



QUSPID

Key facts

Full name
Quasi-Pilot Development

Project call number
EUSPA/GRANT/03/2024

Project call
Implementing quasi pilot in G2G

EU contribution
€ 922,887.95

Market segment
Transversal

Project start/end
01/10/2025 – 30/09/2027

Context and motivation

The growing deployment of GNSS-enabled applications in sectors such as IoT, automotive, health care and smart mobility increase the need for positioning and timing solutions that are fast, energy-efficient, and robust. Many emerging applications rely on low-power devices operating in challenging environments, where conventional GNSS signal acquisition can be limiting. This creates the need for innovative signal concepts that better address these constraints.

Scope

QUSPID focuses on the assessment and demonstration of the added value of the Galileo Quasi-Pilot (QP) signals through a structured approach. The project validates the technical feasibility and benefits of Quasi-Pilot-enabled reception and supports awareness and uptake among institutional, industrial, and research stakeholders.

Targeted GNSS innovation

QUSPID targets the use of Galileo QP signals as an innovative evolution of Galileo signal design. These signals enable simplified acquisition, reduced receiver complexity, lower energy consumption, and improved performance in obstructed or interference-prone environments, supporting new classes of future GNSS-enabled applications.



Challenge & technical solution

Many GNSS applications require reduced time-to-first-fix, lower power consumption, and improved robustness in difficult signal environments, which are not always supported by traditional GNSS signals. QUSPID addresses this challenge by upgrading existing commercial receivers and developing a proof of concept to fully exploit GALILEO QP features. The solution will indeed demonstrate the improvements for the GNSS acquisition phases and its benefits for Automotive and IoT applications.



Targeted Product

The project delivers a prototype demonstration setup showcasing the practical use of Galileo QP signals in representative application scenarios in Smart Digital Tachograph for the Automotive market and in IoT for Railways applications. The platform integrates QP signal reception and basic performance visualization, enabling hands-on evaluation by different stakeholders. It serves as a reference product to support future receiver design, industrial implementation, and the transition towards market-oriented Quasi-Pilot-enabled GNSS solutions.

