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The network of Horizon Europe
Cluster 5 National Contact Point.

Nottingham Trent University

ADMEC

Looking for partners for proposals in the areas of **Smart building** and **Next-generation vehicle (CCAM)**

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Smarter buildings as part of the energy system for increased efficiency and flexibility

HORIZON-CL5-2026-02-D4-02

The proposed project is to achieve the following expected outcomes

- Measurable reduction in buildings' energy demand together with a reduced gap between their as-designed and as-built energy performance.
- Measurable increase in the number of building typologies with SMART grid connected renewable energy sources (RES) and energy storage together with increased flexibility in grid/network management and operations.
- Measurable enhancement of the smart readiness of buildings as rated by the Smart Readiness Indicator and/or other relevant building rating systems.
- Responsiveness to a deeper understanding of the needs and concerns of diverse social group involved in or potentially affected by the R&I development, benefiting the societal uptake and building trust.

Smarter buildings as part of the energy system for increased efficiency and flexibility

Call topics: HORIZON-CL5-2025-02-D3-20, Horizon-CL5-2026-02-D4-02

- Current consortium
  - UK: two universities (research in building technologies and sustainability assessment), one pilot partner for residential housing
  - France: University (research in building energy), one pilot partner for heritage building
  - Italy: Council of National Research (research in social and humanity)
- Profile of the partners sought
  - Pilot partners to demonstrate the project solutions in climatic zones different from UK and France, different building types (residential, tertiary etc.) and technical building systems.
  - Local authorities, policy makers, professional organisations for building standards
  - Economics model developer in relation to energy in building
  - Mechanical and electronic product companies for buildings (HVAC, lighting, acoustics, etc)
  - Public health in relation to building occupancies
  - Building management system
  - Research and Development departments of construction companies

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Next-generation environment perception for real world CCAM operations: Error-free and secure technologies to improve energy-efficiency, cost-effectiveness, and circularity

Call Topics: HORIZON-CL5-2025-01-D6-01 HORIZON-CL5-2026-01-D6-03

The proposed project is to achieve the following expected outcomes:

- Validated prototypes of next-generation vehicle and infrastructure-based environment perception technologies for robust, reliable and trustworthy CCAM operation in complex real-world conditions (e.g., at pedestrian crossings, in construction sites, during interactions with emergency vehicles, etc)
- Automated CCAM perception systems can anticipate, process, and respond to on-site 'early-warnings' (e.g., street design, sounds and smells from the environment, intentions of pedestrians, active mobility users, etc.)
- Energy-efficiency of the sense-think-act systems of CCAM considering the vehicle, the infrastructure, the cloud at the-edge, while at the same time increasing the performance to guarantee security, error-free reliability, and reduction of climate and environmental footprints.
- Standardisation and adoption of modular, reusable, and upgradable software and hardware platforms enabling scalable deployment that can lead to cost reduction and improved affordability, while adopting a circular, eco-design approach based on efficient materials use and reduced waste

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Next-generation environment perception for real world CCAM operations: Error-free and secure technologies to improve energy-efficiency, cost-effectiveness, and circularity

HORIZON-CL5-2026-01-D6-03

- Current consortium

  Coordinator: Nottingham Trent University, UK. **Members**: Brisa Group, Portugal; Automotive Industry Institute, Poland; and EIT Urban Mobility, Spain (to confirm)

- Partners sought with capacities to achieve the following
  - **Advancing the sense-control-act process** for both vehicle and infrastructure-based smart sensor systems and networks, controllers, and actuators for CCAM;
  - **Digital enabling technologies** such as AI at-the-edge, machine learning, data spaces with reference scenarios and suitable software architectures;
  - **Adoption of modular, reusable, and open software platforms** supporting the environment perception for CCAM while ensuring transparency of operation, verification, and safety assessment.
  - **Energy efficiency, circularity, and eco-design** of the environment perception systems by decreasing energy and resource consumption in both production and operation.
  - **Reduction of potential costs of environment perception systems** through scalability, modularity and standardisation, making technologies financially viable for widespread implementation;
  - **Support remote assistance** as a stepping-stone towards higher levels of autonomy and vehicle automation in wider Operational Design Domains (ODD).

Advanced Design and Manufacturing Engineering Centre, Nottingham Trent University: **Profile Outline**

- Research in circular economy, sustainability in industrial implementations, sustainable buildings, transports, and other related areas.
- Methodologies with digital-twin, block chain, traceability, Big data, mobile App and systems, condition monitoring, control, artificial intelligence
- Novel eco-accounting approach to measure environmental, social and economic impacts of products/services, individuals and entities
  - Eco-cost, Eco-credits, Eco-accounts
  - Eco-incentive schemes
  - Digital product passport
- Experience in EU projects, Horizon Europe SMILE CITY, REBELION; H2020 CIRC4Life (coordinator), H2020 REMOURBAN, FP7 myEcoCost, FP7 cycLED, FP7 CBM Agitators, CIP Eco-innovation Ecolights, Asia link, Asia ICT, etc. with budgets over €60 millions.

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