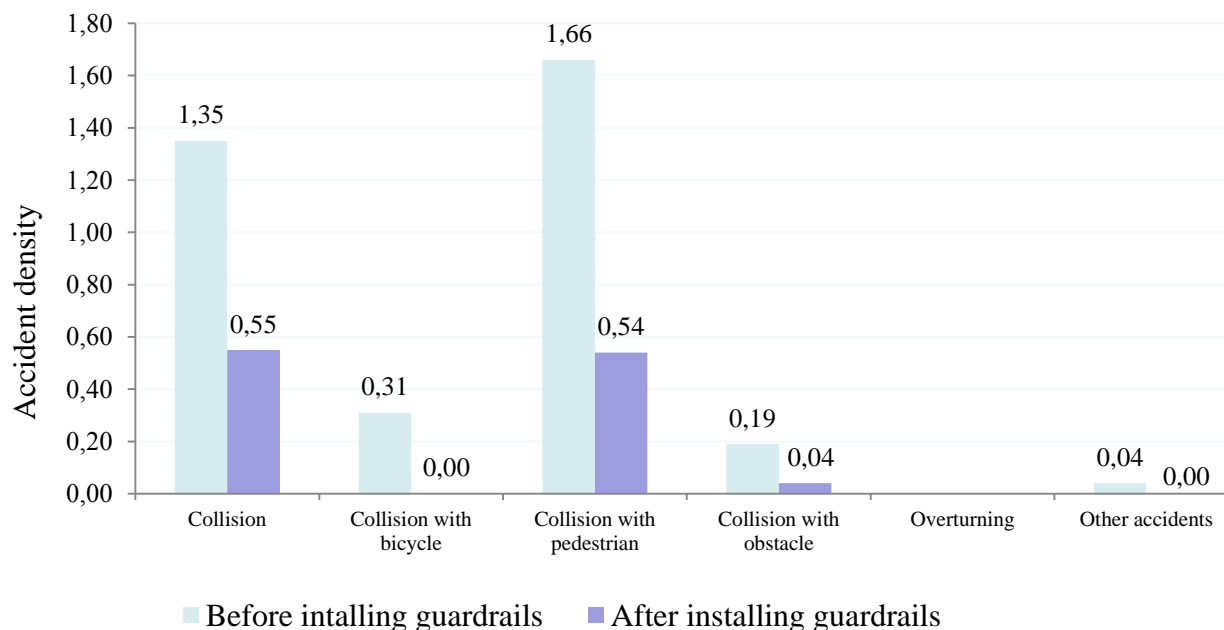


Accident Density by Accident Type Before and After Road Lightening



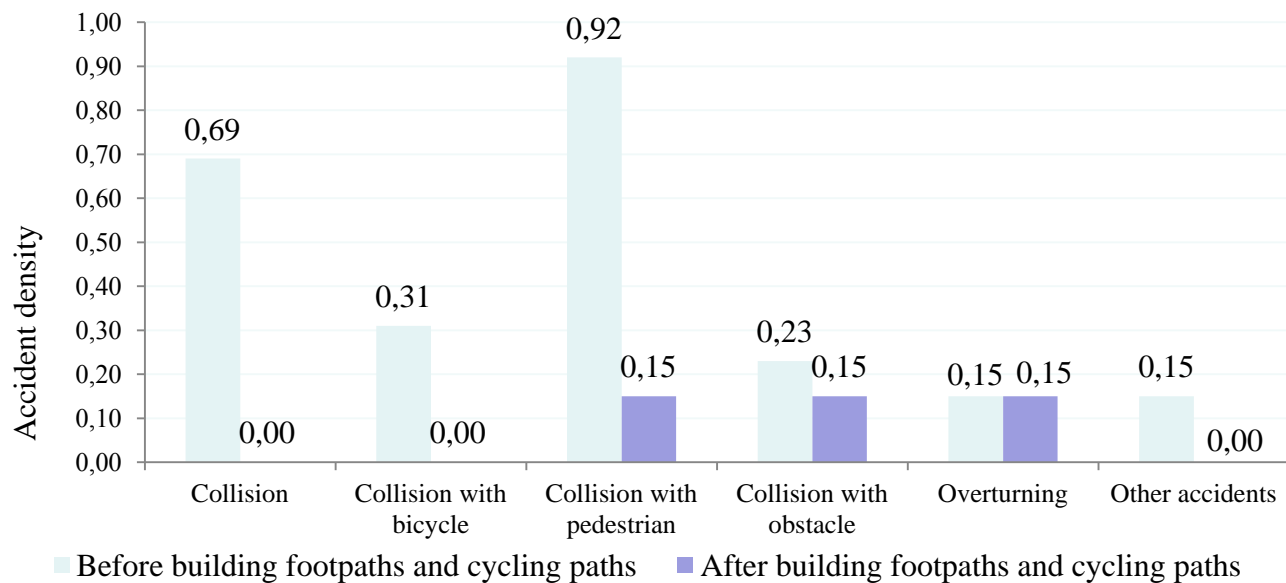
Accident type	Before lightening	After lightening
Collision	0,95	0,68
Collision with bicycle	0,21	0,02
Collision with pedestrian	1,58	0,45
Collision with obstacle	0,18	0,1
Overturning	0,03	0,05
Other accidents	0,05	0,02

Accident Density by Accident Type Before and After Installing Guardrails



Accident type	Before installing guardrails	After installing guardrails
Collision	1,35	0,55
Collision with bicycle	0,31	0,00
Collision with pedestrian	1,66	0,54
Collision with obstacle	0,19	0,04
Overturning	1,16	0,02
Other accidents	0,04	0,00

Accident Density by Accident Type Before and After Building Footpaths and Cycling Tracks



Accident type	Before building footpaths and cycling tracks	After building footpaths and cycling tracks
Collision	0,69	0,00
Collision with bicycle	0,31	0,00
Collision with pedestrian	0,92	0,15
Collision with obstacle	0,23	0,15
Overturning	0,15	0,15
Other accidents	0,15	0,00



Impact of Traffic Safety Measures on Road Accidents and Consequences

Measure	Change, %		
	Accidents	Fatalities	Injured
Lightning	-55,8	-73,0	-42,6
Guardrails	-68,1	-33,0	-72,6
Footpaths and cycling tracks	-81,0	-93,8	-87,2
Road signs	-24,0	-14,3	-7,6





Impact of Traffic Safety Measures on Different Types of Accidents

Measure	Accident type	Change in the number of accidents, %
Lighting	Collisions	-28,1
	Accidents with pedestrians and cyclists	-73,7
	Collisions with obstacles	-44,3
Guardrails	Collisions	-59,1
	Collisions with obstacles	-80,0
	Accidents with pedestrians and cyclists	-72,5
Footpaths and cycling tracks	Accidents with pedestrians and cyclists	-87,5
Road signs	Collisions	25,0
	Accidents with pedestrians and cyclists	-33,8
	Collisions with obstacles	-33,3
	Overturnings	-100,0

Educational activities



Specific projects:

- *„Take Care of Each Other on the Road“* (700 parishes)
- *„Traffic Safety in Communities“* (more than 150 communities every year)
- Lithuanian schoolchildren's competition *„Save Young Lives on the Roads“* (competition of primary school children *Šviesoforas* (Traffic Lights); competition of young cyclists *Saugus ratas* (Safe Wheel), competition of young scooter and motorcycle riders).

Educational activities



TV, RADIO

- ✘ Social advertisement on TV (Speeding, Alcohol, Seat belts, other);
- ✘ Reportages on TV;
- ✘ TV shows;
- ✘ Social advertisement, special discussions on Radio;
- ✘ Articles in newspapers, magazines;
- ✘ Internet sites information, Road safety sections, Banners, Reportages.

INTERNET



PRESS



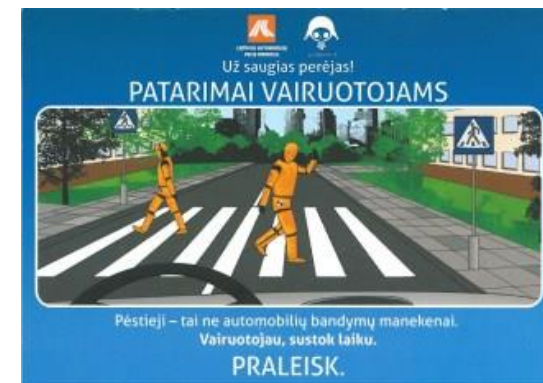
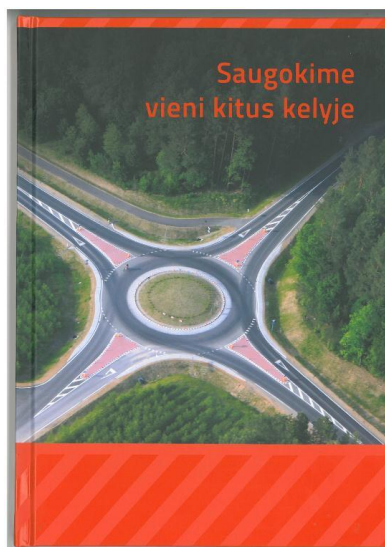
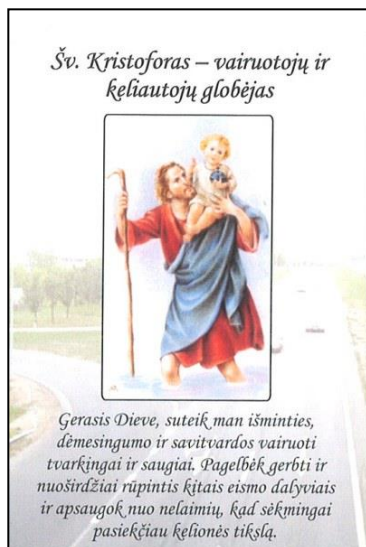
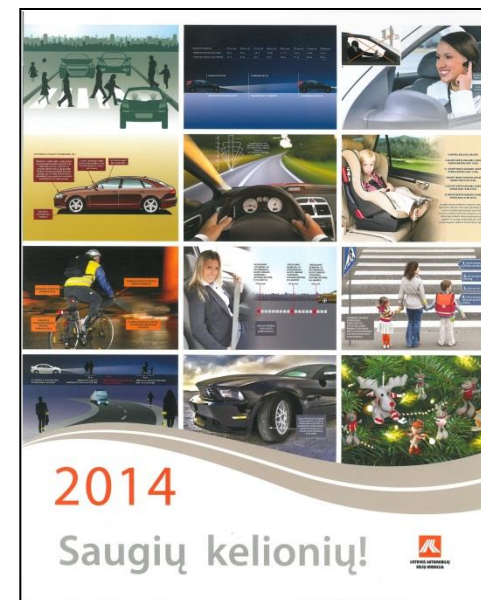
Educational activities

- ✘ Road safety information in different sport events (Rally, marathons);
- ✘ Wide-scale road safety projects (Don't be a moose, Project with basketball team, Project „Iron Trap“);
- ✘ World Day to Commemorate Road Fatalities;
- ✘ Safety Reflector Day.

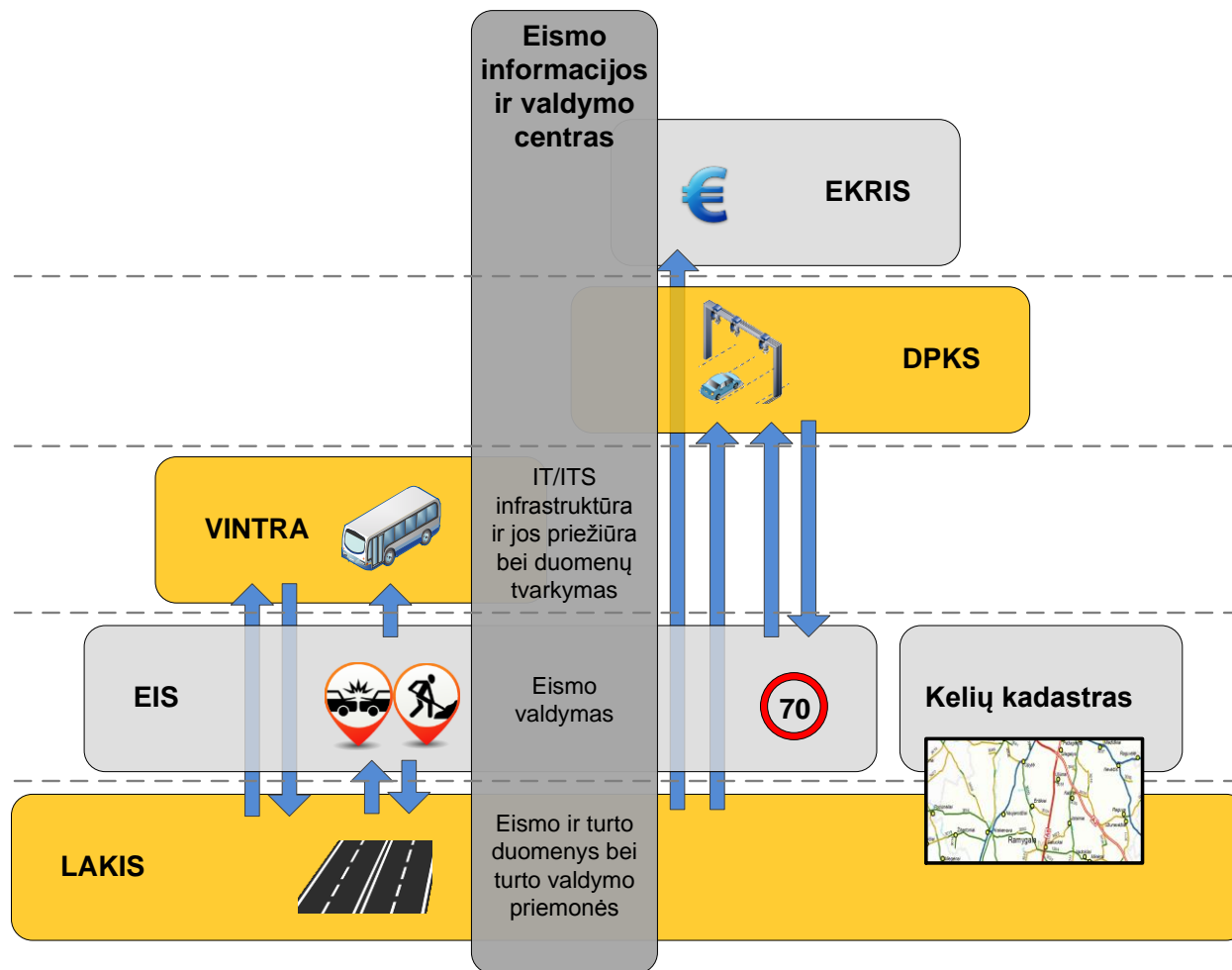


Educational activities

- ✘ About 120 000 safety reflectors every year;
- ✘ About 15 000 safety jackets;
- ✘ Educational books and booklets for children;
- ✘ Posters, visual information in bus stops;
- ✘ other.



ITS Framework



Sąvokos ir sutrumpinimai

DPKS – Daugiafunkcė pažeidimų kontrolės sistema

EIS – Valstybinės reikšmės kelių eismo informacinė sistema

EKRIS – Elektroninė kelių rinkliavos informacinė sistema

IT – informacinės technologijos

ITS – Intelektinių transporto sistemos

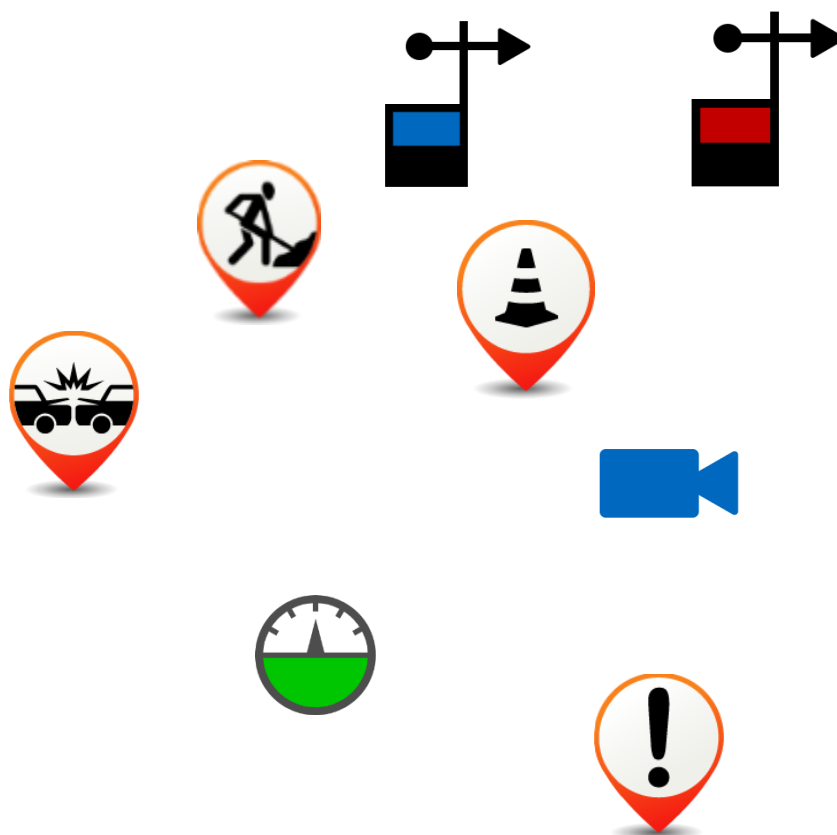
LAKIS – Valstybinės reikšmės kelių informacinė sistema

VINTRA - Viešojo transporto kelionių duomenų informacinė sistema



Traffic Information System

- Road weather conditions
- Pavement conditions
- Road works
- Traffic restrictions
- Accidents
- Cameras
- Planned road works
- Traffic volume
- Strategic noise map
- Pavement information

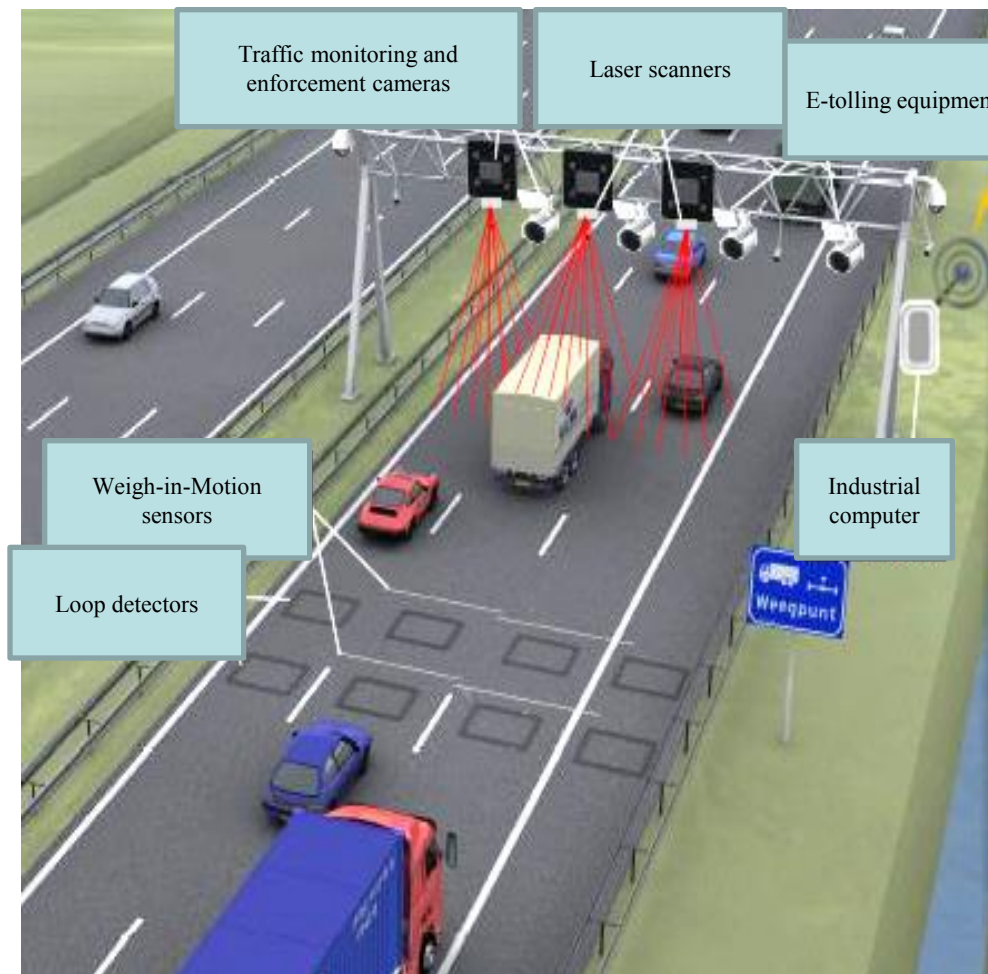


Implementing of Variable Message Signs in 2015-2016

- Speed limits system on A1 road in 2016



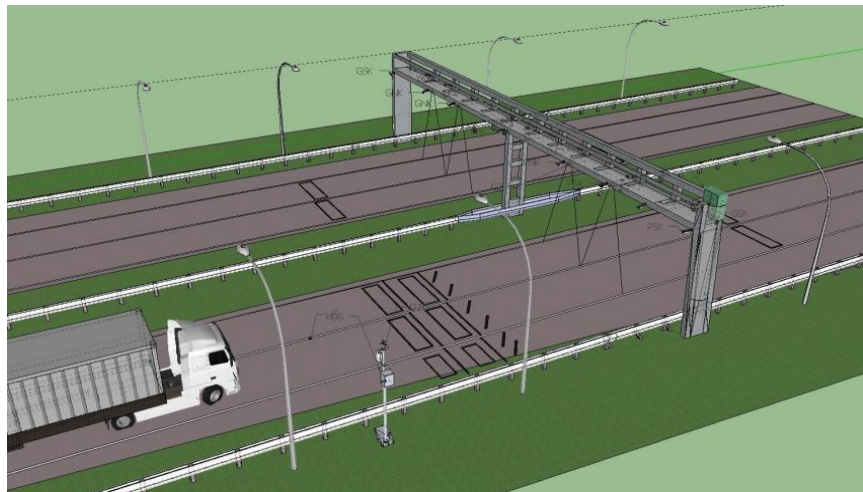
Multifunctional traffic enforcement and traffic monitoring system



Main functions:

- automated **average speed control**.
- **weigh-in-motion**;
- **license plate recognition** (technical inspection data, insurance validity, vehicle registration);
- **E-tolling** (or vignette validity checks checking).

Multifunctional traffic enforcement and traffic monitoring system



Deployment plan:

- 2015-2017: **Pilot phase** (3 locations): metrology, tests, preselection use;

- 2016 - 2018: Complete network of **Weigh-in-Motion system** (over 50 locations);

- 2016 – 2018: Complete network of **multifunctional traffic enforcement and traffic monitoring system** (appr. 200 stations);

- in plans: **e-tolling** (user pays-polluter pays principle) on the main roads.

Traffic monitoring and control

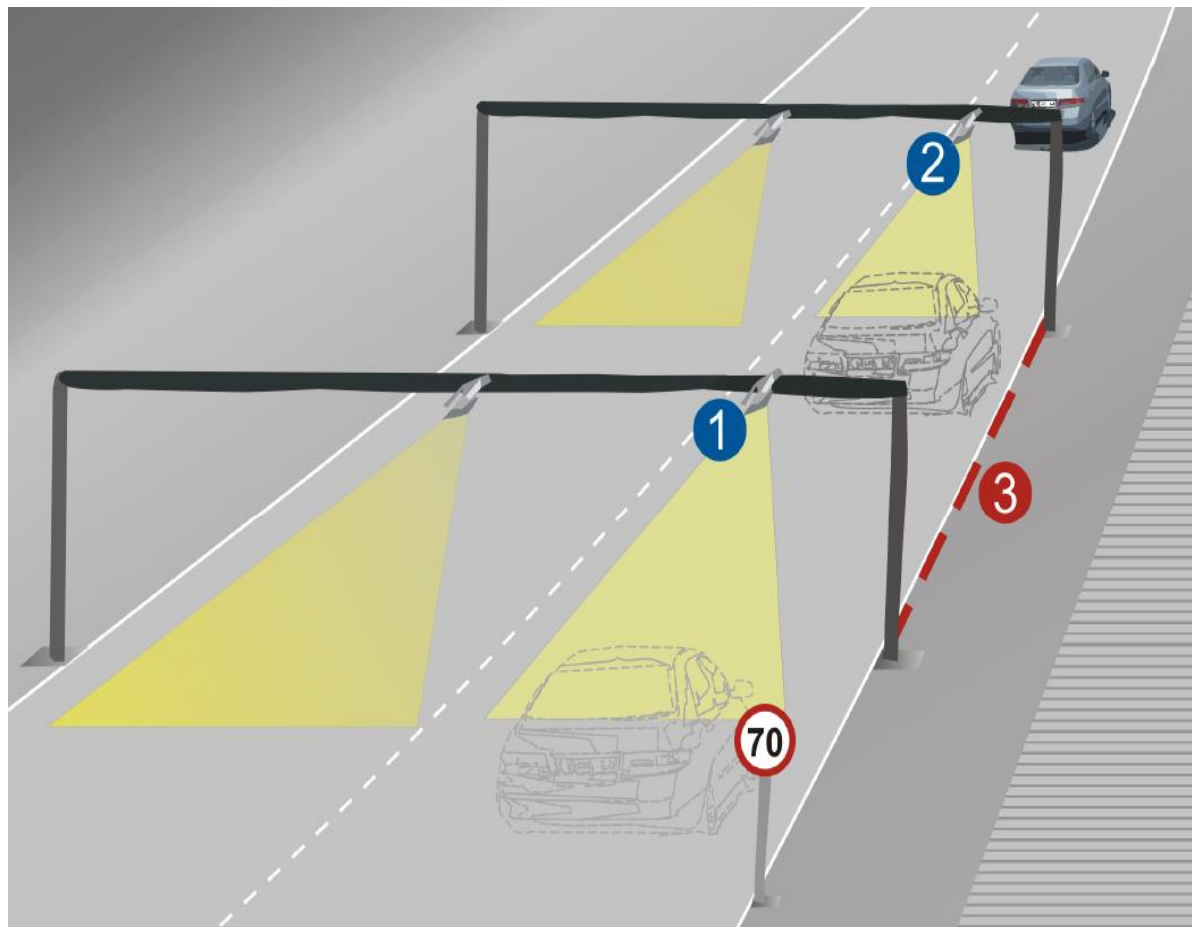
Enforcement of violations

- Weigh in motion;
- Control of dimensions;
- Speed enforcement;
- Technical inspection validity;
- Car insurance validity;
- Control of stolen vehicles;
- Car registration validity;
- Etc.

Traffic monitoring

- Data on traffic loading;
- Transport vehicles classification;
- Traffic conditions monitoring;
- Monitoring of traffic disturbances;
- Real-time traffic information;
- Etc.

Average Speed Control System



- Feasibility study in 2015;
- Pilot project in 2015.



Lithuania and Sweden Receives PIN Road Safety Awards 2011



Road deaths cut by 58% in Lithuania since 2001



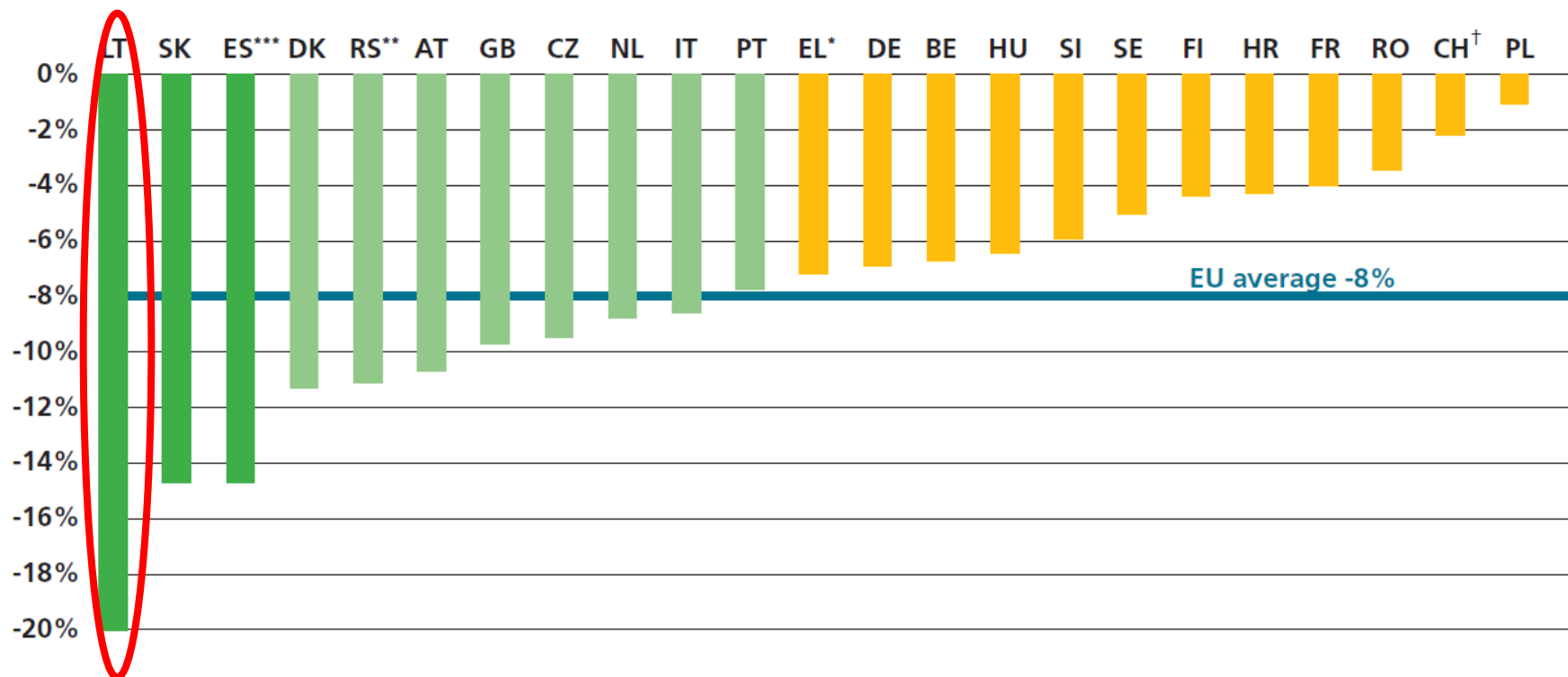
Ranking EU Progress on Improving Motorway Safety

PIN Flash Report 28

March 2015



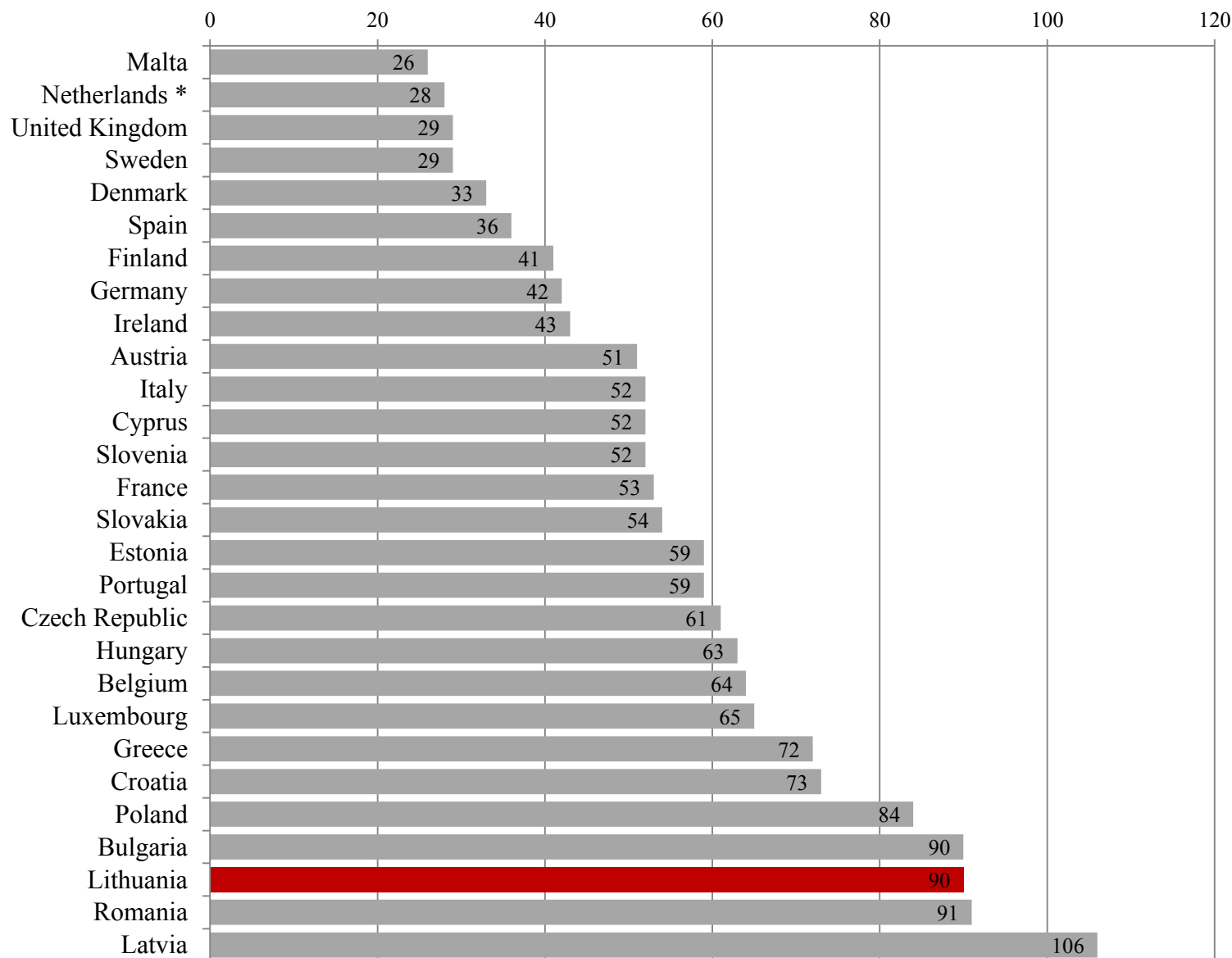
European Transport Safety Council



Average yearly percentage change estimated over the period 2004-2013 in deaths on motorways



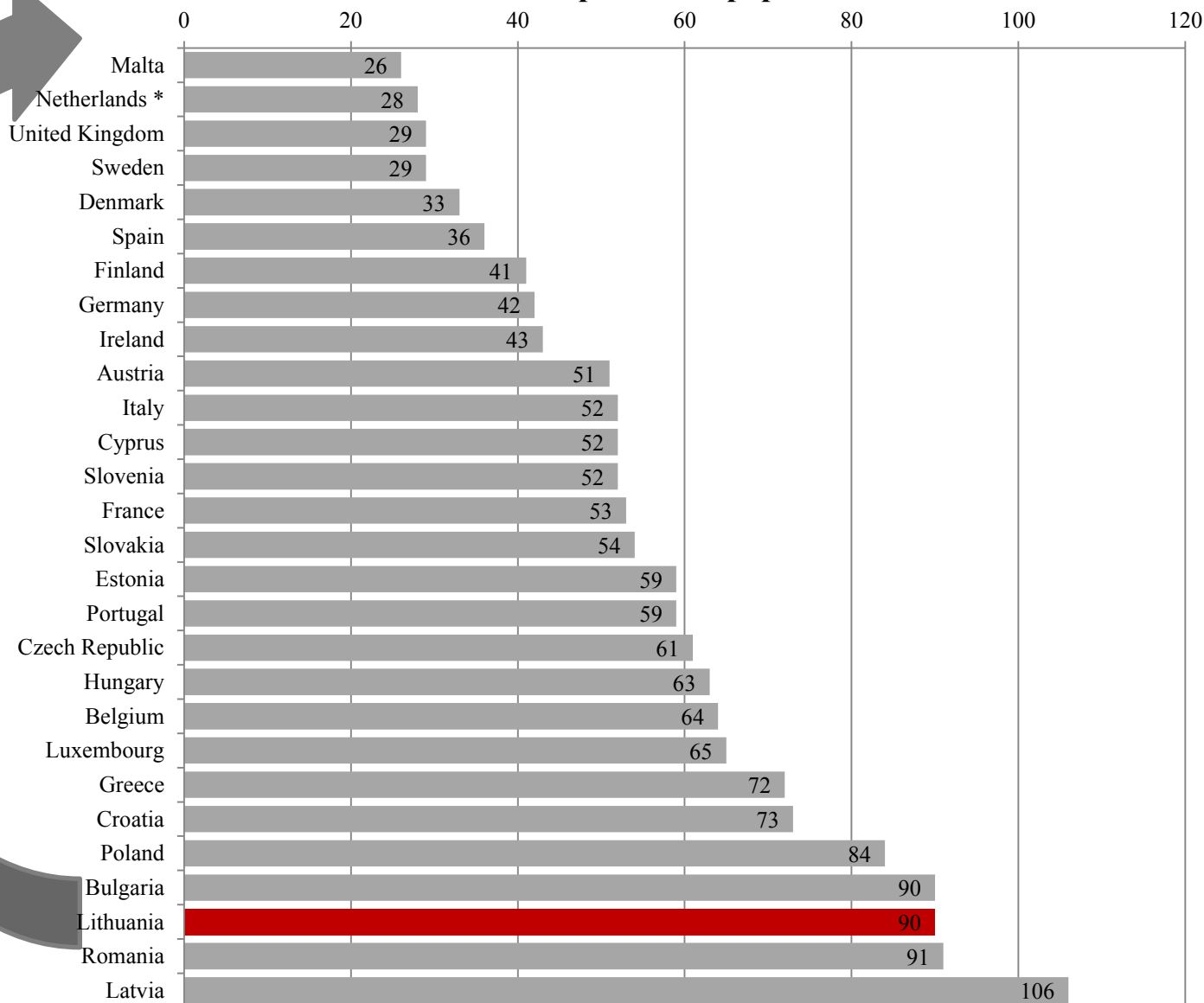
Number of Fatalities per 1 Million Inhabitants in 2014





Future challenges

Number of killed per 1 mln. population





THANK YOU FOR YOUR ATTENTION