

5G stardust

cnit

SRS
SOFTWARE RADIO SYSTEMS

orange

hispsat

W2S
Advanced Wireless Solutions & Services

MARTEL
innovate

ThalesAlenia
Space

ttc
Centre Tecnològic de
Telecomunicacions de Catalunya

DLR
Deutsches Zentrum
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5G-STARDUST



Co-funded by
the European Union

6G SNS

5G stardust

Satellite and Terrestrial Access for
Distributed, Ubiquitous, and Smart
Telecommunications

5g-stardust.eu



OUR OBJECTIVES



To define an integrated terrestrial-satellite network building on 5G-compliant regenerative satellite payloads, enabling cost-effective connectivity in **un(der)served areas**



To ensure a more efficient user connectivity concept by providing geographic coverage according to user-centric approaches (i.e. cell-free strategies)



To define a self-organised end-to-end network architecture able to adapt to diverse verticals' requirements and to time-varying network operations (e.g., data traffic loads and topology changes)



To provide end-to-end network flexibility by means of data driven AI-based multi-connectivity and resource allocation strategies



To guarantee cost reduction and capability to scale up the integration of satellite with terrestrial infrastructures to efficiently manage the deployment and operation of massive capacity networks

WHAT IS 5G-STARDUST?

5G-STARDUST is a Horizon Europe Research and Innovation project aimed at delivering a fully integrated 5G-NTN autonomous system with novel self-adapting end-to-end connectivity model for enabling ubiquitous radio access.

The project will design, develop and demonstrate a flexible satellite system integrated with the terrestrial infrastructure and will produce an innovative framework to support the operation of multi-orbit constellations, with transparent and regenerative space nodes, to deliver 5G/6G NTN services.

The final project output will be to prove the integration of OBP-NTN with terrestrial networks by means of TRL5 demonstrations.

