

Results of Measuring Key Performance Indicators for Road Safety Policy in Bulgaria

<https://trendlineproject.eu/>



Co-funded by the European Union

Trend line



▶ What is Trendline?

- Brings together **29 European countries** (25 EU Member States + 4 observer countries)
- Focuses on:
 - Data collection
 - Data analysis
 - Delivery of **Road Safety KPIs (Key Performance Indicators)**
 - Use of KPIs in road safety policies

▶ Project Background

- Co-funded by the **European Union**
- Builds on experience from the **Baseline project**

▶ Why KPIs Matter

- ▶ Provide insights into factors linked to:
 - ▶ Crash risks
 - ▶ Injury risks

▶ Core Focus

- ▶ The project is built around **8 key KPIs** – **Speed, Safety Belt, Protective Equipment, Drugs, Distraction, Vehicle Safety, Infrastructure, Post-Crash Care** + experimental KPIs



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- ▶ **Institution:** State Agency Road Safety (SARS)
- ▶ **Project goal:** Collect and analyze data on key road safety indicators for the purpose of safety policy-making
- ▶ **Builds on the experience** accumulated under the Baseline Project
- ▶ **Implementation period:** 36 months (October 2022 – October 2025)
- ▶ Bulgaria is involved in measuring **6 key performance indicators (KPIs)**

INFORMATION ABOUT THE PROJECT IN BULGARIA



SPEED
share of vehicles traveling within the speed limit

ALCOHOL
share of drivers driving within the legal limit for blood alcohol content

DISTRACTION
share of drivers not using a handheld mobile device

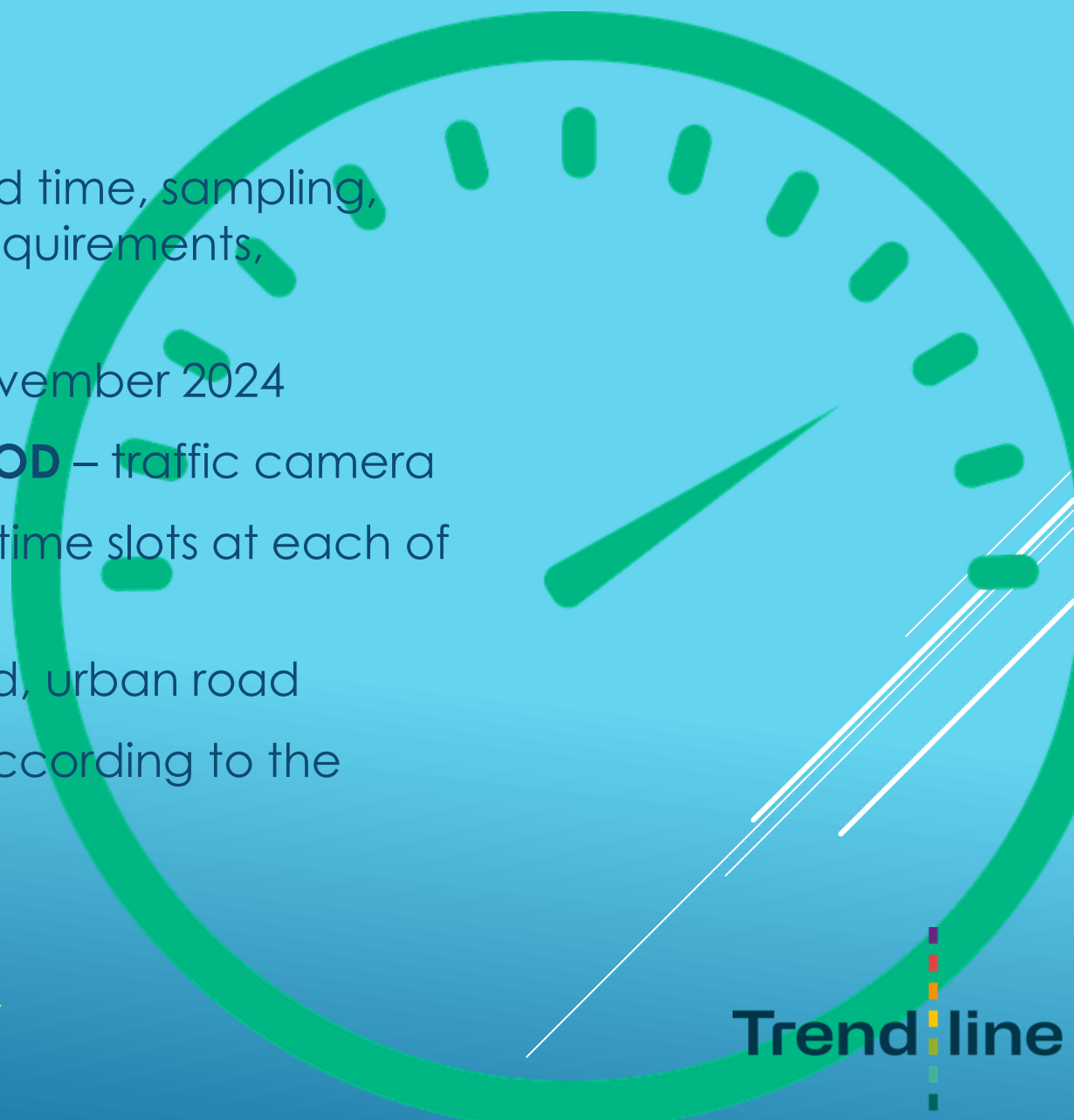
SAFETY BELTS AND CRS
share of vehicle occupants using the safety belt of child restraint system correctly

HELMETS
share of riders of powered two-wheelers and bicycles wearing a protective helmet

VEHICLE SAFETY
share of new passenger cars with a Euro NCAP safety rating equal to or above 4 stars

KPIs MEASURED IN BG



- 
- ▶ **PREPARATION** – measurement locations and time, sampling, schedules, traffic camera trainings, data requirements, processing plan, and calculation methods
 - ▶ **FIELDWORK**– May-June and September-November 2024
 - ▶ **PRIMARY INFORMATION COLLECTION METHOD** – traffic camera
 - ▶ **SAMPLE** – comprehensive survey in certain time slots at each of the designated locations
 - ▶ **TYPES OF LOCATIONS** - motorway, rural road, urban road
 - ▶ **DATA ANALYSIS AND KPI CALCULATION** – according to the TRENDLINE methodology

SPEED: **METHODOLOGY**

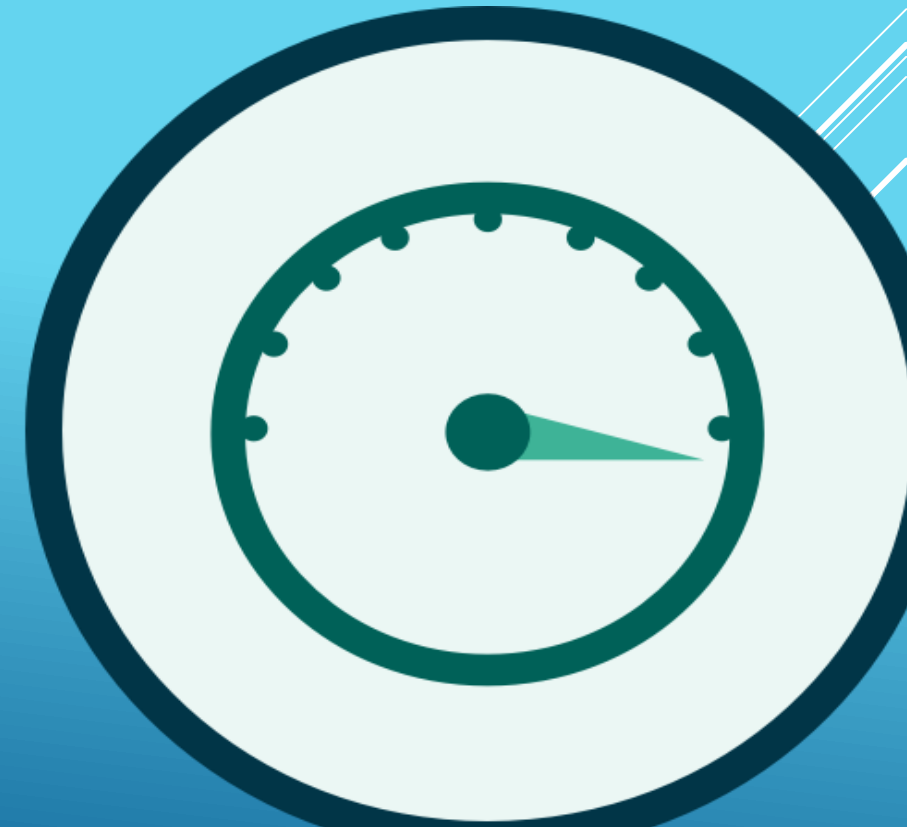
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- ▶ Number of implemented locations – **30**
- ▶ Number of measurement sessions carried out- **120**
- ▶ Counted passenger cars – **77,998**

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- ▶ Motorways – **30,644**
- ▶ Rural roads – **26,226**
- ▶ Urban roads – **21,128**



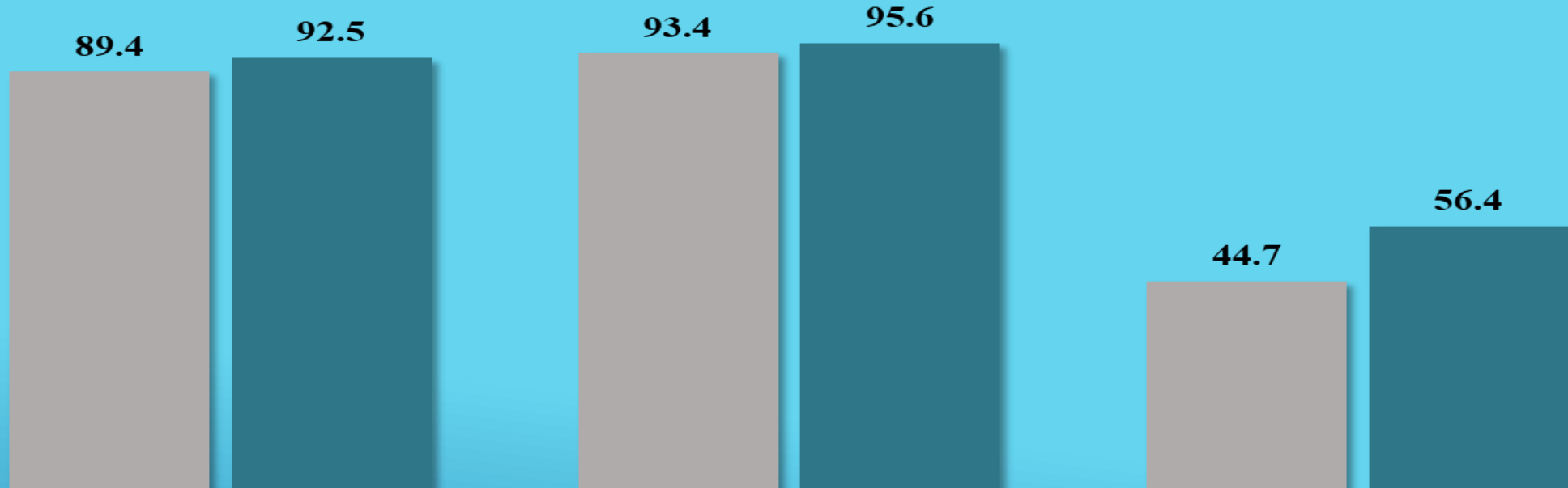
СКОРОСТ - РЕЗУЛТАТИ



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Ключов показател „Скорост“

■ Baseline ■ Trendline



Магистрала

Път извън населено място

Път в застроени зони

Дял на водачите, които шофират в рамките на ограничението на скоростта, според типа път (%)

SPEED: COMPARATIVE DATA



- ▶ **Preparation** – locations, sample, schedules, training of interviewers, processing plan, and calculation methods
- ▶ **Fieldwork** – May-June 2024
- ▶ **Primary information collection method** – sociological survey among drivers of light vehicles
- ▶ **Types of locations** – motorway, rural road, urban road
- ▶ **Data analysis and KPI calculation** – according to the TRENDLINE methodology

ALCOHOL: **METHODOLOGY**

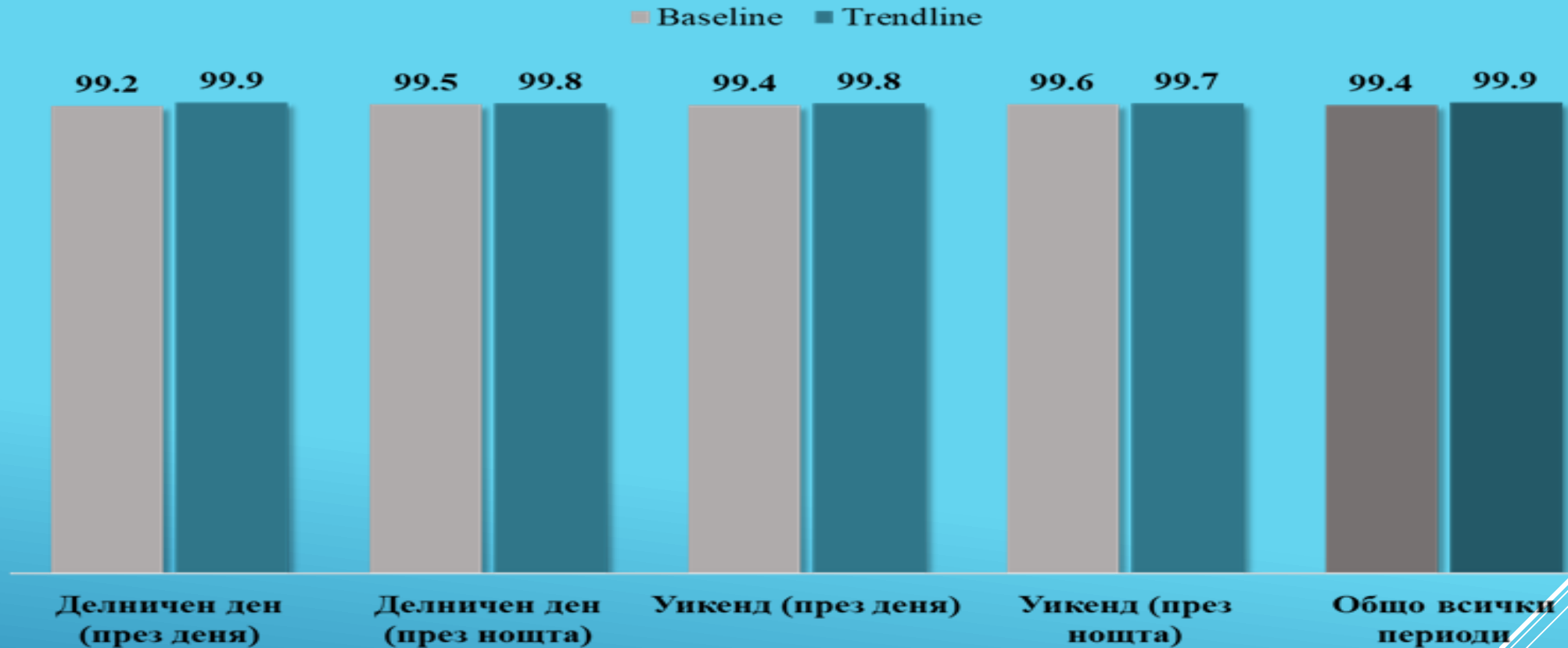


- ▶ Number of drivers surveyed – 2,572
- ▶ Motorways – 855
- ▶ Rural roads – 862
- ▶ Urban roads – 855

ALCOHOL: RESULTS



Ключов показател „Употреба на алкохол“



Процент водачи, декларирали, че шофират в рамките на законовата граница за съдържание на алкохол в кръвта, според периода и времето на пътуването (%)

ALCOHOL: COMPARATIVE DATA





- ▶ **Preparation** – locations, sample, schedules, training of interviewers, processing plan, and calculation methods
- ▶ **Fieldwork** – May-June 2024
- ▶ **Primary information collection method** – 10-minute comprehensive traffic count before the start and after the end of each session
- ▶ **Types of locations** – motorway, rural road, urban road
- ▶ **Data analysis and KPI calculation** – according to the TRENDLINE methodology



DISTRACTION: METHODOLOGY

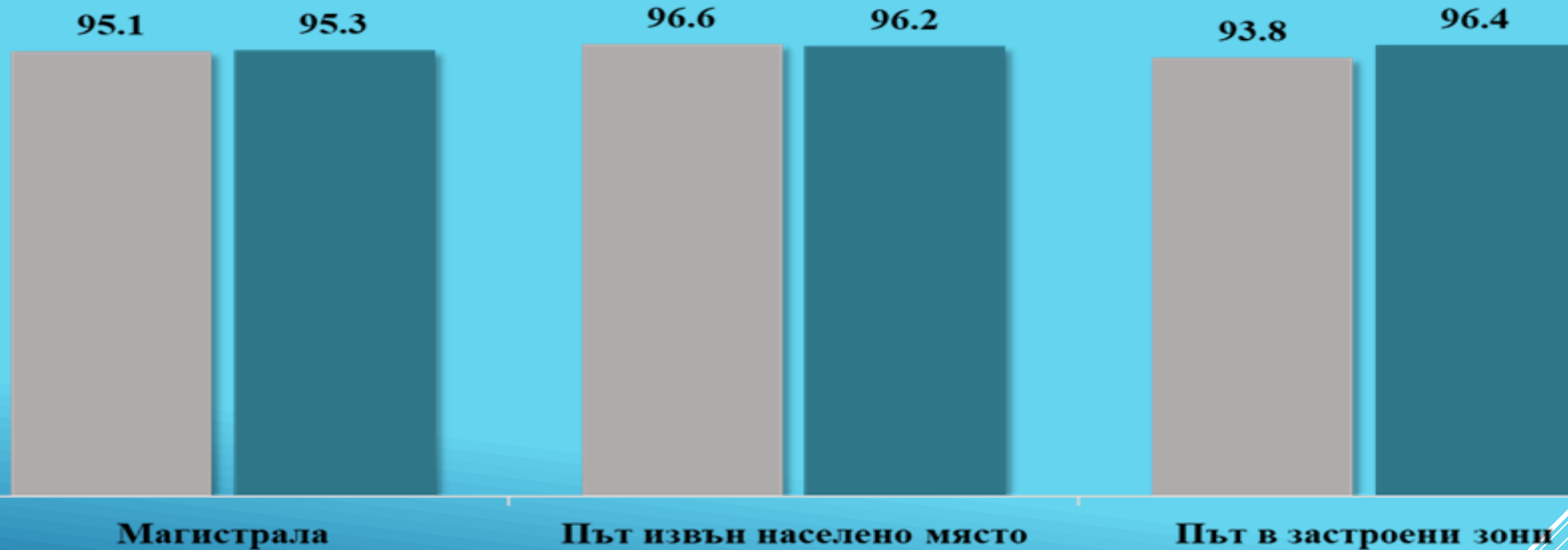
- ▶ Number of observed vehicles – 40,061
- ▶ Motorways – 15,415
- ▶ Rural roads – 12,325
- ▶ Urban roads – 12,321

DISTRACTION: RESULTS



Ключов показател „Разсейване“

Baseline Trendline



Дял на водачите, които НЕ използват мобилно устройство по време на шофиране, според типа път (%)

DISTRACTION: COMPARATIVE DATA





SAFETY BELTS AND CRS: METHODOLOGY



- ▶ **Preparation** – locations, sample, schedules, training of interviewers and observers, processing plan, and calculation methods
- ▶ **Fieldwork, Part A** – May-June 2024, September-November 2024 r.
- ▶ **Fieldwork, Part B** – May-June 2024
- ▶ **Primary information collection method** – random direct observation of vehicles (A) and survey of volunteer drivers (B)
- ▶ **Types of locations** – motorway, rural road, urban road
- ▶ **Data analysis and KPI calculation** – according to the TRENDLINE methodology



- ▶ **Number of observed vehicles, part A – 40,061**
 - ▶ Motorways – **15,415**
 - ▶ Rural roads – **12,325**
 - ▶ Urban roads – **12,321**

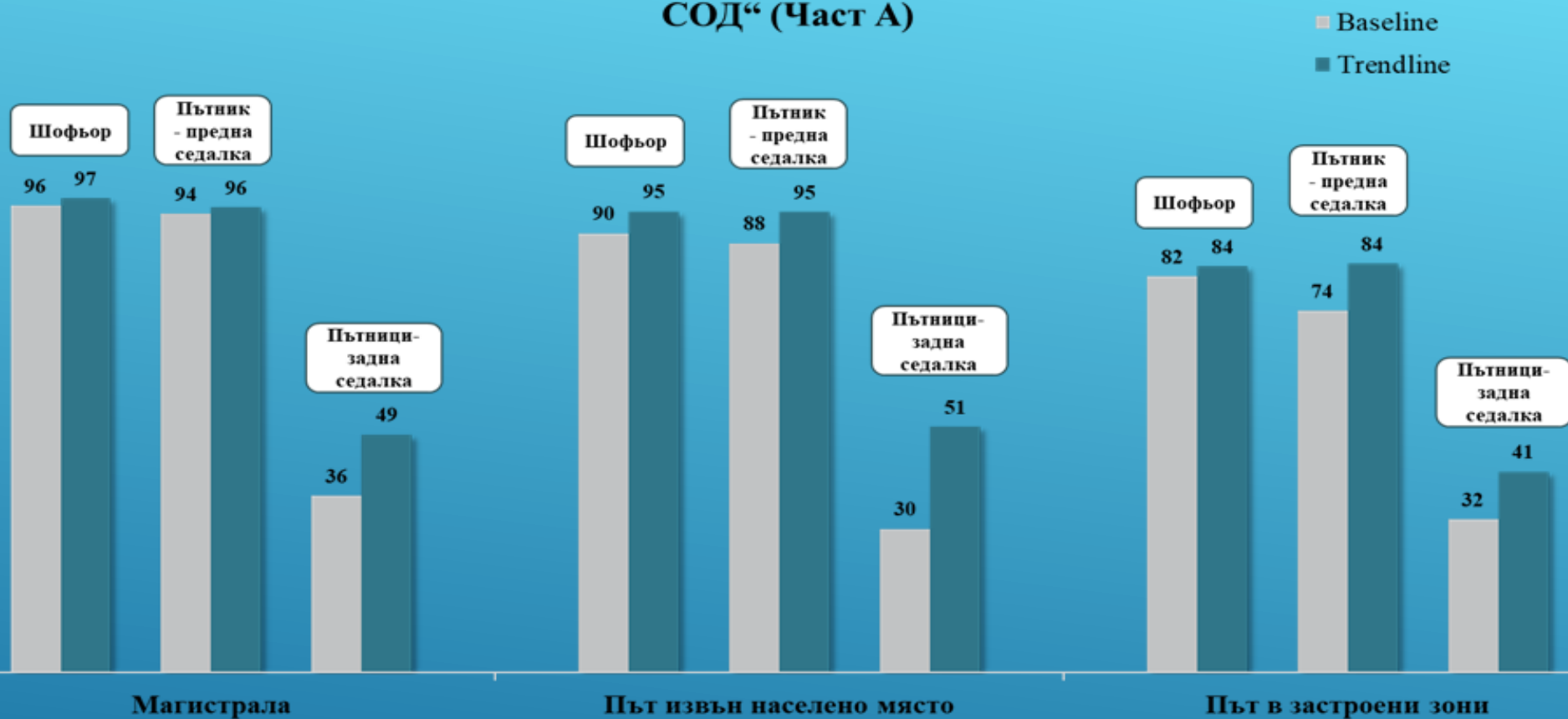
- ▶ **Number of surveys, part B – 213**
 - ▶ Motorways – **79**
 - ▶ Rural roads – **51**
 - ▶ Urban roads – **83**

SAFETY BELTS AND CRS: RESULTS

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Ключов показател „Обезопасителни колани и СОД“ (Част А)



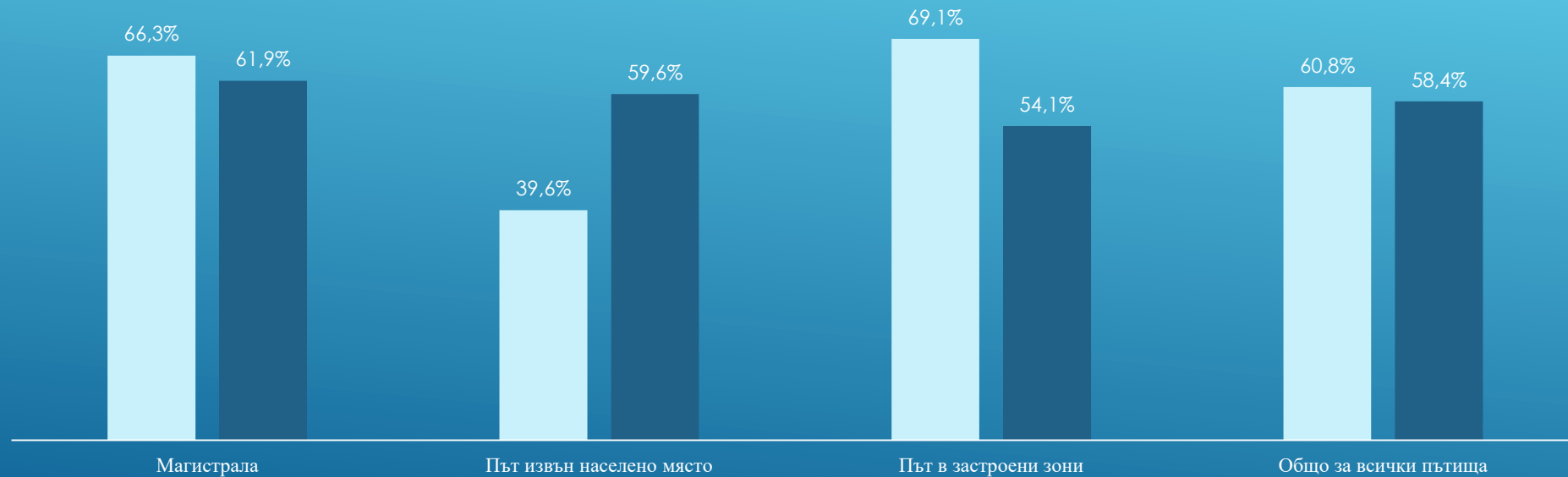
Дял на използващите обезопасителни колани според мястото в автомобила и типа път (%)

SAFETY BELTS AND CRS: RESULTS, PART A



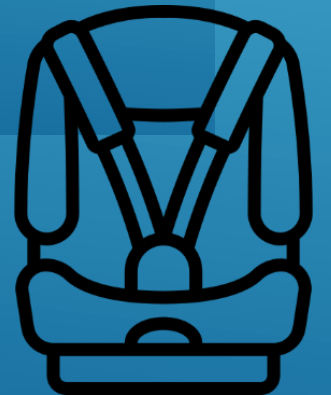
Ключов показател "Обезопасителни колани и СОД" (Част Б)

■ Baseline ■ Trendline



Дял на правилно използващите системата за обезопасяване на деца (%)

SAFETY BELTS AND CRS: RESULTS, PART B





- ▶ **Preparation** – locations, sample, schedules, training of observers, processing plan, and calculation methods;
- ▶ **Fieldwork** – May-June 2024, September-November 2024;
- ▶ **Primary information collection method** – random direct observation of motorcyclists and cyclists
- ▶ **Types of locations** – motorway (excl. cyclists), rural road, urban road
- ▶ **Data analysis and KPI calculation** – according to the TRENDLINE methodology

HELMETS: **METHODOLOGY**





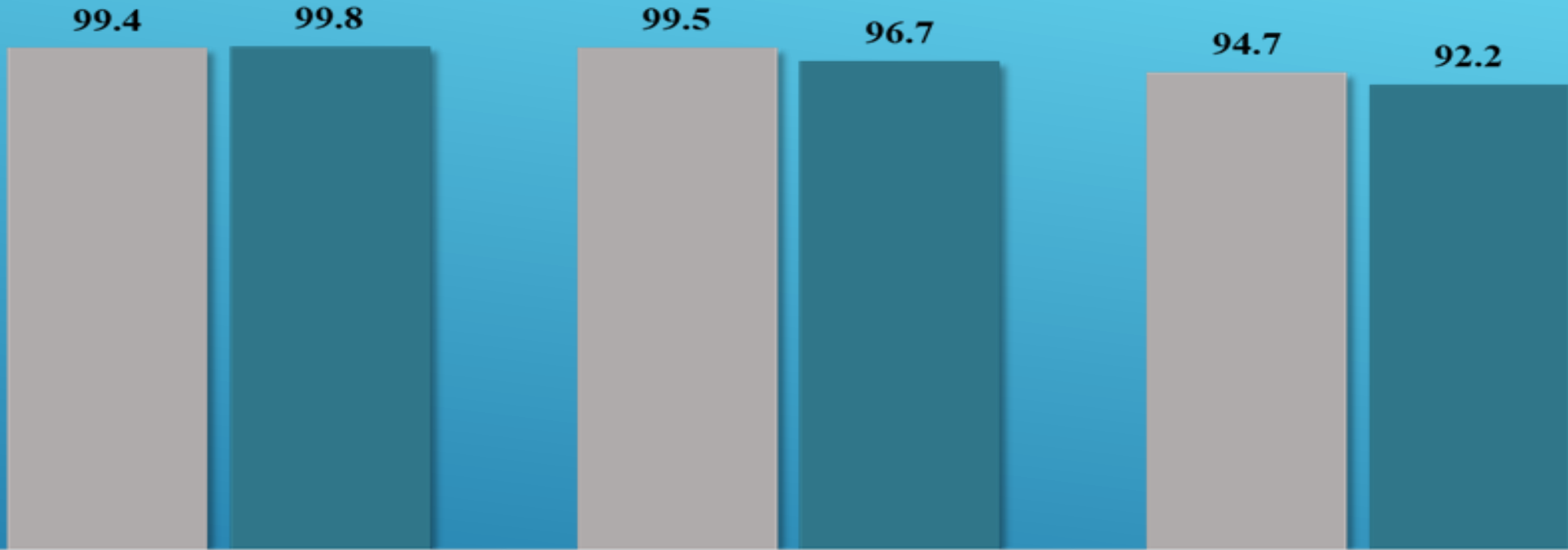
- ▶ Number of observed **motorcyclists** – 5,346
 - ▶ Motorways – 824
 - ▶ Rural roads – 1,779
 - ▶ Urban roads – 2,743
- ▶ Number of observed **cyclists** – 6,103
 - ▶ Rural roads – 1,059
 - ▶ Urban roads – 5,044

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HELMETS: RESULTS

Ключов показател „Използване на защитни средства-каска“ (МОТО)

■ Baseline ■ Trendline



Магистрала

Път извън населено място

Път в застроени зони

Дял на водачите на мотопеди/мотоциклети, които използват каска, според типа път (%)

HELMETS (MOTORCYCLISTS): COMPARATIVE DATA

Ключов показател „Използване на защитни средства-каска“ (ВЕЛО)

■ Baseline ■ Trendline



Дял на велосипедистите, които използват каска, според типа път (%)

HELMETS (MOTORCYCLISTS): COMPARATIVE DATA



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VEHICLE SAFETY: METHODOLOGY

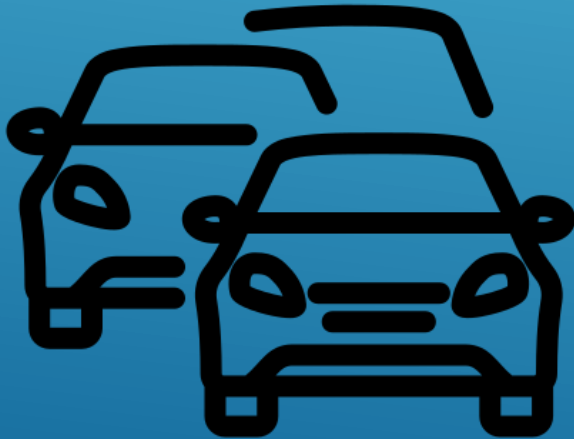


- ▶ **Preparation** – databases of comprehensive information about all registered vehicles
- ▶ **Rating** – passenger cars with a Euro NCAP safety rating equal to or above 4 stars
- ▶ **Data analysis and KPI calculation** – according to the TRENDLINE methodology



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VEHICLE SAFETY: RESULTS



- ▶ Only **4.8 %** of passenger cars are aged 0-5 years, with the indicator for 2020 being **7%**
- ▶ The share of newly registered passenger cars against the total fleet in 2022 is **0,78%**, showing a decrease by **1,3%** compared to 2019



KPI are measured and calculated according to an approved methodology and are validated at each stage.

The data and indicators resulting from calculations are comparable to those from Baseline.

Theoretical and methodological basis, procedures and good practices for data collection and calculations of road safety indicators have been established.

A good information base has been created for the creation and development of road traffic safety policies.

Trend:line **FINDINGS AND CONCLUSIONS**



Share of 30 km/h
road lane lengths in
urban zones

Driving under the
influence of drugs

Helmet wearing of
PMD riders

Self-reported risky
behavior and
attitudes toward
risky behavior

Compliance with
traffic rules at
intersections and
red-light negations

Use of light by
cyclists
Enforcement of
traffic regulations
Alternative
speeding indicators

EXPERIMENTAL KEY PERFORMANCE INDICATORS

Trend:line

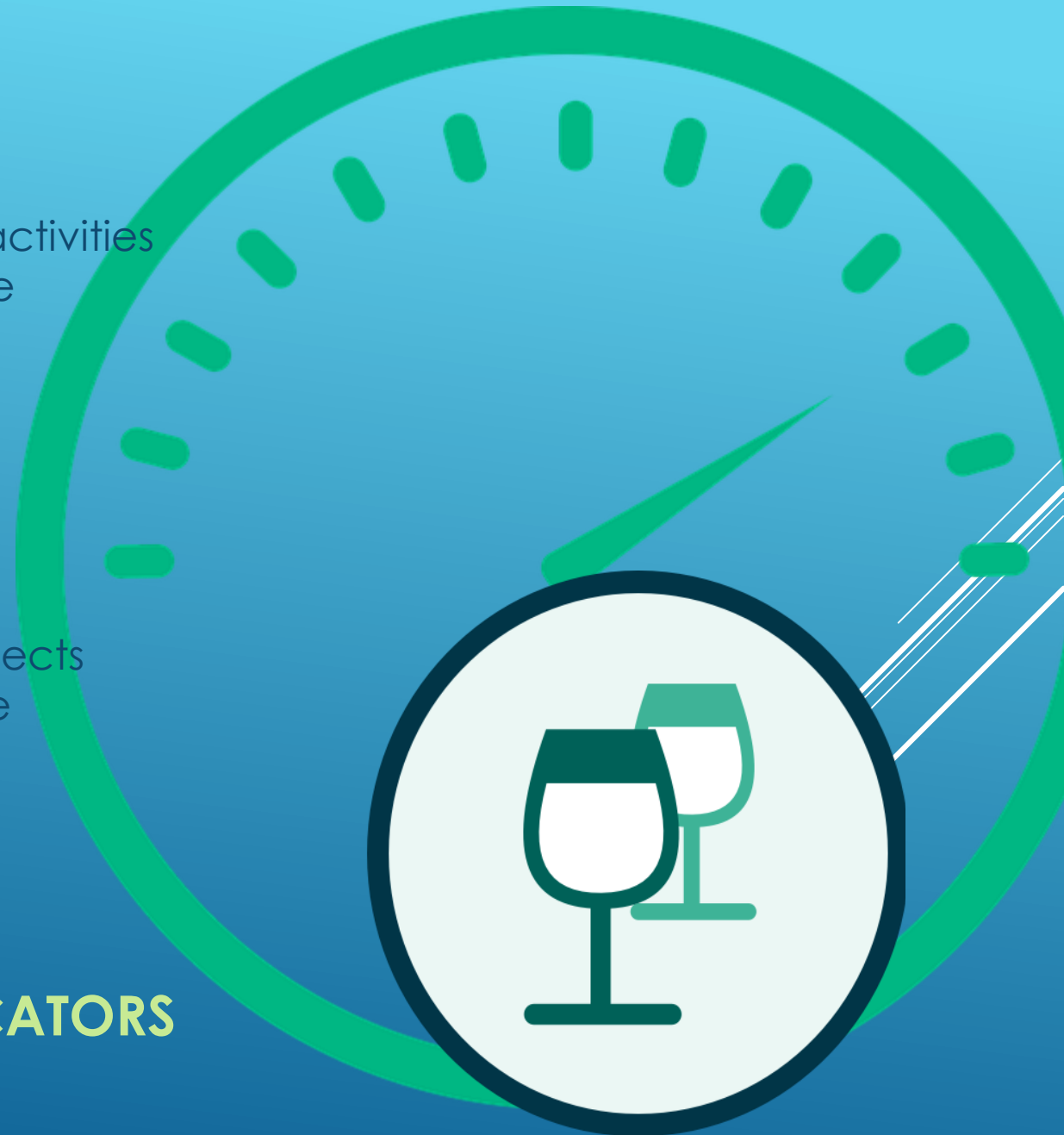


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- ▶ **Bulgaria, through SARS, took part in** the expert activities and work groups on “Share of 30km/h road lane lengths in urban zones” and “Self-reported risky behavior and attitudes toward risky behavior: Alcohol”.
- ▶ Summary reports with the results of the pilot projects and corresponding methodologies to report the indicators have been prepared for all experimental indicators.

EXPERIMENTAL KEY PERFORMANCE INDICATORS





Streamlining procedures and improving methodologies for data collection and analysis

Integration of survey findings into road safety policies

**UPCOMING
STEPS**

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THANK YOU FOR YOUR ATTENTION!



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