Development and Collection of Road Safety Key Performance Indicators - Trendline

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Artificial Intelligence for Road Safety and Mobility Workshop

8th UN Global Road Safety Week

Athens, 15 May 2025

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The Trendline project

- **Partners**:
  25 EU Member States
  4 countries as observers

- **Coordination Team**:
  SVOW (NL), VIAS (BE), CDV (CZ), NTUA (EL)

- **Duration of the project**:
  36 months (October 2022 – September 2025)

- **Framework Program**:
  Funded by the European Union under grant agreement No. MOVE/C2/SUB/2022 -54/CEF/TA/SI2.892654

Co-funded by the European Union

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Background

- The EU Road Safety Policy Framework 2021-2030: Next steps towards "Vision Zero" highlights the need of measuring road safety KPIs at European level
- The Trendline project builds on the experience gained in the Baseline project
- Objective: data collection and analysis of road safety KPIs in a harmonized way for the EU MS and exploration of their use within national road safety policies

EU Key Performance Indicators

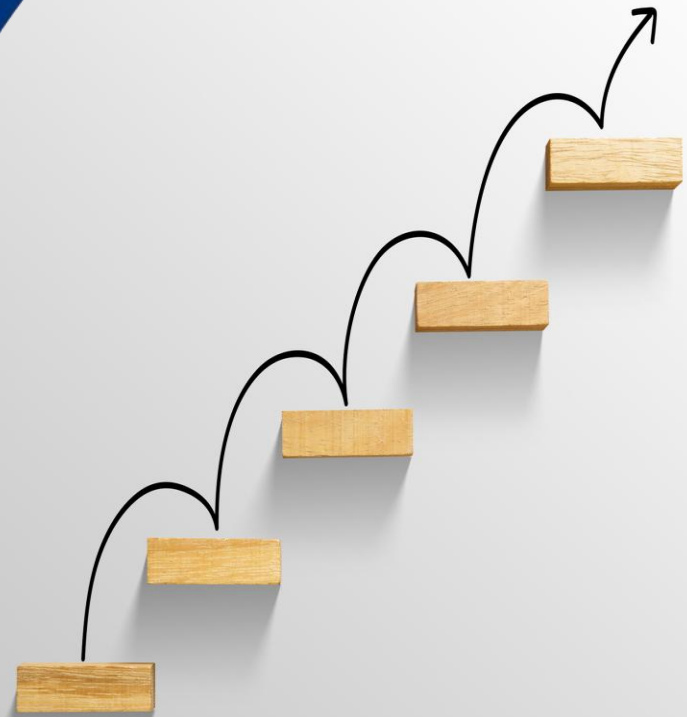
KPI area	KPI definition
Speed	Percentage of vehicles travelling within the speed limit
Safety belt	Percentage of vehicle occupants using the safety belt or child restraint system correctly
Protective equipment	Percentage of riders of PTWs and bicycles wearing a protective helmet
Alcohol	Percentage of drivers driving within the legal limit for blood alcohol content (BAC)
Distraction	Percentage of drivers not using a handheld mobile device
Vehicle Safety	Percentage of passenger cars with a Euro NCAP safety rating equal or above a threshold
Infrastructure	Percentage of distance driven over roads with a rating above an agreed threshold
Post-crash care	Time elapsed between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services

Experimental Indicators

- 10 new experimental and complementary indicators have been defined within the Trendline project:
  - Driving under the influence of drugs
  - Share of 30km/h road lane lengths in urban zones
  - Red-light negations by road users
  - Compliance with traffic rules at intersections
  - Helmet wearing of PMD riders
  - Self-reported risky behaviour
  - Attitudes towards risky behaviour
  - Use of lights by cyclists in the dark
  - Enforcement of traffic regulations
  - Alternative speeding indicators

Methodological Approach

- Existing methodologies for the 8 KPIs were reviewed and refined
- MS collected data and calculated at least 3 of these KPIs
- Methodologies for the new experimental / complementary indicators were developed and tested in at least 4 Member States each
- More emphasis has been given on the use of the KPIs in policy monitoring activities
- Final Outputs:
  - KPI reports, with the final KPI results
  - Reports on the experimental indicators, with recommendations for further use
  - KPI database, with Trendline and Baseline data
- Committees/Groups:
  - Technical Committee
  - Key Expert Group (KEG) per KPI
  - Statistical Analysis Group
  - Policy Integration Advisory Committee (PAC)



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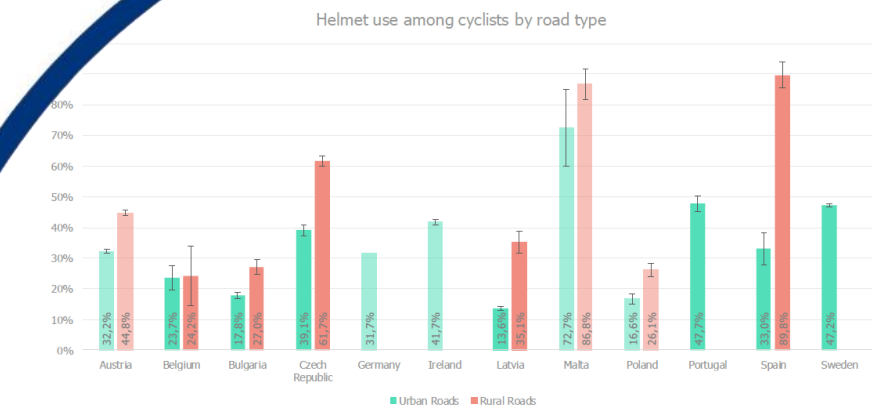
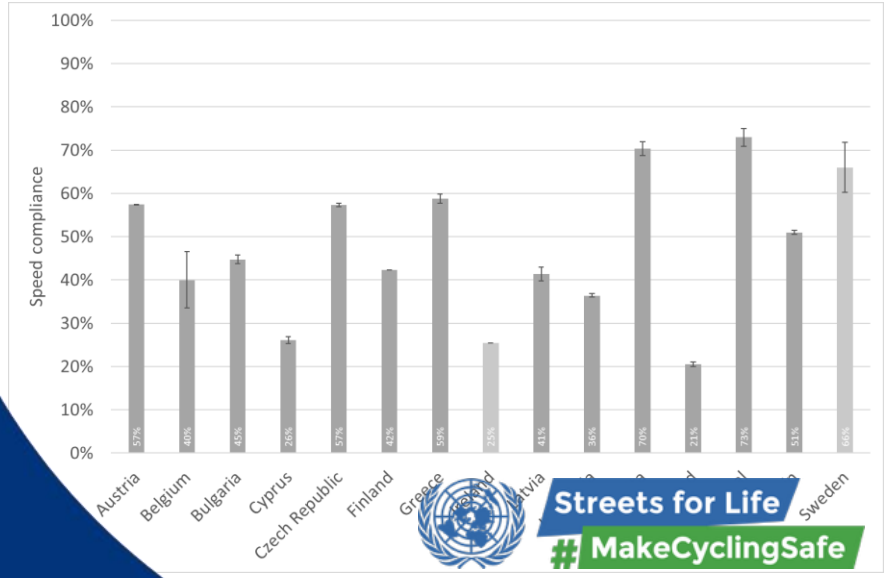
- Collecting KPIs at various disaggregation levels allows to explore the different behavioral patterns and performances per type of road, area, road user, etc.

- Based on the Baseline results:
  - Low compliance with speed limits on urban roads in most countries
  - Low helmet use among cyclists

- Trendline also explores the safety performance of cyclists and other vulnerable road users, introducing new experimental KPIs:
  - Share of 30km/h road lane lengths in urban zones
  - Red-light negations by road users
  - Compliance with traffic rules at intersections
  - Helmet wearing of PMD rider

Trendline results will be published in June 2025.





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Scientific and Social Impact

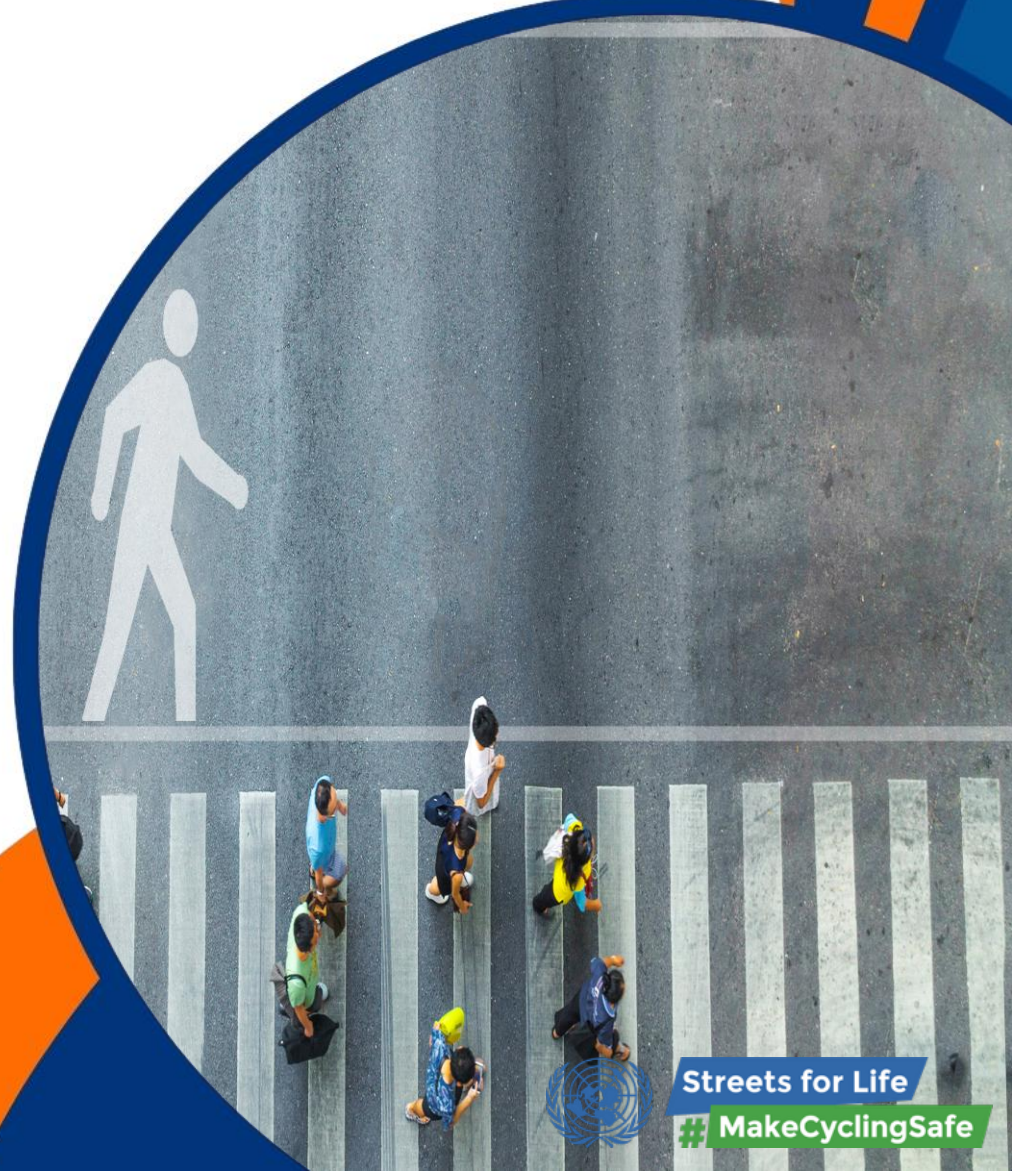
- The EU KPIs constitute the basic tool for monitoring and evaluating the road safety progress at national and EU level over the period 2021-2030
- Comparable KPIs among the EU countries and over time allow for further statistical analyses and understanding of the road safety phenomenon
- KPIs will contribute to the proactive treatment of road safety problem and the implementation of the proper measures and policies to prevent casualties

Future Challenges

- Systematic collection of KPIs in the future will contribute to a better evaluation of the road safety performance and progress made over time

- The correlation of the KPIs with the characteristics of road crashes is expected to lead to useful conclusions about the real dimension of the problem and the causes of road crashes

- More detailed KPIs, which could be also collected through new technologies in the future, are valuable information for documenting targeted road safety actions



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