Road Infrastructure Safety

Anastasios Dragomanovits

Transportation Engineer, Research Associate

Together with: Evdokia Kalliani, George Yannis



Department of Transportation Planning and Engineering National Technical University of Athens

> Artificial Intelligence for Road Safety and Mobility Workshop

> > 8th UN Global Road Safety Week

Athens, 15 May 2025



MakeCyclingSafe

The EGRIS 3 project

- Guidance on the design of 'forgiving roadsides', 'self-explaining and self-enforcing roads', as well as on quality requirements of road infrastructure for vulnerable road users
- Project Partners
 - National Technical University of Athens (NTUA)
 - Transportes Inovacao e Sistemas (TIS)
 - <u>PwC EU Services (PwC)</u>
 - <u>Rupprech Consult</u>
- Duration of the project
 - 24 months (April 2024 April 2026)
- For the European Commission Directorate General for Mobility and Transport







Background

- EU Directive 2019/1936/EC revised the procedures of EU DIR 2008/96 on Road Infrastructure Safety Management (RISM) and introduced the requirement for design provisions forgiving roadsides, self-explaining and selfenforcing roads, and infrastructure for VRUs.
- In a forgiving roadside, the roadside environment should not contain dangerous elements that will seriously injure or kill vehicle occupants that have unplanned trajectories off the carriageway.
- The self-explaining road concept advocates a road and traffic environment that elicits safe driving behaviour simply by its design.
- VRUs suffer the most severe consequences in the event of a collision, as they are unprotected against the speed and mass of the crash opponent.



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Objectives

- Develop guidance for the design of forgiving roadsides, self-explaining and self-enforcing roads and infrastructure for VRUs
- Identify safety and quality minimum requirements for VRU infrastructure
- Develop a set of criteria for assessing existing infrastructure and investments on new road infrastructure
- Incorporate VRU requirements in the audit process for all stages of road designs
- Consider the needs of Member States and stakeholders and achieve consensus



Methodological Approach







Desk Research

Overview of sources (guidelines, reports, position papers, etc.)







*Europe: published by an institution with pan-European scope **Global: published by an institution with global scope



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Consultation

Online Survey



Targeted Interviews (25 experts)

Countries	Total
Austria	4
Belgium	16
Bulgaria	2
Croatia	1
Cyprus	0
Czechia	1
Denmark	2
Estonia	0
Finland	2
France	5
Germany	3
Greece	3
Global	1
Hungary	3
Ireland	1
Italy	4
Latvia	2
Lithuania	1
Luxembourg	1
Malta	0
Netherlands	4
Poland	1
Portugal	5
Romania	1
Slovakia	1
Slovenia	1
Spain	2
Sweden	4
UK	1
Iceland	2
Norway	1
Total	75

Meetings of the EU Expert
Group on Road
Infrastructure Safety
(EGRIS)

- Sub-group 3 meetings
- Plenary meetings
- Workshop with breakout sessions (per Task)





Streets for Life

- The project considers quality and safety of infrastructure for all VRU categories, namely:
 - Pedestrians, further divided into fully able pedestrians, elderly, children, mobility impaired, visually impaired, and pedestrians with other disabilities.
 - Cyclists (including e-bikes up to 25km/h)
 - Powered-Two Wheelers
 - Users of Personal Mobility Devices (PMD)
- Improvement of VRU safety in city streets across the EU
- Improvement of VRU infrastructure quality, thus promoting clean and active transportation







Scientific and Social Impact

- Improve interest and awareness amongst national road authorities and stakeholders on forgiving roadsides, self-explaining and selfenforcing roads, and requirements for VRU infrastructure.
- Improved consideration of VRU infrastructure in the Road Safety Audit Process, resulting in safer roads for all
- Better use of EU funding towards safer and higher quality road infrastructure





Future Challenges

- Implementation of EC recommendations from EU Member States and internationally
- Balancing needs of different road users
- Addressing evidence gaps on costeffectiveness of measures, to enable reliable, data-based decision making

Improving cost-effectiveness of measures



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