



New PHOEBE project to shine a light on European road safety challenges

Press Release



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The new EU-funded project PHOEBE ('Predictive Approaches for Safer Urban Environment') might have only started in November 2022, but it is already leaving its mark. The different partners got together for the very first time at the premises of the POLIS Network Secretariat in Brussels (Belgium). The goal is to discuss the way to go of what aims to be a shining example of road safety promotion.

The PHOEBE project, which is funded under the Horizon Europe and UKRI framework, is a 45-month-long project involving eleven sector-leading partners. Indeed, it brings together the interdisciplinary strength of traffic simulation, road safety assessment, human behaviour, mode shift, induced demand modelling, and new and emerging mobility data into a harmonised, prospective assessment framework for road safety.

The consortium brings together a unique and diverse team with an established track record of delivering highly innovative and evidence-based European Commission projects and solutions by:

- Connecting the models and methods of iRAP and Aimsun,
- Using the stakeholder networks of POLIS and EIRA- EuroRAP,
- Employing the technology and big data skills of The Floow, Factual Consulting, and OSeven,
- And utilising the human behaviour, mode shift and policy and socioeconomic analysis skills of the University partners (NTU Athens, TU Delft, TU Munich, and UP Valencia),

this new exciting project will ensure the delivery on the expected outcomes and support 'safe, seamless, smart, inclusive, resilient and sustainable mobility systems for people and goods' and save lives.

The importance of road safety

An estimated 19,800 people were killed in road crashes in the European Union in 2021 – most of these fatalities taking place in urban areas. The European Commission supports the global UN goal of halving road deaths by 2030 to pave the road for a 'vision zero' by 2050. Emerging mobility solutions, such as shared e-scooters and (free-floating) electric bikes are relatively novel means of transport, which create challenges for city administrations to integrate these modes into an existing traffic system. More than 1000 injuries from e-scooter accidents were recorded in Brussels in 2021 alone.

To reduce the present-day risks, the PHOEBE project will allow cities to foresee the risk of introducing new modes of transport, technological and regulatory changes in transport systems in a virtual simulation environment where it is urgent to consider the demands of vulnerable road users. There is a specific need for new approaches that account for the dynamic and rapidly changing nature of urban traffic environments and their impact on safety for all types of road users, gender, age, and mobility levels.

Main contributions to PHOEBE

The project aims to develop an integrated, dynamic, and scalable human-centred predictive safety assessment framework for all road user types in urban areas. It will provide technical specifications and data optimization flows to policymakers, transport planners, and traffic analysts, decisively incorporating road safety as a performance indicator in traffic modelling. Moreover, it will facilitate foreseeing the risk of introducing new modes of transport, technological and regulatory changes in transport systems in a virtual simulation environment where it is urgent to consider the demands of vulnerable road users.

PHOEBE will seek to build on the strengths of both iRAP's road safety assessment tools and AIMSUN's simulation and Artificial Intelligence for future mobility tools to deliver harmonised, integrated, and world-leading safety prediction tools that take account of gender, age, and ability levels in providing for future mobility.

Discover the pilot cities!

Each of the three pilots will focus on different aspects of transport modelling according to their respective local mobility challenges.

- **Valencia (ES)** will promote active mobility in the framework of the new SUMP, which is a significant opportunity to set up real-world simulations and collect infrastructure data to have an initial diagnosis and develop measures for vulnerable road users, and promote sustainable and inclusive mobility in Valencia.
- **Athens (GR)** aims to foster investments into an extensive network of bicycle lanes, as well as reduce the speed limit to 30km/h. Assessments will be made to analyse the potential impact of environmental transport charging policies in Athens to understand the impact on road user behaviour, mode choice, induced demand, and safety outcomes.
- **West Midlands (UK)** is facing the challenge of 491 accidents with active mobility users led to fatalities or serious injuries. PHOEBE will help to enhance road safety and support the integration of new development regions with the existing urban mobility infrastructure, which includes significant investments of more than €1.8 billion across the entire region. Plannings include new routes and modal corridors.

For regular and updated information, do not hesitate to follow the project on Twitter and LinkedIn for regular updates.

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