

<b>Project name</b>	New Space Portugal
<b>Project Number</b>	11
<b>Type of Operation</b>	Agendas/Alianças mobilizadoras para reindustrialização
<b>Lead promoter</b>	GEO SAT, Lda.
<b>Start date</b>	01-01-2022
<b>Date of the conclusion</b>	30-06-2026
<b>Total eligible investment</b>	451.946.157,17€
<b>Total eligible investment to SIMPLYCONNECTED, UNIPESSOAL, LDA</b>	754.975,73€
<b>Funding program</b>	Plano de Recuperação e Resiliência (PRR)

### **Project description**

The New Space Portugal Agenda is a national strategic initiative aimed at strengthening Portugal's position in the space sector by fostering the development of advanced satellite systems, digital infrastructures, and innovative downstream services. By promoting collaboration between industry, research institutions, and network operators, the Agenda seeks to build technological autonomy, accelerate the adoption of standard-based space technologies, and enable new commercial services that address global challenges in areas such as connectivity, environmental monitoring, and digital transformation.

Within this framework, Connected plays a central role in advancing space-based IoT connectivity by adapting, integrating and demonstrating a next-generation satellite communication solution built on standard and scalable technologies. The project focuses on the system-level adaptation and integration of an existing IoT Payload Gateway, designed to enable direct communication between IoT devices and Low Earth Orbit (LEO) satellites, into multiple satellite platforms, validating its performance in representative mission scenarios.

The payload follows a modular, autonomous, and platform-agnostic design, allowing seamless integration across different satellite architectures and mission profiles. Project activities include payload–platform interface definition, electrical and functional integration and system-level testing. This approach maximises technological reuse, reduces integration and qualification costs, and accelerates deployment in future satellite missions. The solution aims to support IoT communications based on different protocols, including 5G Narrow Band IoT and other Low-Power Wide-Area Network, positioning it as a highly flexible and future-proof component for non-terrestrial networks.

In parallel, Connected is driving the integration of satellite IoT communications with terrestrial mobile networks, in close collaboration with a national mobile network operator. This work focuses on defining and validating an end-to-end hybrid architecture that enables seamless data exchange between IoT devices, satellite payloads in orbit, and terrestrial IoT platforms. A dedicated service demonstration will take place to validate bidirectional communications and assess key performance metrics such as latency, reliability, energy efficiency, and effective throughput, in alignment with 3GPP specifications for Non-Terrestrial Networks.

Through this contribution, Connected is helping to bridge space and terrestrial infrastructures, enabling a new paradigm of global, low-cost, and energy-efficient IoT connectivity. The solution developed under the New Space Portugal Agenda has strong potential for large-scale deployment across sectors including environmental monitoring, maritime operations, agriculture, and forestry, while reinforcing national and European technological sovereignty in non-terrestrial communications.