Widening Country Inspiration Story

"Build a strong, multidisciplinary consortium with complementary skills."

Organisation name: University of Zagreb, Faculty of Transport and Traffic Sciences
Organisation type: Higher education organisation
Country: Croatia
Project Acronym: IVORY
Project start and end date: 1.11.2023 - 31.10.2027
Type of MSC action, Horizon Europe: Doctoral Networks
Is your organisation a coordinator? No

What is your project about? AI for Vision Zero in Road Safety (IVORY) aims to develop a framework for integrating Artificial Intelligence (AI) into road safety research. It supports the UN's Sustainable Development Goal to halve traffic fatalities by 2030 and eliminate them by 2050, addressing the European Commission's Vision Zero strategy. The project tackles the lack of shared understanding regarding AI's role in road safety through four main objectives: creating responsible AI for safety, enhancing human-vehicle-environment interactions, developing scalable safety management AI, and fostering knowledge sharing. By training fifteen researchers for the application of responsible artificial intelligence to support road users and infrastructure safety management, IVORY will create a sustainable platform for learning and networking.

Why is your project important for society? The IVORY project addresses the societal challenge of reducing road fatalities and injuries by advancing AI-driven road safety research. It focuses on responsible AI development that supports safe transportation for all, including vulnerable road users and communities in low-to-middle-income countries. The project aligns with the UN's Vision Zero goal to eliminate traffic deaths by 2050.

What communication and public engagement measures have you foreseen? Public engagement measures include outreach through social media, open access to research, public lectures, and collaboration with road safety organisations. These efforts aim to raise awareness, educate road users, and influence safety policies.

What kind of support did you get? During the IVORY project application, significant support came from the Croatian National contact point (NCP), who provided valuable guidance on Horizon Europe and MSCA requirements, helping navigate the application process and offering advice on eligibility and proposal writing. Their assistance was instrumental, and they continue to be a crucial resource, addressing ongoing project concerns.

The project team also referred to official MSCA guidelines, templates, and insights from successful applicants, which helped draft a strong proposal and navigate administrative processes effectively.

Do you have other successful projects under Horizon 2020/ Horizon Europe? What in your experience helped you to succeed?
Yes. As a beneficiary, we have participated in other successful Horizon 2020 and Horizon Europe projects. A key to our success has been finding strong partners to form a consortium with a mix of expertise, including academic, industrial, and non-profit sectors. This diverse collaboration brings together complementary skills and perspectives, essential for tackling complex challenges like road safety. Additionally, guidance from NCPs helped us understand proposal requirements and align with EU priorities, enhancing our applications' competitiveness.
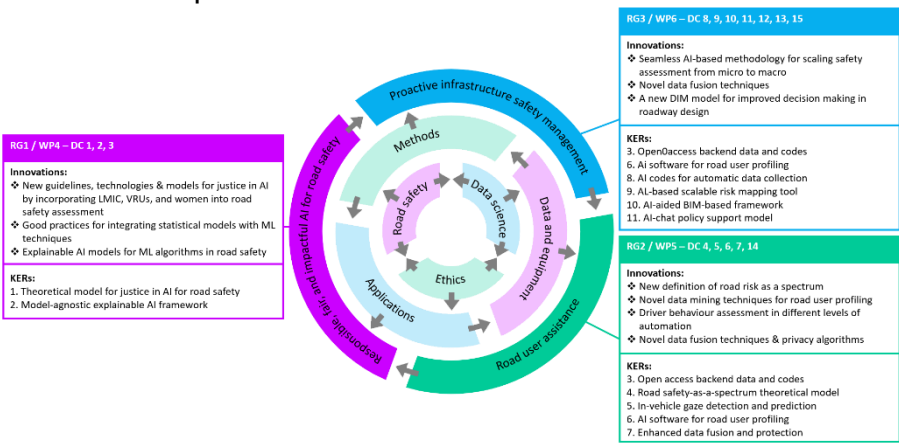
natural to join forces again for the IVORY project.

What tips can you give other organisations that would like to apply for MSCA? For MSCA applications, start early and align your project with EU priorities. Build a strong, multidisciplinary consortium with complementary skills. Use NCP support to grasp requirements. Focus on clear objectives, impact, and innovation. And if at first you don't succeed, "grant" yourself another chance!

More information on the project:

The Marie Sklodowska-Curie Actions (MSCA) support researchers at all stage of their career across all disciplines. The MSCA also support cooperation between industry and academia and provide innovative trainings and career developments.

The MSCA Doctoral Networks (DN) offer doctoral programmes implemented by partnerships of organisations from different sectors across Europe and beyond to train highly skilled doctoral candidates, stimulate their creativity, enhance their innovation capacities and boost their employability in the long-term.

RG3 / WP6 – DC 8, 9, 10, 11, 12, 13, 15

Innovations:
- Seamless AI-based methodology for scaling safety assessment from micro to macro
- Novel data fusion techniques
- A new DIM model for improved decision making in roadway design

KERs:
3. Open0access backend data and codes
6. AI software for road user profiling
8. AI codes for automatic data collection
9. AL-based scalable risk mapping tool
10. AI-aided BIM-based framework
11. AI-chat policy support model

RG2 / WP5 – DC 4, 5, 6, 7, 14

Innovations:
- New definition of road risk as a spectrum
- Novel data mining techniques for road user profiling
- Driver behaviour assessment in different levels of automation
- Novel data fusion techniques & privacy algorithms

KERs:
3. Open access backend data and codes
4. Road safety-as-a-spectrum theoretical model
5. In-vehicle gaze detection and prediction
6. AI software for road user profiling
7. Enhanced data fusion and protection

RG1 / WP4 – DC 1, 2, 3

Innovations:
- New guidelines, technologies & models for justice in AI by incorporating LMIC, VRUs, and women into road safety assessment
- Good practices for integrating statistical models with ML techniques
- Explainable AI models for ML algorithms in road safety

KERs:
1. Theoretical model for justice in AI for road safety
2. Model-agnostic explainable AI framework

How did you find the partners in your consortium?
We found our consortium partners through previous strong collaborations with coordinators and several beneficiaries, having successfully completed projects together. These past experiences demonstrated our skills and expertise, and it was only

The MSCA-NET project is the MSCA NCP project to facilitate the transnational cooperation to achieve a consistent and harmonised level of NCP support. The scientific community can also profit from our project to support their MSCA application.