

EGIPRON

European Global Interference PROtection Network

Key facts

Full name

European Global Interference PROtection Network

Project call number

GSA/OP/05/19

Project call

Development of an advanced interference detection and robustness capabilities system

Funding

2 579 000,00 EUR

EU contribution

2 579 000,00 EUR

Topic

Transversal

Market segment

Transversal

Project start/end

CS1 19/02/2021 – on-going

Context and motivation

The EGIPRON project, or European Global Interference PROtection Network, is a crucial initiative aimed at addressing the growing challenge of GNSS interference across Europe. With the increasing reliance on GNSS for a wide range of applications, from critical infrastructure to everyday navigation, the need for robust, reliable, and secure GNSS services has never been more urgent. The motivation behind EGIPRON lies in the necessity to create a scalable and flexible interference monitoring system capable of ensuring high reliability in detecting jamming and spoofing incidents for EU Member states. The project emerges from the need to monitor vast geographical areas, both within European territories and in regions of global interest to Europe, for GNSS interference. This task is further complicated by the requirement to integrate various data collection infrastructures that were not initially designed for high-reliability interference detection. EGIPRON seeks to overcome these challenges by proposing a modular and adaptable

architecture that can be configured for centralized or distributed monitoring, depending on the specific needs of the user. Additionally, the project aligns with the broader goals of the European Union in setting new standards for GNSS security and reliability. By leveraging the combined expertise of Qascom and Leonardo, EGIPRON aims to provide a comprehensive interference detection and management service that not only meets current demands but also sets a baseline for future developments in GNSS protection.

The system is designed to handle sensitive interference information securely at the European level, ensuring that critical infrastructures, including space systems, are safeguarded against the growing threat of GNSS interference. The project also aims to support the development of enhanced RFI (Radio Frequency Interference) monitoring services, contributing to the operational deployment of advanced GNSS protection capabilities.



Targeted GNSS innovation

Creation of a robust, scalable, and flexible GNSS interference monitoring system



Targeted Product

Comprehensive interference detection and management service

Scope

The scope of the EGIPRON project encompasses the development and deployment of an interference monitoring system covering all European territories and worldwide areas of European interest. Collaboration between Qascom, and Leonardo to leverage their combined expertise in GNSS radio frequency, cybersecurity, and technology development, provision of a balanced, compliant service technology in the subsequent contract stage, capable of processing millions of data points daily.

Challenge & technical solution

Challenges include monitoring extensive geographic areas for GNSS interference, integrating data collection infrastructures not initially designed for high-reliability jamming and spoofing detection and managing sensitive interference information securely at a European level. The EGIPRON project proposes a flexible and modular architecture, allowing for centralized or distributed interference monitoring. The system includes five different interfaces and applications for mobile devices, tailored to various monitoring needs. The solution incorporates high-security measures for critical infrastructures and space systems, as well as scalable monitoring solutions for broader applications. The consortium leverages the expertise of SMEs and large aerospace and defense industries to ensure agility, flexibility, and credibility in the implementation.

