

ERASMO

Enhanced Receiver for AutonomouS MObility

GSA/GRANT/03/2018

ERASMO is a 3-year Fundamental Elements¹ project, carried out by a **Consortium comprised of Renault, Idneo, GMV-ITS, GMV-AD, VVA, Artisense, Septentrio and CNRS-UTC**, that will lead to the development of an innovative positioning **On-Board-Unit (OBU)** that enables **fully automated driving**.

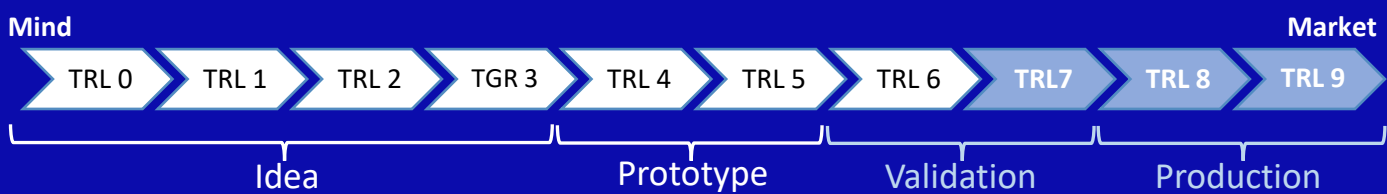
The ERASMO OBU will integrate an **EGNSS receiver with additional sensors** to enable the target applications' optimal performance. To meet the required performance targets, the proposed OBU is expected to also make use of multiple communication channels in order to benefit from of the cooperative positioning concept. The developed ERASMO receiver OBU will be suitable for fully automated driving, have an marketable price point, and optimally **leverage EGNSS differentiators** by implementing a series of technical aspects.

The main goals are to:

1. **Optimise the use of Galileo signals** in terms of accuracy, integrity, availability and correction features.
2. **Hybridise GNSS data with information from multi-sensor and vehicle information** to attain the best absolute localisation information as possible, as well as to measure the level of integrity achieved.
3. **Determine the relative localisation** of the vehicle by leveraging on perception sensors available for autonomous driving as well as a priori information stored on navigation maps.
4. **Combine both relative and absolute localisation** estimates to provide high accuracy and high availability localisation information for autonomous driving and other location dependent applications, including an estimate of the system integrity level.
5. **Demonstrate and measure the performance** of the proposed solution experimentally in peri-urban and urban road networks.
6. **Ensure that the proposed solution is economically and operationally** feasible for use in passenger vehicle.



Technology Readiness Level (TRL) of at least 7

The outcome of the development shall be a close-to-market prototype(s), which corresponds to reaching a TRL level of 7 or higher.



¹ The Fundamental Elements Programme is an EU R&D funding mechanism to support the development of EGNSS-enabled chipsets, receivers and antennas. It was created by the 2013 GNSS Regulation, and it is complementary with Horizon 2020 that aims to develop innovative products, application and feasibility study in different market segments.

Find out more on:

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 ERASMO - Enhanced Receiver for AutonomouS Mobility 
<https://erasmo-gnss.eu/> 

Members of the industry Consortium leading the evolution of autonomous driving:

