

PRESS RELEASE

TRACE successfully demonstrates Cooperative Cargo Bike Platooning for Urban Logistics in Modena

The TRACE project has successfully completed the Italian Pilot B on 25/06/2026, demonstrating an innovative urban logistics scenario based on cooperative cargo bike operations and the TRACE collaborative logistics platform.

The demonstration was carried out by the University of Modena and Reggio Emilia (UNIMORE) through the HiperLab research group, in collaboration with the Municipality of Modena, with the logistical support of URBICO, and with the support of SPINITALIA for the development and sensorization of the cargo bike prototypes. UNIMORE developed the software stack enabling cargo bike platooning operations, integrating cooperative driving functionalities, vehicle communication, and real-time monitoring capabilities within the TRACE platform.

The Pilot B demonstration took place in Modena, starting from the Diagonale Verde, where the TRACE solution was validated in a realistic urban environment. The demonstration involved the execution of a last-mile delivery scenario, including the transportation of multiple parcels and the coordination of connected logistics assets throughout the entire mission.

A key achievement of the demonstration was the successful validation of the cargo bike platooning concept. The platooning software stack developed by UNIMORE enabled cooperative operations between multiple vehicles through real-time information exchange and coordinated movements. This approach represents an important step towards more efficient and sustainable urban logistics, allowing connected cargo bikes to operate together while maintaining safe and supervised interactions between vehicles.

During the pilot, the main technological components developed within TRACE were successfully tested, including the Vision System, Vehicle-to-Vehicle (V2V) communication modules, Smart Autonomous Bike Driving System (SBADS), Bike Connection Box, and onboard sensing technologies integrated into the cargo bike prototypes. The TRACE platform successfully collected and processed operational data throughout the mission, enabling real-time tracking of the logistics vehicles and supporting the subsequent evaluation of the project Key Performance Indicators (KPIs).

The Virtual Cockpit was also successfully validated during the demonstration, receiving vehicle status information and displaying the live video stream generated by the cargo bike. This functionality provided operators with enhanced situational awareness and supported the supervision of connected logistics assets during the delivery mission.

The successful execution of Pilot B demonstrated the capability of the TRACE platform to integrate different technological components into a unified cooperative logistics ecosystem, combining connected vehicles, cooperative driving functionalities, sensing technologies, and real-time data exchange to support sustainable last-mile delivery operations.



Beyond the technical validation, the demonstration attracted significant interest from citizens in the historic centre of Modena. Several people approached the project team to request additional information about the TRACE solution, highlighting the innovative nature of the technology and expressing interest in seeing similar sustainable logistics solutions operating in the city in the future.

The successful completion of Pilot B represents an important milestone for TRACE, demonstrating the potential of cooperative cargo bike systems and connected logistics platforms to contribute to the evolution of smart cities and sustainable urban mobility.

To explore the full demonstration of the TRACE Italian Pilot B, showcasing cooperative cargo bike platooning, connected vehicle technologies, and real-time logistics coordination through the TRACE platform, watch the official video here: <https://youtu.be/ATNQ1PI54CE?si=B6b6-1Q14-FRETwu>



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TRACE at a glance

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Project Coordinator: National Kapodistrian University of Athens

Website: <https://trace-horizon.eu/>

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