

PROJECT

## NICENAV

### **NICENAV Navigation-grade ITAR-free Certifiable Equipment for the Navigation of manned and unmanned Air Vehicle, based on FOG technology**

**Funding:** European (Horizon 2020)

**Duration:** Jun 2015 - Sep 2015

**Status:** Complete

**Total project cost:** €71,429

**EU contribution:** €50,000



**Call for proposal:** H2020-SMEINST-1-2015

[CORDIS RCN : 197371](#)

#### **Objectives:**

##### **Brief description of project idea:**

NICENAV project (Navigation-grade ITAR-free Certifiable Equipment for the Navigation of manned and unmanned Air Vehicle, based on FOG technology). Fibre Optic Gyroscope (FOG) is a truly and unique solid state technology that allows compact, lightweight and accurate sensors technology to provide orientation and position with or without GPS availability. The INS (Inertial Navigation Systems) proposed is an autonomous system that can operate in absence of GPS and is essential for airborne application where safety is involved (i.e. the system provide heading, altitude and position autonomously in case of GPS lost). NICENAV does not rely on any component or design/development services or technical data to be provided by US under the ITAR regulations; this ensures shorter time-to-market and reduced development costs. It will be qualified to be installed on-board of airborne platforms, both manned and unmanned, where safety requirements (DO-178C/DO-254) are mandatory. The system will provide performance better than 1 NM/hr for the “inertial navigation” accuracy.

#### **Competition:**

Sagem (French company) that offers an ITAR-free INS solution dedicated to high performance airborne applications, which is also DO-178C & DO-254 certified. Comparing the two products, NICENAV has a lower cost (about 20%) and it is based on FOG technology while the Sagem solution is based on RLG technology. FOGs are more reliable, need lower maintenance, ensure an higher MTBF (Mean Time Between Failures) and they are easily scalable. In addition, contrary to RLGs, FOGs are very close to their theoretical performance.

#### **Market segment:**

World Wide Aircraft Prime Contractors - Avionics first and second tier integrators - Aircraft Maintenance & Overhaul Companies.

#### **Market size:**

Focusing on ITAR-free solutions: \$192 million in 2014 and \$238 million by 2019.

#### **Revenue Streams:**

Cumulated revenues at the 4rd year after commercialization = € 29M.

**Team:**

CIVITANAVI SYSTEMS-NEAT.

**Parent Programmes:**

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Lead Organisation:****Civitanavi Systems Srl****Address:**

VIA DEL PROGRESSO 5  
63827 PEDASO FM  
Italy

**EU Contribution:** €50,000

**Partner Organisations:****Neat Srl****Address:**

Via Edoardo D'Onofrio 304  
00155 ROMA  
Italy

**EU Contribution:** €0

**Technologies:**

Information systems  
Fibre optics and photonics technology

**Development phase:** Research/Invention

**STRIA Roadmaps:**

Cooperative, connected and automated transport, Vehicle design and manufacturing, Network and traffic management systems

**Transport mode:** Air transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Other specified

**Geo-spatial type:** Other