Korea-EU Horizon Europe Researchers Networking Forum

on Energy & Advanced Mobility

- **MINJE CHOI, Ph.D.**

- **Research Professor / Academic Researcher (Postdoctoral Res.)**
- **University of Seoul / University of Cambridge**
- **Mobility planning / Autonomous mobile Robot**

NOTE: You are certainly allowed to add more slides for sharing but your presentation should not be longer than 3 minutes

1. Short Introduction of your Organization

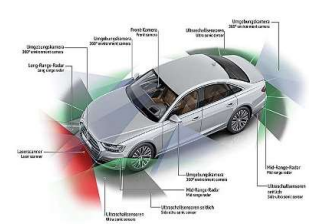
University of Seoul – A Strong Foundation for Urban Innovation

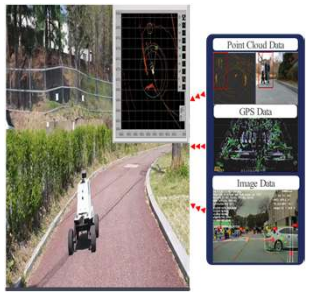
Urban Science & City Innovation

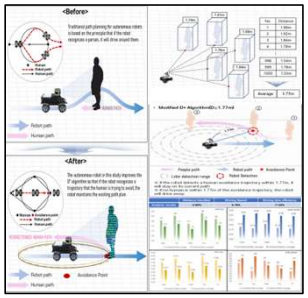
Supported by the City of Seoul / Innovation and Future Mobility

2. Expertise

Expertise & Potential Contribution – University of Seoul







1. National R&D on Autonomous and Smart Mobility

- Developing autonomous mobile robots based on ROS platforms
- Conducting national R&D on autonomous positioning and dedicated mobility navigation systems
- Evaluating urban impacts of advanced mobility adoption through real-world simulations

2. Ongoing Research with Global Academic Partners

- Currently conducting joint research with leading global universities such as UCL, Cambridge, and MIT

3. Policy Expertise and Decision-making in Korea's Autonomous Vehicle Testbed Committee

국토교통부
Ministry of Land, Infrastructure and Transport

- Participating in national-level decision-making as a member of Korea's Autonomous Vehicle Testbed Selection Committee

Autonomous Mobility · Digital Twin · Simulation · Urban Integration · Policy & Planning

3. Your Project Idea

HORIZON-CL5-2026-10-D6-01:
Flagship-pilot: Large-scale Demonstrations of CCAM

Main Objectives:

- Integrate and demonstrate advanced CCAM technologies in real urban environments.
- Validate safety, efficiency, and public trust through multi-site testing.
- Develop policy and business models for large-scale deployment.

Our Idea Briefly Explained:
Using Seoul's real mobility testbeds, the project aims to create a city-scale simulation–demonstration framework that connects AI-based perception, infrastructure data, and citizen behavior modeling to evaluate how CCAM systems can operate effectively in dense urban environments.

HORIZON-CL5-2026-10-D6-02:
Geopolitical competition and socioeconomic resilience in CCAM

Main Objectives:

- Assess Europe's global CCAM competitiveness and dependencies.
- Analyze socioeconomic impacts of CCAM adoption across sectors.
- Build an innovation and policy roadmap to enhance resilience.

Our Idea Briefly Explained:
By integrating economic–transport modeling and urban digital twins, the project evaluates the long-term impacts of CCAM on employment, equity, and regional growth, providing an evidence-based roadmap for sustainable and inclusive mobility policy.

HORIZON-CL5-2027-06-D6-04:
Holistic Solutions for CCAM Integration in Critical Scenarios

Main Objectives:

- Identify and classify critical edge cases for CCAM operations.
- Develop AI-driven decision support for real-time risk management.
- Strengthen cooperation between road authorities, mobility operators, and emergency services.

Our Idea Briefly Explained:
The project designs a Digital Twin-based "Local Deconflicting CCAM Architecture" that detects, predicts, and mitigates risk scenarios (e.g., accidents, extreme weather, or system failures) while maintaining safety and continuity in complex urban environments.

HORIZON-CL5-2026-10-D6-10:
Enhanced Resilience in Multimodal Passenger Transport through Digital Technologies and AI

Main Objectives:

- Improve resilience of multimodal passenger systems using AI and digital twins.
- Enable predictive maintenance and real-time disruption management.
- Enhance passenger safety, reliability, and network efficiency.

Our Idea Briefly Explained:
Leveraging Seoul's multimodal data and AI simulation capabilities, the project develops a Generative AI–driven platform for predicting disruptions, optimizing network recovery, and improving resilience in multimodal corridors linking bus, metro, and shared mobility.

4. Profile You are Seeking and Why

1. Our Expertise & Role & Strengths

Research focus on :

- *Autonomous mobility systems*
- *Urban-scale simulations (Digital Twin)*
- *Multi-agent & ROS-based robotics*
- *Policy & regulatory impact analysis*

Seoul City Testbeds provide real-world environments for validation and urban-scale simulation.

2. Existing Collaborations

- TH Aschaffenburg (Germany) – Expertise in sensor integration, system perception, and experimental testing.

- Széchenyi István University, Győr (Hungary) – Strong in large-scale AV demonstrations, hardware development, and testing at ZalaZONE.

3. Looking for partners

- focusing on **hardware design, AI-based mobility software, and public/private mobility applications, transport operators etc**

5. Contact Details

Google Scholar

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