

R&D PROJECT



Figure 1.5: Road operator management levels

PROJECT PARTNERS

- RETEVISION I
- FUNDACIO PRIVADA I2CATSA
- EIGHT BELLS LTD
- ATHENS TECHNOLOGY CENTER
- ATOS IT SOLUTIONS AND SERVICES
- ABERTIS AUTOPISTAS ESPAÑA SA
- AXBRYD S.R.L.
- CELLNEX FRANCE SAS
- COMSA INDUSTRIAL
- CENTRE TECNOLOGIC DE CATALUNYA
- HISPASAT SA
- ANADOLU ISUZU OTOMOTIV S.ve T.A.S.
- FUNDACIO BARCELONA MOBILE WORLD CAPITAL FOUNDATION
- IRT ANTOINE DE SAINT EXUPERY
- NEARBY COMPUTING SL
- SNCF
- TERRA3D
- VALEO VISION SAS
- VODAFONE ESPAÑA,
- I NST. DU VÉHICULE DÉCARBONNÉ
- LINEA FIGUERAS PERPIGNAN S.A

BUSINESS AREAS

Technical and Innovation R&D Area COMSA INDUSTRIAL

DURATION

2020 – 2024

BUDGET

Consortium Budget: 15.717.821,75 €

COMSA Budget: 1.972.698,00 €

KEYWORDS

5G, Multi-tenant, CCAM and FRMCS, Network infrastructure

COORDINATOR

Manuel Alfageme

H2020 ICT FUNDING



Title of the project

Sustainable 5G deployment model for future mobility in the Mediterranean Cross-Border Corridor

Acronym

5GMED

Content of the project

5GMed brings together key stakeholders of the “Barcelona – Perpignan” cross-border section of the Mediterranean corridor, including MNOs, road and rail operators and neutral hosts, complemented with innovative SMEs developing AI functions, and selected R&D centres with a proven track record in 5G research and innovation. Given the proximity of the E15 highway and the high-speed rail track in the considered cross-border section, the 5GMed consortium will demonstrate how a multi-stakeholder 5G infrastructure featuring a variety of technologies, including Rel.16 5G NR at 3.5 GHz, Rel.16 NR-V2X at 5.9GHz, unlicensed mm-wave, network slicing and service orchestration, can be used to jointly deliver CCAM and FRMCS services.

The considered CCAM use cases include Remote Driving in cross-border open roads to enable safe fallback operation in Level 4 autonomous driving, and the massive sensorisation of road infrastructures enabling AI-powered traffic management algorithms in the presence of legacy vehicles. The considered FRMCS use cases include performance services where AI-functions running on the infrastructure side analyze camera feeds from high-speed trains in real-time and business services providing high-speed internet to passengers and in-train neutral hosting capabilities to MNOs.

A Follow Me Infotainment use case will demonstrate live migration of media functions across cross-border scenarios both in automotive and railways environments.

General objectives

5GMed will demonstrate advanced CCAM and FRMCS services along the “Barcelona – Perpignan” cross-border corridor, enabled by a multi-stakeholder compute and network infrastructure deployed by MNOs, neutral hosts, and road and rail operators, based on 5G Rel.16 and offering support for AI functions.

Project tasks

- I. Project Management
- II. Use Case definition and Trial specification
- III. Technological extensions for scalable and multi-tenant 5G Infrastructure in main transport paths
- IV. Automotive use case technology development and initial validation
- V. Railways use case development and initial validation
- VI. Use case validation in cross-border corridor and small scale
- VII. Enabling cross-border 5G deployment and business across Europe
- VIII. Impact Maximization

Results and conclusions

The project is currently in its ongoing phase.