Horizon 2020
European Union Funding
for Research & Innovation

EUSPA
European Union Agency for the Space Programme

High integrity **E**GNSS **L**ayer for **M**ultimodal
Eco-friendly **T**ransportation

HELMET Project

RadioLabs DLR sogei Univerzita Pardubice ITC roboauto

Alessia Vennarini

Radiolabs

Connected vehicles, IoT and machine learning for intelligent transport systems

Expo 2020 Dubai, January 30th, 2022

Main objectives

Develop Satellite Navigation technologies for an ***eco-friendly***, ***smart and innovative*** transport sector that makes the most of digitalisation and automation

Target applications

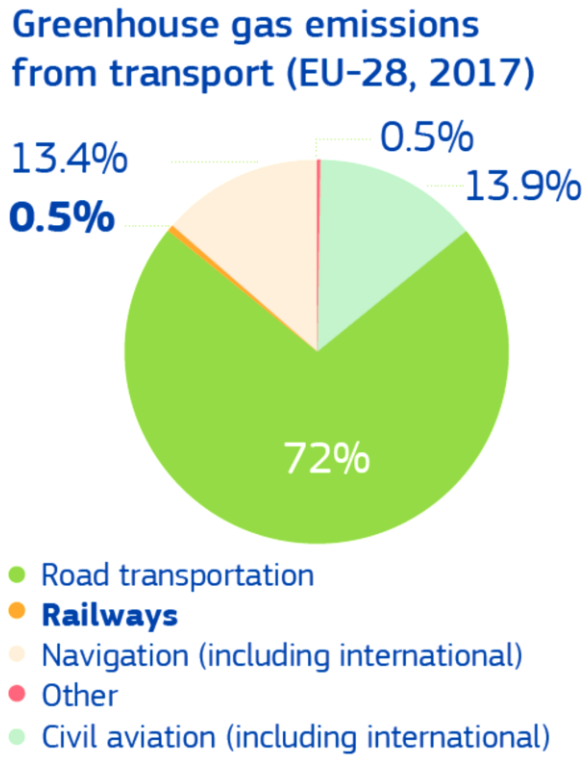
- Connected & driverless **CARS**
- **Train management & automation**
- **Drones** for surveillance roads and railways.

☞ **Make Transport safer, more sustainable, accessible and reliable by optimising new technological infrastructures**

Motivation

Synergy between **Train** and **Connected cars technologies will bring to** an economically-sustainable, safer ecosystem – a priority of the European Green Deal - leveraging on

- osmosis of best-practices from rail to automotive
- car market potential for a wide spread of GNSS in the transport

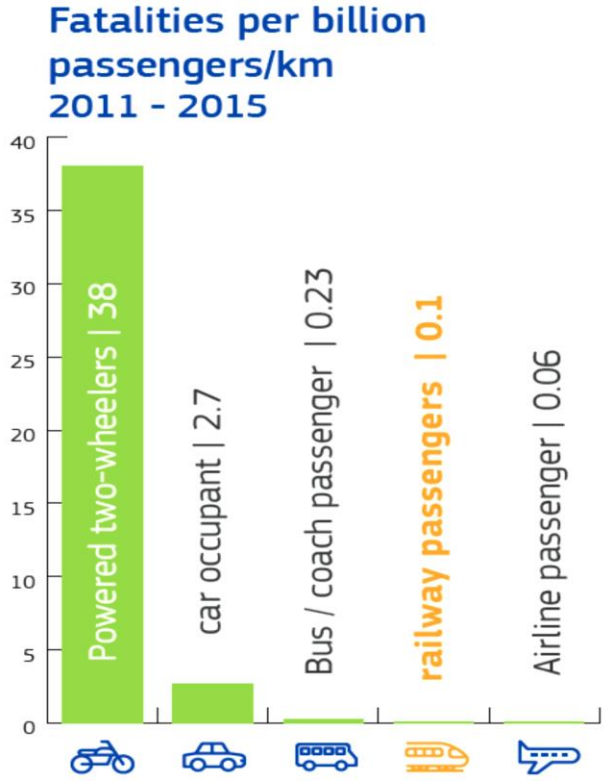


Strategic benefits

- ❑ increase modal shift from roads to rail
- ❑ Improve safety with connected cars

March 2020

#EUGreenDeal



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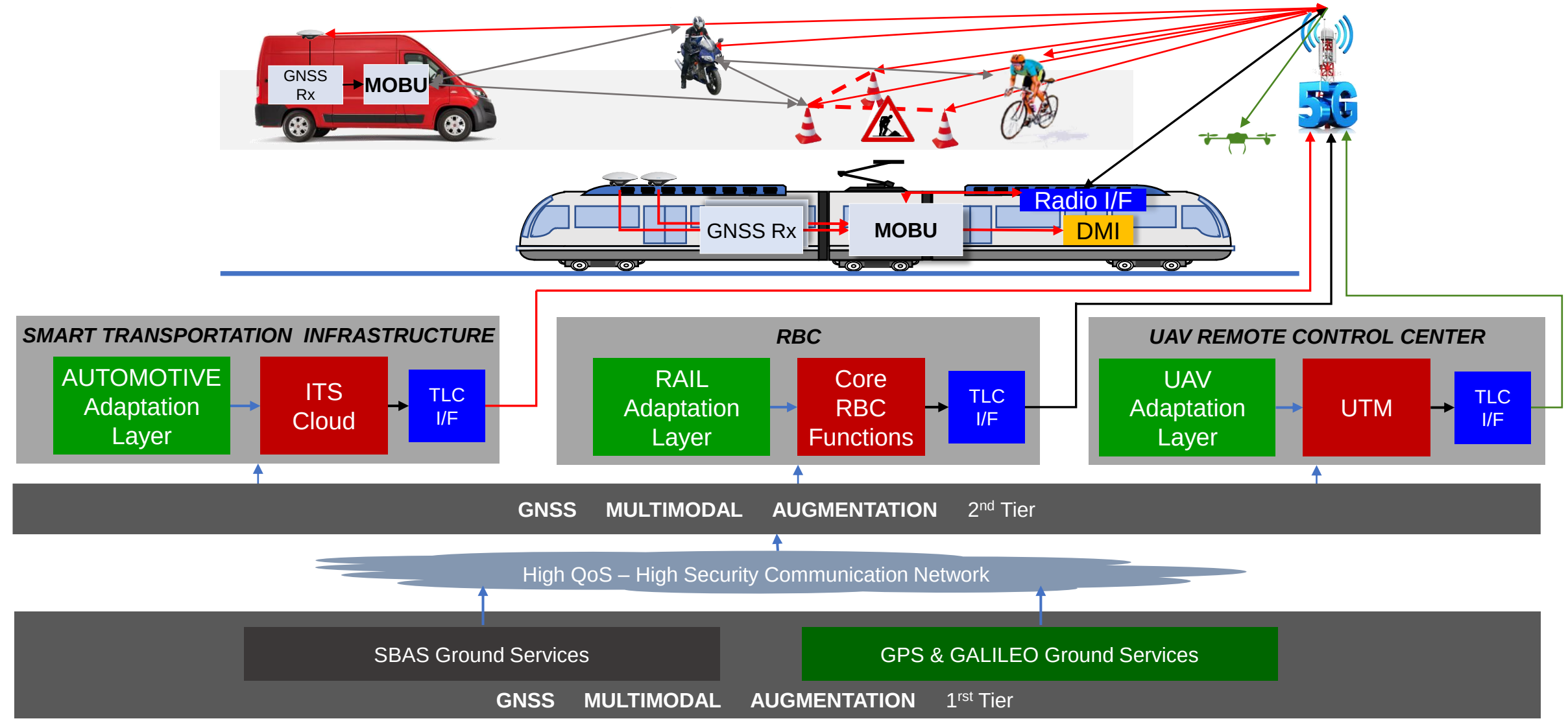
Multi-modal architecture



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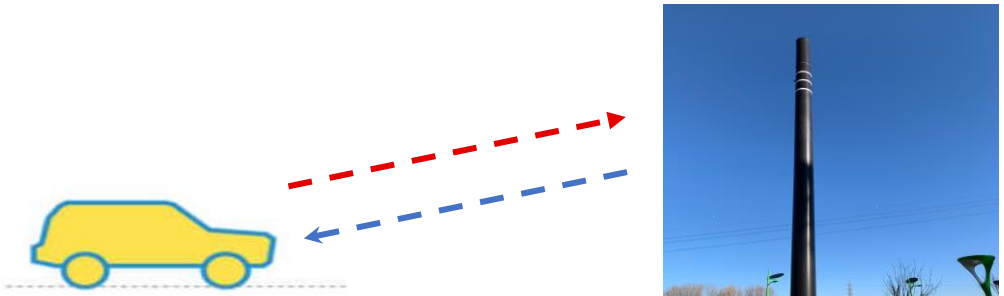
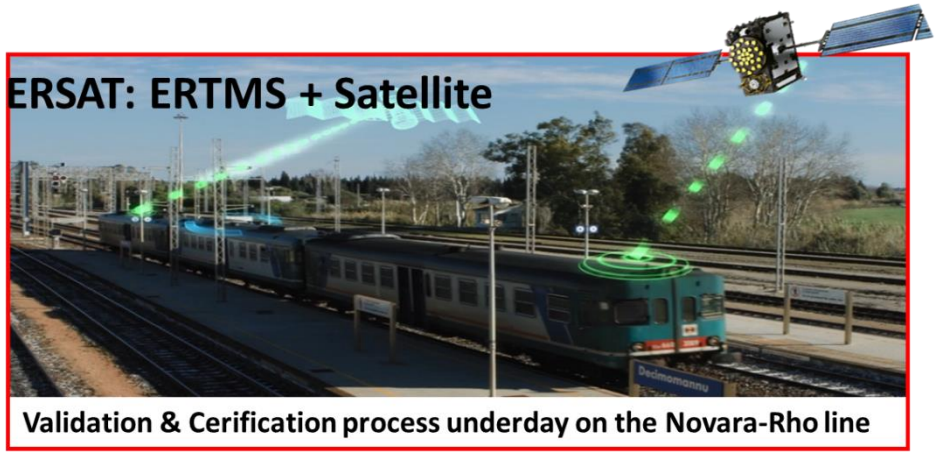
Achievements and future prospects

- **MULTI-MODAL AUGMENTATION PLATFORM** for Rail, Roads and Drones
- **SAFETY** framework for **ROAD** vehicles harmonized with avionics and rail best practices
- **MULTISENSOR On Board Unit** with advanced Integrity Monitoring Capabilities
- **TIGHTER INTEGRITY BOUNDS** incorporating (Statistical) Knowledge about **Local Hazards**
- Contribution to the standardization working-group **RTCM SC 134**

Identified *early adopters* in Italy



Smart Road - ANAS



ERSAT - RFI

Consortium

Multidisciplinary team including research centres and industrial partners

RadioLabs

Univerzita Pardubice

Research centres

DLR

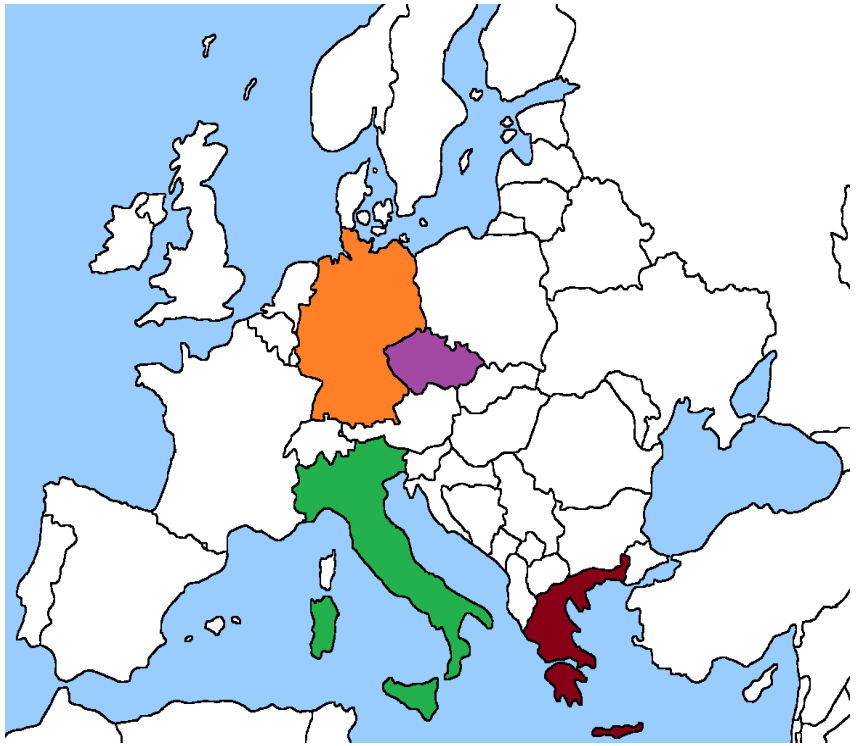
HELMET

Industrial partners

ITC

sogei

roboauto



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- Visit us on HELMET website:

https://www.helmet-project.eu/

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