



# GEONAV IoT

## GEONAV IoT (ESA NAVISP 2018-2019) - Real-time Indoor/Outdoor precise tracking solution

- European Global Navigation Satellite System (E-GNSS)
- Ultra-Wide-Band (UWB)
- Use-cases: Elite sport and Valuable Asset Management



## GEONAV IoT H2020:

- Improving GeoNav IoT outdoor location using Galileo dual-frequency and 5G
- Addressing new use-case: Autonomous drones
- Setting-up a European value chain for industrialisation and preparing market entry



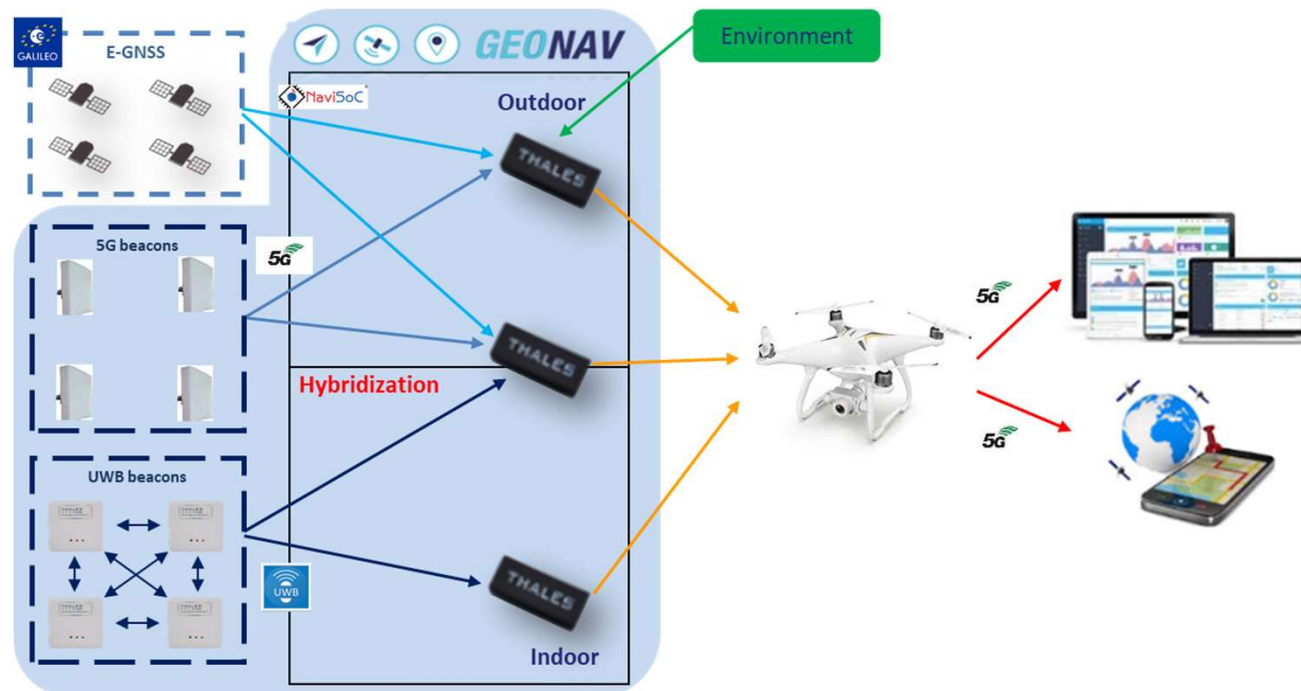
# Main innovations

## Galileo DFMC algorithm :

- Better ionospheric delay estimation
- Improving real-time positioning accuracy
- Improving availability of the solution
- Better multi-path mitigation

## 5G

- Improving TTFF and predictions
- Hybridization between 5G and E-GNSS
- E-GNSS Ephemeris online data through 5G
- Improving availability of the position



# Status of implementation

## ■ Kick-Off Dec 2019

### ■ WP1 - GeoNav IoT updates

- System specifications for Dual-frequency and 5G
- Software development for Dual-frequency
- Hardware and infrastructure design for 5G
- NaviSoC chipset design and development

...Software development for 5G

### ■ WP2 - Autonomous drones use case

- Definition of system specifications
- Hardware design and manufacturing

...Integration of GeoNav IoT library for tests

### ■ WP3 - Industrialization

...Kick-off : Q1/2021

### ■ WP4 - Communication

- Communication plan
- Website
- LinkedIn and Twitter accounts

...Continuous communication

...Exploitation plan

...Drone demonstration Q3/2021

[https://twitter.com/GeoNav\\_IoT](https://twitter.com/GeoNav_IoT)

<https://www.linkedin.com/in/geonav-iot-a706a01a1>

<https://www.thalesgroup.com/en/geonav-iot-precise-positioning-solution-both-outdoor-and-indoor-environments>