IDENTIFICATION AND DEVELOPMENT OF AFI NAVMOD

1. Project Identification

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**	**31/12/202**
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		

2. Project Deliverables

Project deliverables					
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**				

3. Resources

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.

4. Project Costing

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**