

EVENTS Project overview

Robust perception and decision-making
for automated driving



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EVENTS At a glance

Key Facts & Consortium

EVENTS Facts

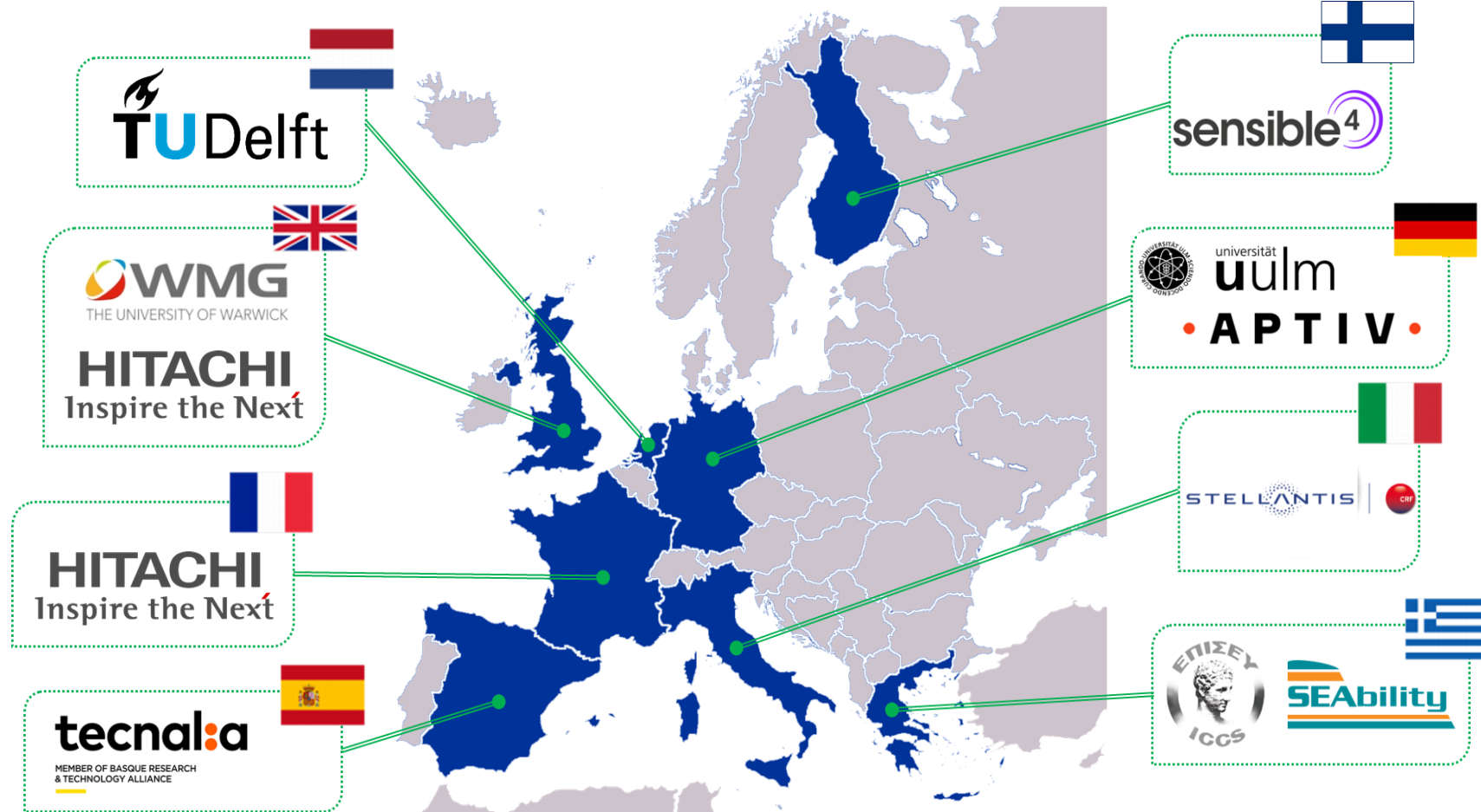


- **Full Title:** Reliable in-Vehicle pErception and decision making in complex environmenTal conditions
- **Project ID:** 101069614
- **Funded Under:** Horizon Europe
- **Funding Scheme:** IA –Innovation Action
- **Duration:** 36 months, 01 September 2022 – 31 August 2025
- **Total Cost:** EUR 6.920.598
- **EU Contribution:** EUR 5.534.448
- **Project Coordinator:** Institute of Communication and Computer Systems (ICCS)



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EVENTS Consortium



11 partners from 8 different European countries



EVENTS Vision

Concept, Challenges & Use Cases

EVENTS Concept



The vision of the 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.

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.



EVENTS Challenges

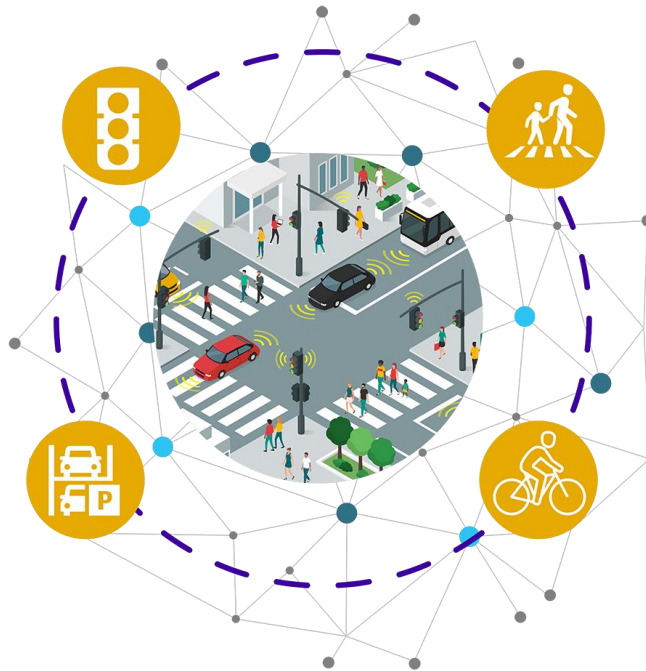


- Perception in complex urban environments, in particular dealing with Vulnerable Road Users (VRUs);
- Perception in adverse weather and poor lighting conditions;
- Perception under (partial) occlusions;
- Self-assessment of perception system;
- Usage of connectivity for V2X information to improve accuracy,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



EVENTS Use Cases

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



**Interaction with VRUs in
Complex Urban Environment**



**Non-Standard and Unstructured
Road Conditions**



**Low Visibility and Adverse
Weather Conditions**









EVENTS Impact

Wider Impact

EVENTS 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.





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Thank you for your attention!

EVENTS Consortium

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