# HIDDEN Project overview

**Seeing Beyond the Visible** - Safe Urban Mobility Through Hybrid and Ethical-aware Intelligence


Funded by the European Union

# HIDDEN at a glance

Key facts & Consortium

# HIDDEN Facts

- **Full Title:** HYBRID INTELLIGENCE FOR ADVANCED COLLECTIVE AWARENESS AND DECISION MAKING IN COMPLEX URBAN ENVIRONMENTS (HIDDEN)
- **Call:** HORIZON-CL5-2024-D6-01
- **Topic:** HORIZON-CL5-2024-D6-01-04
- **Type of Action:** Research & Innovation Action
- **Starting date:** 1st July 2025


- **Duration:** 36 months
- **EU Funding:** 5M euros
- **Consortium:** 14 partners and 2 affiliated partners from 7 countries
- **Project Coordinator:** Institute of Communication and Computer Systems (ICCS)

Funded by the European Union

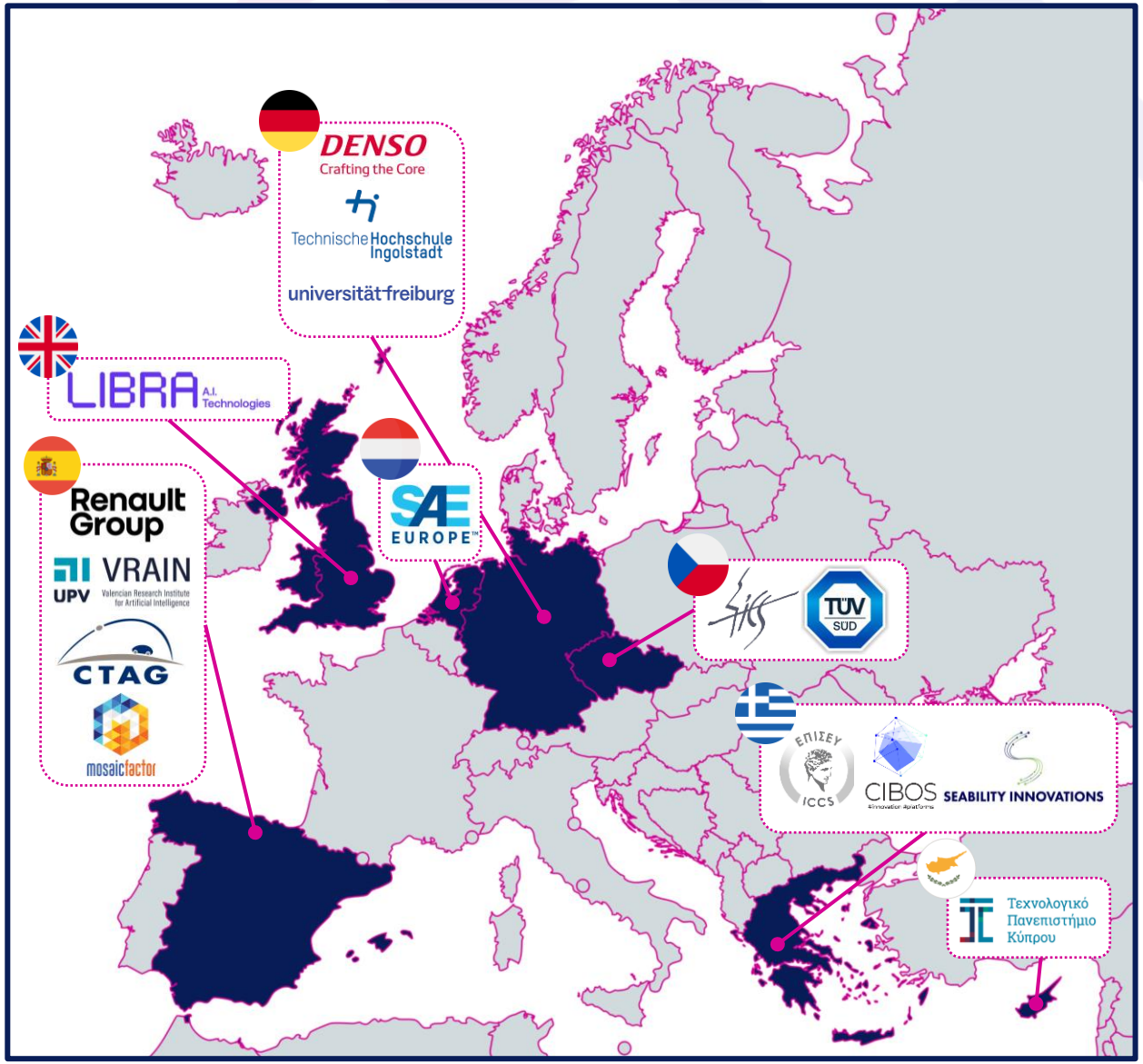
*HIDDEN project is funded by the European Union, under grant agreement No 101202228. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.*

# HIDDEN Consortium

**14 partners &**

**2 affiliated partners from 7**

**European countries**

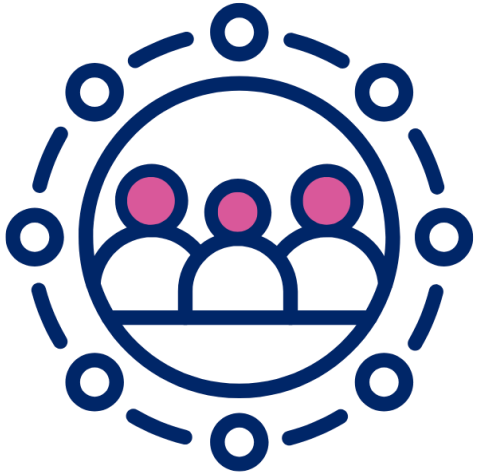



Funded by the European Union

# HIDDEN’s Vision

Concept, Objectives & Use Cases

# HIDDEN's Concept



To advance **collective awareness** & **decision-making** for CCAM systems in complex urban scenarios, with or without road infrastructure support, focusing on timely detection of occluded vehicles and Vulnerable Road Users (VRUs) and prediction of their trajectories.

HIDDEN deploys **Hybrid Intelligence** tools and techniques promising increased performance of AVs, reaping the benefits of combining human with machine intelligence.


HIDDEN is developing CCAM systems which are not just **technologically advanced** but also deeply **aligned with human driving styles, ethical principles and regulation**s, setting a new benchmark for the future of AVs technology.

Funded by
the European Union

# HIDDEN Objectives

1. Design, develop and test **failsafe AI-based collective awareness** systems, focusing on detection of **occluded objects**, including VRUs, in **complex urban** settings.

2. Design, develop and test **predictive decision-making** agents that **utilise collective awareness** output and which are **explainable** and aligned with **human driving styles** and **ethical principles.**

3. Embed **human intelligence** in both perception and decision-making layers, while considering AI-related **ethical and societal aspects**, via the development of a dedicated toolset.

4. Reach out to **CCAM stakeholders**, in EU and beyond, concerning HIDDEN developments, engage in a continuous discussion with EU **type approval authorities** and **UNECE** working groups and promote mature results to standardisation.

Funded by
the European Union

# HIDDEN Use Cases

**USE CASE 1**
Protect darting out child hidden by parked vehicle in a school zone

**USE CASE 3**
Protect cyclist or micro-mobility user hidden by vehicle in a vehicles-cyclists shared zone

**USE CASE 2**
Protect worker hidden by vegetation in a road construction zone

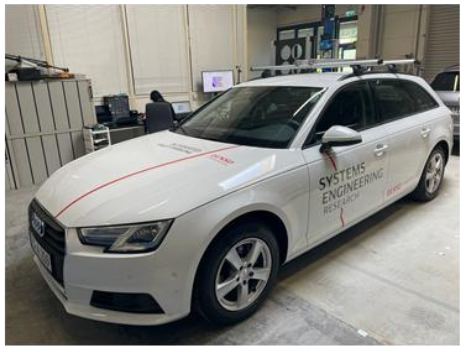
**USE CASE 4**
Protect vehicle hidden by buildings or a shuttle in an unsignalized intersection

Funded by the European Union

# Prototype Vehicles



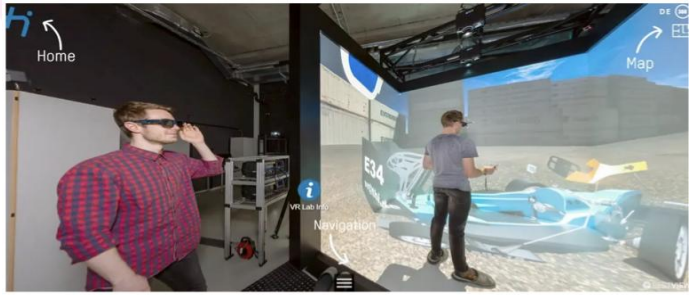

DENSO




Funded by
the European Union

# Testing facilities and advanced simulation tools

Technische Hochschule Ingolstadt


CTAG

ΕΠΙΣΕΥ ICCS


Funded by the European Union

# HIDDEN’s Motivation & Impact

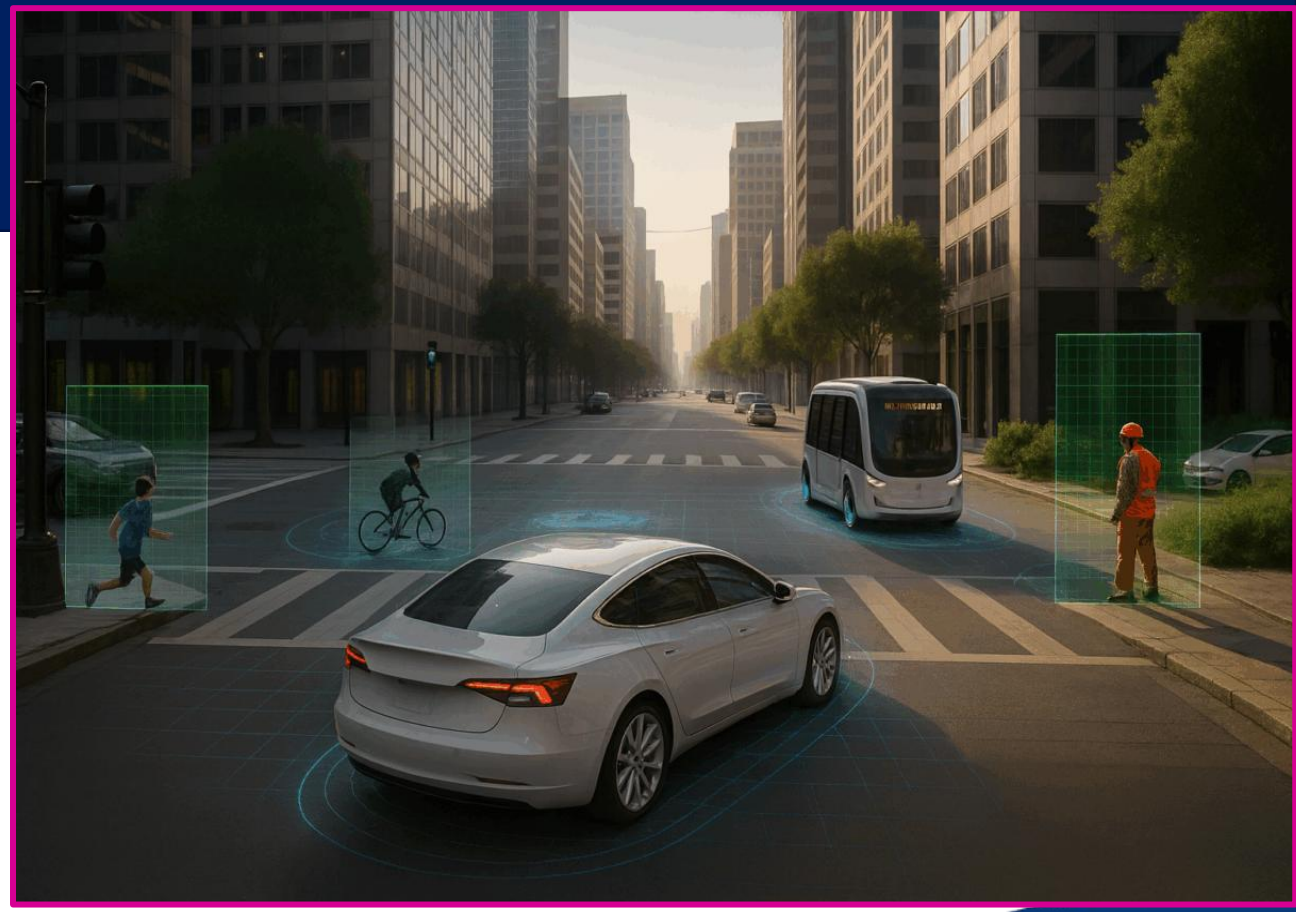
# HIDDEN Motivation

- The need for increased **road safety** in complex urban areas, focusing on protecting the **VRUs**.
- The need for improved **perception and decision-making** in complex **urban settings** involving many occluded objects (vehicles, pedestrians, cyclists, etc.), enabled by HI tools and techniques.
- The need for better collaboration between the human driver and the AV to reap the benefits (safety, traffic efficiency, etc.) of this symbiosis and the anticipation of **human-like behaviour by the AVs**.
- The need for **international collaboration** and harmonization, aligning also HIDDEN developments with **EU type approval authorities** and UNECE WP.29.
- The need for understanding the **AI-related ethical challenges** and the increased trust and users' acceptance of CCAM solutions using AI.

Funded by
the European Union

# Expected Impact

**HIDDEN** is trying to make a significant impact on the European transport landscape by accelerating the development and deployment of **AI-based technologies** for **perception** and **decision-making** in CCAM systems.



The project actively contributes to the vision of **safer, smarter, and more sustainable mobility systems** for people and goods by aligning with the European Commission Strategic Plan and the EU AI Act.

HIDDEN, by deploying **collective perception** and **hybrid intelligence** technologies, will enhance scene understanding and enlarge the reaction time window in safety critical situations that often occur during urban driving, thus generating benefits for the overarching mobility system (improved traffic flow, environmentally friendly mobility)

Funded by
the European Union

www.hiddenproject.eu

HIDDEN EU PROJECT

HIDDENEUproject

# Thank you for your attention!

HIDDEN Consortium

Funded by the European Union

This project has received funding under grant agreement No 101202228. It is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission. Neither the European Union nor the granting authority can be held responsible for them.