

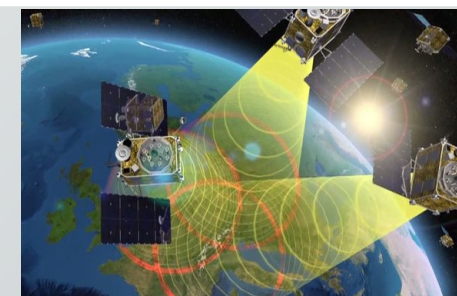


European
Global Navigation
Satellite Systems
Agency

European GNSS Agency pilot project for the transmission of SBAS corrections via IALA beacons and AIS/VDES

ENAV21 Meeting

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Prof. Manuel Lopez Martinez
Project Officer
European GNSS Agency

ALG TRANSPORTATION
INFRASTRUCTURE
& LOGISTICS



We certify you're there.



GSA has an active long-term trajectory working to foster SBAS adoption in maritime for SOLAS and non-SOLAS vessels, and beyond leisure applications

- Use of EGNOS (European SBAS) in maritime is currently **possible through the Open Service**, which provides differential corrections to increase accuracy. However, the use of the integrity information provided is not yet standardised at users' receivers to fulfil maritime safety needs.
 - **EC** (owner of EGNOS) and **GSA** considers that **SBAS can complement current IALA beacon and AIS services** to provide differential corrections and integrity information.
 - The use of EGNOS corrections for water navigation (both coastal and inland) and **their expected benefits has already brought the attention of many European authorities**, which are interested in the recapitalization of their DGPS radio beacon networks.
 - GSA is funding a new pilot project to demonstrate the operational performance of the **transmission of SBAS corrections via IALA beacons and AIS/VDES**, while providing a **detailed cost benefit analysis of the solutions** proposed in IALA Guidelines for the use of SBAS (expected to be finalised in ENAV21). This hybrid service complements the current GNSS Augmentation services exploiting synergies and benefiting from the current infrastructure and standards, which facilitates the adoption by maritime and inland waterways authorities and has no impact at user level.
- **Budget: 899,100.00 €**
 - **Duration: 17 months**

Pilot Project builds from the work performed so far by the GSA, aimed at demonstrating that EGNOS can provide multiple benefits to the maritime and IWW service providers

- The contract will allow **the maritime and IWW service providers** to have a **clear understanding about the technical and economic feasibility** of the transmission of **EGNOS corrections via IALA beacons and AIS/VDES**
- Up to four **pilot projects will be developed in different sites and countries implementing preferred service provision schemes**, which will be evaluated in long-term real scenarios and validated both from operational and economic points of view.
- The **key drivers of this project** include
 1. **Close involvement of the maritime and IWW authorities**
 2. **Practical implementation of the architectures** to verify operational requirements, carry out extensive analysis and identify the best value for investment options

The Project aims to address technical, operation and economical feasibility of using EGNOS as a source for the Differential GNSS (DGNSS) corrections to be transmitted via IALA beacons and AIS/VDES stations

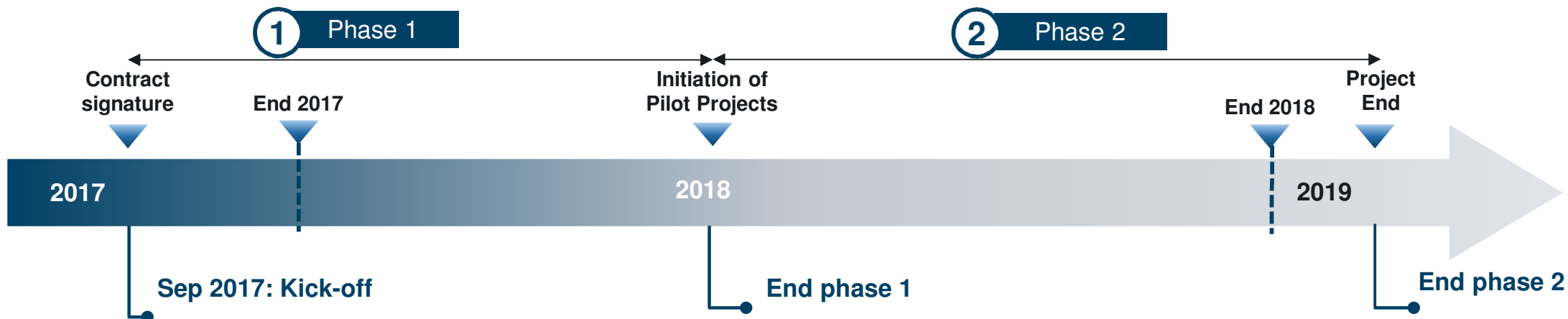
Structure and Implementation Timeline

1 Phase 1

- Establishment of an **Advisory Board (AB)** with maritime and inland waterway authorities
- **Preliminary assessment by the AB** of the different EGNOS service provision schemes.
- Establishment of up to **4 Working Groups (WG)** to support pilots and preliminary trials
- Preliminary **technical feasibility and CBA** based on preliminary trials following guidelines and recommendations from AB and WG.
- Preliminary recommendations

2 Phase 2

- **Definition** of up to 4 pilots following guidelines provided by the **Advisory Board**
- **Deployment of pilots** to use EGNOS corrections via AtoN infrastructure, as provided by interested authorities.
- **6-months test campaigns**
- **Technical feasibility analysis and CBA**, based on pilot campaigns
- Derivation of **conclusions and recommendations for service implementation**



Maritime and IWW authorities are key actors to maximise the outcomes and relevance of the pilot projects. Two levels of participation are envisaged:

Participate to the Advisory Board

Extent of Participation

- To analyse the candidate EGNOS service provision schemes and **support selection of most suitable scheme**
- To support preliminary **tests and pilots definition** and deployments
- To support technical, operational, and economical analysis.

Main benefits for Maritime/IWW Authorities:

- Participation in the selection of most suitable EGNOS service provision schemes to be implemented.
- Participation in the definition of pilots to align it with their own service provision needs.
- Acquisition of valuable technical, operational and economic know-how on these service provision schemes

... and also host a pilot and participate to the Working Group

Extent of Participation

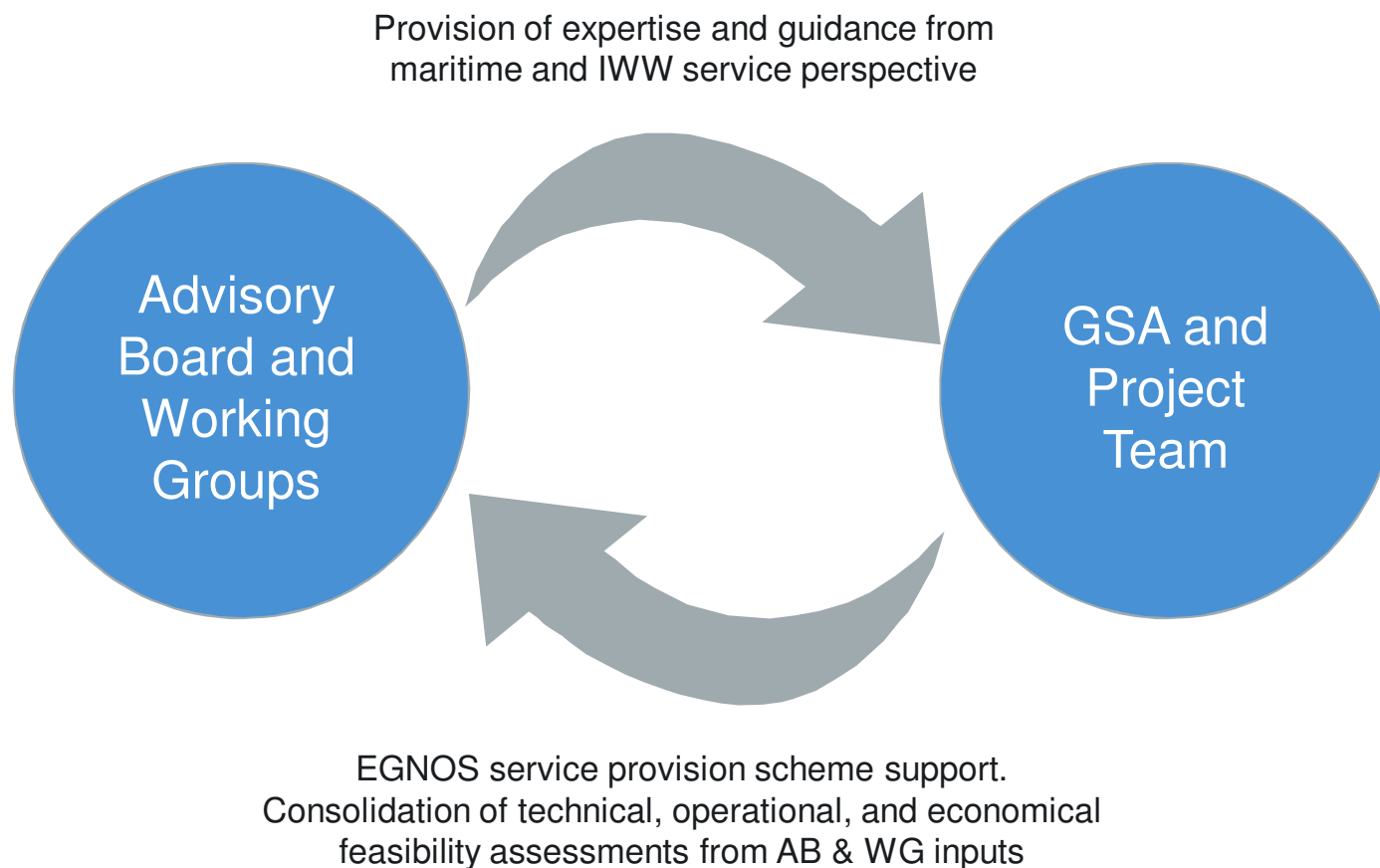
- To host a pilot and facilitate relevant infrastructure
- To support the execution of the pilot

Main benefits for Maritime/IWW Authorities:

- Full deployment of EGNOS service provision at the end of the project, ready to use
- Acquisition of know-how and experience in the service deployment
- Being pioneer of differential service provision using EGNOS data

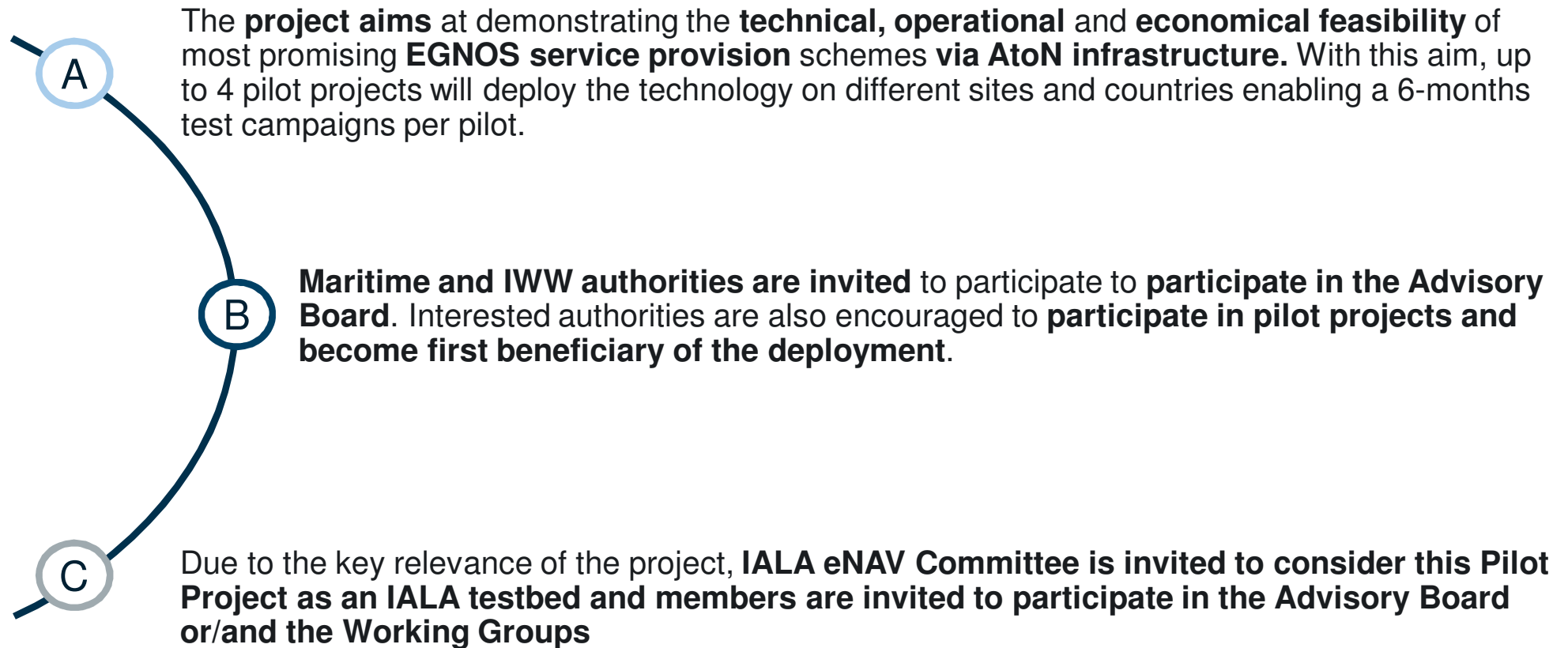
Participation to Advisory Board would be oriented to acquire technical and operational knowledge for future projects and implementation; participation to Working Groups would allow to achieve an immediate practical implementation

In-depth involvement of the Advisory Board and Working Groups will mean real continuous 2-way interaction with GSA and Project team



The main objective of the whole project are the results of real implementation scenarios, that can serve as a baseline, provide solid know-how and useful lessons learnt for future implementations

The participation of authorities to Advisory Boards and Working Groups is strongly encouraged, being a fundamental factor for the final outcome!



For the participation in the project please contact
Jose-Manuel Alvarez at Jose-Manuel.Alvarez@essp-sas.eu