**IDENTIFICATION AND DEVELOPMENT OF AFI NAVMOD**

1. **Project Identification**

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| **AFI Region** | **PROJECT DESCRIPTION (DP)** | DP N° XX | |
| ***Programme*** | **Title of the Project** | **Start** | **End** | |
| *[CNS]*  **Programme Facilitator: [ROs] : RO CNS** | **AFI NAVMOD** *AFI Navigation Modernization Initiative*  Project coordinator: [Name of the Project Coordinator] | **01/12/2025** | **31/12/2027** | |
| **Rationale** | The AFI NAVMOD project is justified by the need to modernize and maintain reliable navigation services in the AFI Region. Conventional navigation aids, as outlined in the AFI Air Navigation Plan (FASID Table CNS 3), remain essential for redundancy and continuity. At the same time, GNSS enables more efficient en-route and approach operations, supporting PBN and RNP implementation. The introduction of augmented GNSS further enhances accuracy and flexibility, particularly for landing operations. However, increasing reliance on GNSS, coupled with vulnerabilities such as Radio Frequency Interference (RFI), poses risks to safety and operational continuity. Therefore, a balanced approach is required—modernizing conventional systems while strengthening GNSS integrity and aligning with ICAO’s GANP and regional performance objectives. | | |
| **Objective** | To assist AFI States in modernizing aeronautical navigation services through:   * Implementation of conventional navigation aids (ILS, VOR, DME) * Integration and oversight of GNSS (core and augmented) * Strengthening GNSS monitoring and RFI mitigation * Definition of minimal operational networks for conventional aids to ensure redundancy * Enhancing regional capacity and coordination | | |
| **Scope** | * Covers all AFI States and FIRs * Includes both ground-based and satellite-based navigation systems * Encompasses infrastructure, procedures, training, monitoring, and reporting mechanisms * Supports national and regional air navigation planning | | |
| **Metrics** | * % of States with updated national navigation plans including GNSS * Number of States with operational GNSS monitoring and RFI reporting mechanisms * Completion of regional workshops and training sessions * Deployment of Regional Navigation Minimal Operating Networks (MON) * Adoption of AFI Navigation Implementation Plan | | |
| **Strategy** | The project will be executed by NAV experts nominated by AFI States, coordinated by a Project-Team Coordinator, and supervised by Project Facilitators (ROs/CNS ESAF/WACAF) using the IIM SG working methodology. Final deliverables will be submitted to the PRCC for review and approval. Collaborative meetings will be held with all relevant stakeholders.  Key strategic pillars:   * AFI Navigation Strategy development * Monitoring & Reporting: Deploy GNSS logbooks, RFI reporting tools, and a regional dashboard. * Redundancy Planning: Define and implement Navigation Minimal Operating Networks (MONs). | | |
| **Related projects** | IIM SG NAV project | | |
| **Relationship with the regional plans** | ASBU NAVS B0, NAVS-B0/1, NAVS-B0/4 | | |

1. **Project Deliverables**

| **Project deliverables** | | | | | |
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| **Reference** | **Description** | **Responsible** | **Delivery**  **date** | **Status of**  **Implementation** | **Comments** |
| **Composition of project team** | | | | | |
| **DEL01.1** | Selection of experts |  |  |  |  |
| **DEL01.2** | Project Kick off meeting (online) / Webinar |  |  |  |  |
| **AFI Navigation Strategy** | | | | | |
| **DEL02** | AFI Regional Navigation Implementation Plan (AFI Nav Plan) |  |  |  |  |
| **GNSS Monitoring & RFI Mitigation** *Strengthen GNSS integrity and availability monitoring in the AFI Region through RFI detection, reporting, and mitigation.* | | | | | |
| **DEL03.01** | Regional workshops on GNSS vulnerabilities and RFI mitigation best practices |  |  |  |  |
| **DEL03.2** | Baseline GNSS incident logbook (aligned with ICAO Doc 9849) |  |  |  |  |
| **DEL03.3** | AFI-wide RFI detection and reporting mechanism |  |  |  |  |
| **NAV Redundancy Infrastructure / Goal:** Ensure continuity and redundancy of conventional navigation systems (ILS/VOR/DME) during GNSS unavailability. | | | | | |
| **DEL04.1** | Definition of Regional Navigation Minimal Operating Networks (Nav. MON) |  |  |  |  |
| **DEL04.2** | State/FIR-level gap analysis of conventional navigation aids |  |  |  |  |
| **DEL04.03** | Workshop for validation of **DEL02, DEL03, DEL04** |  |  |  |  |

1. **Resources**

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| **Resources required** | - Selection of experts to conduct the project activities (Technical experts (ANSPs, ICAO, industry partners)  - Funding for workshops, training  - Commitment of beneficiary States to fund the assistance mission,  - Commitment by States to support the coordinators and experts. |

1. **Project Costing**

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| **Activities** | **Expenditures** | | |
|  | **Total** | **2026** | **2027** |
| **Deliverable 1 Composition of project team** |  |  |  |
| Activity #1.1 : Selection expert | - | - | - |
| Activity #1.2 : Kick off meeting | - | - | - |
| **Deliverable 2: AFI Navigation Strategy** |  |  |  |
| Activity #2.1 : Development of AFI Navigation Strategy |  |  |  |
| Activity #2.2 : Validation workshop ( Del 2 and 3) |  |  |  |
| **Deliverable 2: GNSS Monitoring & RFI Mitigation** |  |  |  |
| Activity #3.1: Baseline GNSS incident logbook (aligned with ICAO Doc 9849) |  |  |  |
| Activity #3.2: AFI-wide RFI detection and reporting mechanism |  |  |  |
| Activity #3.3: Validation workshop ( Deliverables 2,3,4) |  |  |  |
| **Deliverable 4: NAV Redundancy Infrastructure / Goal** |  |  |  |
| Activity #4.1: Definition of Regional Navigation Minimal Operating Networks (Nav. MON) |  |  |  |
| Activity #4.2 Workshop for the validation of documents and tools | 47,660 | - | **47,660** |
| **Total** | **47,660** | **-** | **47,660** |