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🌐 **https://events-project.eu/**

Project facts

Full Title: ReliablE in-Vehicle pErception and decision making in complex environmenTal conditions

Project ID: 101069614

Funded Under: Horizon Europe

Funding Scheme:
IA –Innovation Action

Duration: 36 months,
01 September 2022 – 31 August 2025

Total Cost: EUR 6.920.598

EU Contribution: EUR 5.534.448

Project Coordinator:
Institute of Communication and Computer Systems (ICCS)

Funded by the European Union

CCAM PARTNERSHIP PROJECT

EVENTS

reliablE in-Vehicle pErception and decisioN-making in complex environmenTal conditionS

Robust perception and decision-making for automated driving

Vision

The vision of EVENTS project is to create a robust and resilient perception and decision-making system for Connected and Automated Vehicles (CAVs) to manage various types of "events" on the horizon.
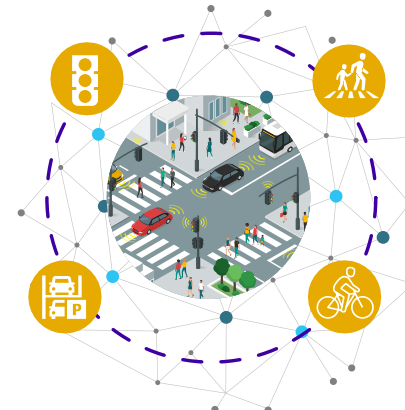
These situations are creating challenges for CAVs that should be overcome in order to enable safe and reliable automated driving in such cases. An indicative but non-exhaustive list of these challenges is the following:

- Perception in complex urban environments, in particular dealing with Vulnerable Road Users (VRUs);
- Perception in adverse weather and poor lighting conditions;
- Perception under (partial) occlusions;
- Accurate prediction of road users' trajectories (especially if highly manoeuvrable, like VRUs);
- Usage of connectivity for V2X information to improve accuracy, certainty & reliability of perception;
- Reduction of the costs of the required sensor-suites;
- Real-time decision-making and motion planning, especially in uncertain situations;
- Self-assessment of perception system.

In EVENTS, in case the system or some of the subsystems cannot perform with the expected quality and reliability, an improved minimum risk manoeuvre is triggered.

Use Cases

Within the scope of EVENTS project and in order to cover a wide area of scenarios, the various types of "events" are clustered under three main use cases:

Interaction with VRUs in Complex Urban Environment

Non-Standard and Unstructured Road Conditions

Low Visibility and Adverse Weather Conditions

Wider Impact

- Accident reduction through the implementation of robust and safe Connected and Automated Vehicles (CAVs) with extended Operational Design Domains (ODDs), thus making future roads and CAVs safer and saving lives and especially focusing on Vulnerable Road Users (VRUs) protection.
- Benefitting citizens and end users by analysing various combinations of sensors covering a wide set of scenarios for CAVs, through a study and analysis related to affordable sensor suites for mass market deployment.
- Knowledge creation and expansion supporting researchers & engineers, while cooperating with similar activities.
- Creation of new jobs in Cooperative, Connected and Automated Mobility (CCAM) industry and research and support of the EU, to maintain the lead in such a highly innovative area.