AIR TRAFFIC AND NAVIGATION SERVICES SOC. LTD
REPUBLIC OF SOUTH AFRICA

APPOINTMENT OF A SERVICE PROVIDER FOR SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF AN AERONAUTICAL INFORMATION MANAGEMENT (AIM) SYSTEM

ATNS/TPQ/RFP002/FY24.25/AIM SYSTEM REPLACEMENT

VOLUME 2

TECHNICAL REQUIREMENTS

APRIL 2024

GENERAL INSTRUCTIONS TO BIDDERS

The Bidder shall submit all responses, diagrams, project management documentation and drawings according to the GENERAL INFORMATION AND INSTRUCTIONS TO BIDDERS document and in the English language.

ALL RESPONSES TO THE REQUIREMENTS IN THIS DOCUMENT SHALL BE PROVIDED AS FOLLOWS:

BIDDERS SHALL RESPOND IN FULL TO EACH ITEM IN THE FORMAT PROVIDED AND REFERENCES (CHAPTER, SECTION, PAGE NUMBER, PARAGRAPH NUMBER) TO DOCUMENTS AND RELEVANT INFORMATION SUPPORTING THE RESPONSES SHALL BE INDICATED IN THE SPACE PROVIDED. THIS INFORMATION WILL BE THE **ONLY RESPONSE USED FOR THE EVALUATION AND ASSESSMENT**.

Responses, provided in the space allowed, that are not clear or inadequate or the lack thereof shall be interpreted as **"Not Compliant"** even though the compliance column is declared as "Comply" and/or the Bidder's offer meets the requirement. Bidder's shall ensure that each response correctly addresses the requirement stated. Responses not addressing the requirement of the specific paragraph shall be interpreted as **"Not Compliant"**.

Bidder's shall declare compliance to each and every paragraph of this document in the column labelled "Compliance" as follows:

C:	Fully Compliant	=	2 points;
PC:	Partially Compliant	=	1 point;
NC:	Non Compliant	=	0 points.
Noted:	Noted and accepted (applicable to paragraphs marked as "I", not containing requirements)		

Bidder's shall, for paragraphs declared "PC" or "NC", include a statement as to the nature of the variation and may additionally supply supporting information in the space provided to demonstrate how the proposal meets the needs of ATNS.

For paragraphs marked "(M)", indicates that the requirement is mandatory and proposals not compliant with the requirement shall be disqualified for further evaluation.

Paragraphs marked "(D)", indicates that the requirement is desirable, and the Bidder is expected to comply. The Bidder shall declare their level of compliance, provide a formal response and reference to supporting documents.

Paragraphs marked "(I)", indicates that the requirement is for information, however the Bidder is still expected to respond and provide information if requested. Any information gathered herein may form part of the contractual terms.

1. Introduction

1.1 Document Purpose

This document serves to capture the approach that was taken to address the project requirements and document the design of a feasible solution.

1.2 Project Purpose

The current Aeronautical Information Management (AIM) service is provided from two independent systems namely, the dynamic and static component (ANAIS) Aeronautical Automated Information System, and static component (CAD) Centralised Aeronautical Database. The Aeronautical Automated Information System (ANAIS) was installed and implemented in 2000 financial year as part of the MOTSETA project which also included the Aeronautical Message Switching System (AMSS) and the Aeronautical E-solution Service (AES) commonly known as File2Fly.

A major upgrade on the MOTSETA system was performed in the 2009/2010 financial year.

The ANAIS has reached its end of design life in the 2020/2021 financial year. The key components of the system have become obsolete, making the system challenging to maintain. Provision was made in the 2017 permission plan to replace the system.

The current Centralised Aeronautical Database (CAD) system was installed in the 2011/2012 financial year and will reach the end of its design life during the 2026/2027 financial year. The main objective of the CAD is to establish a platform for a single aeronautical information repository for the various operational systems within ATNS and facilitate ATNS to play a leadership role in the ICAO establishment of an African Centralised Aeronautical database (AFI-CAD).

1.3 Scope of Work

The anticipated goal is to implement an AIM system that complies with the requirements to migrate from AIS to AIM in preparation for System Wide Information Management (SWIM) operations. The system shall have the following capabilities:

[a]   Flight Plans [FPL];

[b]   Associated ATS Messages;

[c]   Notice to Airmen [NOTAM];

[d]   Meteorological Information [MET];

[e]   Pre-Flight Information Bulletin [PIB]

[f]   Static Database Management;

[g]   Aeronautical Charting Production;

[h]   Internet Briefing System [IBS];

[i]   Aeronautical Information Product Authoring and Management; and

[j]   Electronic Terrain and Obstacle Data [eTOD].

This system shall also cater for seamless interfacing to the Aeronautical Message Switch System [AMSS] including interfacing with other ATNS ATM systems like the following:

[a]   Air Traffic Flow Management [ATFM] with its subs-systems (e.g. SCORE, AFT etc);

[b]   ATM System [TOPSKY];

[c]   AFTN/AMHS; and

[d]   ASMGCS.

2. System Analysis

2.1 Objectives

ATNS plans to procure and implement an AIM system that shall support the collection, validation and management of aeronautical data and information and the preparation and publication of aeronautical information products as defined in the relevant regulations.

The objectives of the implementation of an AIM system are to:

- Enhance the quality of aeronautical data and information by reducing human interaction with aeronautical data;
- Ensure traceability by establishing a digital dataflow from origination to provision of aeronautical data and information;
- Increase efficiency by automating manual processes;
- Achieve compliance with international and national regulations;
- Enable ATNS to autonomously produce and update the aeronautical information products;
- The AIM system should follow the process as defined in the Figures 1,3 and 4 (or similar); and
- Improve the timeliness, quality, efficiency, and cost-effectiveness of aeronautical information services.

3. System Overview

3.1 Standards and Regulations

The following standards, regulations and recommended practises shall be considered in the detailed technical design and technical specifications:

       a.   ICAO Annex 2, Rules of the AIR

       b.   ICAO Annex 3 Meteorological Service for International Air Navigation (Latest Edition)

       c.   ICAO Annex 4, Aeronautical Charts (Latest Edition)

d.   ICAO Annex 10 Volume II/III (Latest Edition)

e.   ICAO Annex 11, Air Traffic Services (Latest Edition)

f.   ICAO Annex 15 to the Convention of Civil Aviation (Latest Edition)

g.   EUROCONTROL Specification for the Electronic Aeronautical Information Publication (eAIP) Version 2.1

h.   ICAO DOC 4444, PANS ATM (Latest Edition)

i.   ICAO DOC 10066, PANS, AIM

j.   ICAO DOC 10039, SWIM

k.   ICAO DOC 9965, Manual on Flight and Flow — Information for a Collaborative Environment

l.   ICAO DOC 7910, Location Indicators (Latest Edition)

m.   ICAO DOC 8126 Aeronautical Information Services Manual (Latest Edition)

n.   ICAO Doc 8585 Designators for Aircraft Operating Agencies (Latest Edition)

o.   ICAO Doc 9880-AN/466 Manual on Detailed Specifications of the Aeronautical Telecommunications Network (ATN) using ISO/OSI Standards (Latest Edition).

p.   ISO 19107:2003 Spatial Schema (Latest Edition)

q.   ISO 19108:2002 Temporal Schema (Latest Edition)

r.   ISO 19115:2001 Metadata (Latest Edition)

s.   ISO/IEC 19501:2005 Universal Modelling Language (UML) (Latest Edition)

t.   Extensible Markup Language (XML) (Latest Edition)

u.   ISO 19136:2007 Geography Markup Language (GML) (Latest Edition)

v.   ISO 19139:2007 Metadata XML Schema Implementation (Latest Edition)

4. Requirements

4.1 Business Requirements

The AIS system shall:

4.1.1   Support ATNS in the collection, validation, storage and management of aeronautical data and information;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.1.2   Enable ATNS to approve changes of datasets;

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.1.3   Support the process of collection, validation, authorization of aeronautical data
and information and the production of aeronautical information products with
workflow management capability;

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.1.4   Enforce logical and semantic consistency

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.1.5   Provide a component to create, update and publish an Aeronautical Information
Publication including and eAIP from the aeronautical information database;

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.1.6 Provide a component to create and update aeronautical charts from the aeronautical information database; and

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.1.7 Allow ATNS to host and manage aeronautical information products and services on behalf of international Clients/States, as well as allow ATNS to offer these products and services as a multi tenanted solution.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.1.8 Interface with existing PANS-OPS tools

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.1.9 Synchronise with the Eurocontrol AIS Database (EAD)

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.2 Major Functions for AIS Automation

The system shall be an integrated computer network, based on the AICM/AIXM concepts, to assist and support the workflow of Aeronautical Information Management using a common database from which the data can be exploited, to produce automated document outputs such as the AIP/eAIP and its amendments and supplements, aeronautical maps and charts, Aeronautical Information Circulars, NOTAM.

The central database of the system shall host all information common to civil aviation. All concerned units shall access these databases through their connected workstation using specific application tools that foresees desired functional requirements of the respective units. The system shall be developed in accordance with ICAO recommendations. The AIS system shall consist of these major functions:

- **Aeronautical Data Management**
- **AIP production/publication Management**
- **Flight Plan (FPL) Filing and Processing (with Web and Mobile applications)**
- **Internet Briefing Service (IBS)**
- **Aeronautical Chart Maintenance**
- **MET Data Processing and Management**
- **NOTAM Operation and Data Management Function**

The major functions should be as follows:

4.2.1 Aeronautical Data Management:

To allow management of aeronautical data through an AIXM 5.1 (or later) compliant database and extensible by the system manager to support data manipulation including to collect/validate/insert/extract/update information and aeronautical spatial features (with their attributes).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.2.2   AIP production/publication Management:

An authoring tool that temporally extracts information from the system central database and automatically generates and publishes ICAO aeronautical information products such as an AIP, AIP Amendments and Supplements based on pre-defined rules and document templates. Charts or other graphic objects inclusion should also be automatically created. The module shall be capable of producing HTML or XML output to obtain a web-based AIP or an eAIP version. The software system shall be provided with ICAO Annex 15 compliant AIP templates and allow for the creation of new templates based on existing ones. The module should also be capable of storing and cataloguing all the produced documents, charts, and templates for operational needs.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3   Flight Plan (FPL) Filing and Processing:

This module shall provide functions for Processing, Validation, Distribution and Retrieval Management Functions such as:

4.2.3.1 FPL Acquisition: Acquires FPL messages via the Aeronautical Communication Layer (AFTN, AMHS) or by interacting with the NOTAM Web Interface.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.2 FPL Registration: Users may register Flight Plans or Flight Plan Proposals directly within the system using the Graphical User Interface (GUI). ICAO structured web-forms ensure that FPLs

are registered using the proper format and syntax. The GUI shall conduct front-end syntax and semantic validation of user entries with all errors clearly reported to the user. Only upon successful validation, the FPL is stored within the system as a Flight Object.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.3 FPL Analysis: All FPLs, which are acquired by the system, are immediately analysed to verify their syntax and semantics according to defined validation rules embedded within the system. The application of these validation rules is configurable to permit per-system customization of the error tolerance.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.4 FPLs, which are found to be consistent with the validation rules, are stored within the system as valid FPLs.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.5 FPLs which are found to be inconsistent with the validation rules and were received by the AFTN/AMHS interface shall be stored within a Reject Inbox for manual processing.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.2.3.6 FPLs which are found to be inconsistent with the validation rules and were registered via the GUI shall be immediately rejected and an error containing the reasoning for its rejection is presented to the user

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.7 FPL Lifecycle Management: FPLs that are stored within the system have a validity period and are automatically set to "Active" or "Inactive" according to temporality. A FPL that has been registered via the GUI or received from the AFTN/AMHS interfaces for a flight-taking place in the future is marked as having the validity of "Active". Once a FPL has expired its validity is marked as "Inactive". Each FPL also is marked with a status of either "Pending", "Approved", "Foreign", or "Sent".

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.8 FPL Proposal: A FPL (with or without Item 19) that has been registered by external users via the GUI that is marked as having the status of "draft", for the first verification by Operators. "Pending" FPLs must be manually approved by and authorized user before the status is marked as "Approved" or "Rejected". It shall be possible to configure the system to skip the manual approval step and have all domestic registered and received FPLs marked as "Approved" immediately. When a FPL has been disseminated by the system, the status of the FPL is changed from "Approved" to "Filed".

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.9 Before its own promulgation, an FPL message shall be subject to various status changes:

      4.2.3.9.1   From draft to pending

      4.2.3.9.2   From pending to approved

      4.2.3.9.3   From pending to rejected (with the reason of rejection sent out also via e-mail to the FPL Proposal originator)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.10   Each status change shall be mapped into actions performed by different Users accounted to different Organizations, or FPL Offices, or Functions groups. The FPL workflow involves several users that can be grouped into the following:

Originators: users belonging to this group have access to FPL Proposal functions to query proposals related only to their pertaining office and to create (or correct) proposals to be submitted to Verifiers.

Verifiers: these users have access to proposals created by Originators and can approve / reject the ones (in "pending" status). At the approval of the proposals, a FPL message is promulgated and distributed through the AFTN/AMHS network.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11 Flight and Flow of Information for Collaborative Environment (FF-ICE/R1 Minimum capability), contains a total of six FF-ICE services, structured and designed to be implemented independently.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.1 The other four services (i.e. Planning Service, Trial Service, FF-ICE Data Publication Service and Notification Service) shall be implemented incrementally as part of system evolution and depending on the needs of ATNS. The incremental implementation should ease transition and lower the risks of operational and system issues.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.2 The system must be able to process FPL filed on an FPL APP.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.3 The system must accept emailed FPL.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.2.3.11.4 FPL statistics must be detailed consisting of individual, team, number of erroneous FPL, displayed on a dashboard as well as the ability to extract reports. The system must have an extensive GOOGLE EARTH functionality which supports the KMZ FILES and mapping function. which displays the entire route flown and erroneous data on the route.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.5 All FPL shall be assigned a unique identification record/reference number when processed.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.6 All FPL processed, shall be saved automatically to the FPL Management database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.3.11.7 NOTAM information applicable to the DEP/DEST/ALTN/CROSSED FIR/SAR/ROUTE to be displayed on a window for the end user when filing an FPL. This is to ensure latest NOTAM information is readily available to the end user.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.2.4 Aeronautical Chart Maintenance:

This tool shall provide automatic extraction and charts symbolization according to the release cycles by retrieving aeronautical data stored in the central database using the GIS engine. The module supports true temporality while capturing all Meta-data regarding the changes that user worked on the data. Rollbacks and producing of charts according to past releases should also be achieved through this tool.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.5 MET Data Processing and Management:

To process received meteorological data from the South African Weather Service (SAWS) and will distribute meteorological bulletins according to a pre-defined schedule.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2.6 NOTAM Operation and Data Management Function:

The NOTAM Subsystem will manage the receipt, initiation and dissemination of all types of NOTAM by users with adequate authorization, i.e. NOTAM database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.3 System Requirements

4.3.1   The requirement is for an Aeronautical Information Management (AIM) System.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.2   The proposed AIM System shall adopt a client/server architecture, which shall support the continuity of service of the system for the failure of one server component.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.3   AIS Database and Management Server is central to AIS equipment. The system shall consist of dual sever based system running in Main/Standby configuration, storage, and processing all concerned AIS data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.4   System Management subsystem shall provide system supervision, set-up, database maintenance and system monitoring such as parameterization. The system monitoring will also allow a quick overview of the current health of the system and application, as well as the

status of the system resources at any required time.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.5 Web access and Mobile Application: The system shall allow for access to users via a web portal and a mobile application for the submission of flight plans, the preparation of pre-flight information bulletins and the access to the State eAIP. Each user shall be identified via access credentials, which shall be categorized under specific user rights/roles to be configured by the system administrator. The web access should be optimised for use on mobile devices.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.6 The system design shall include a state-of-the-art website and mobile application with a firewall which shall enable secure access by external users (e.g. Pilot Portal for briefing and flight planning on eAIP website). ATNS branding of the website and mobile application shall be done at project execution.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.7 AIP subsystem shall allow for the creation, presentation and updating of AIP database as defined in ICAO Annex 4, Doc 8216 (AIS Manual), Doc 8697 (Aeronautical Chart Manual). The subsystem should handle automatic updating in line with the AIRAC publication cycle. The software system shall be provided with ICAO Annex 15 compliant templates and allow creation of new templates based on existing ones.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.8   Aeronautical Chart / Map Maintenance.

The system shall support all ICAO charts as defined in ICAO Annex 4. It shall produce and update aeronautical charts as listed in Annex 15 5.2.5.1, 5.2.5.2 and 5.2.5.3. It shall allow creation, presentation and update based on specification provided in ICAO Annex 4 and ICAO Doc 8697 such as automatic generation of symbols, management of base map data, map frames, etc. it shall be linked to the database to allow automatic update and maintenance of the charts. It shall enable manual edits of the generated data. The system shall be based on Geographic Information System (GIS) that complies with aeronautical requirements. The system shall allow for the reviewing, updating, and managing of the database driven charting and mapping applications; symbology, labelling and maintenance; customizable ICAO complaint templates.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.9   The MET subsystem shall process received meteorological data from SAWS and shall distribute meteorological bulletins according to pre-defined schedules. The system shall manage the OPMET database by the operator as the following:

      a. Check and validate messages.

      b. Correct message text fields.

      c. Delete and modify stored METAR message (original message is not modified).

      d. Print out messages.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.10 The AIM Terminal shall allow users to access eAIP, NOTAM, AIP, AIP Supplements, AIC's, Charts, and Meteorological data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.11 The system shall support AIXM5.1 (or later) version and manage basic data related to NOF and NOTAM codes to issue NOTAM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.12 The system shall refer to NOTAM information via Web and search for Geographical Area (such as Polygon drawn on a Web Map), Validity period and NOTAM code by arbitrary character string.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.13 The system shall also be developed in accordance with the latest recommendations from ICAO and others, including all the latest amendments.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.14 The system shall be modular designed and by using industry standard components provide a flexible and expandable combination of components, enabling upward growth.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.15 The Work-Flow Management, Publishing and NOTAM components of the system shall be based on the latest WEB application technology.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.16 The system application shall include a Work-Flow Management System, which can manage all data management functions and internal quality processes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.3.17 The AIM System shall be synchronized with the GPS master clock system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.18 The system shall be interfaced to the AFTN/AMHS system in use at OR Tambo International Airport (FAOR) and shall also have integration capability with various other sites. Interface Control Document (ICD) must be provided by the tenderer.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.19 The database completeness, coherence and consistency shall be granted by query functions. Manually or automatically basic queries shall be permitted. (RQN, RQL, RQO, RQA).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.3.20 All incoming NOTAM shall be syntactically and semantically verified in accordance with the provision contained in ICAO Doc 8126 and the published Aeronautical Data and Aeronautical Information.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.4 General Technical Requirements

4.4.1   The equipment shall be compact, fully solid state, highly reliable and adopt state of the art technology. The design and selection of equipment shall be consistent with the requirements for long-term operation with highest degree of reliability and maintainability.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.2   AIS Automation shall support in meeting the requirement for integrity, resolution accuracy as specified in PANS-AIM Document 10066.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.3   All equipment shall be constructed to operate safely without undue heating, vibration, wear, corrosion, electromagnetic interference, or similar problems.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.4   Safety and protection of personnel during normal operation and maintenance or during malfunctioning of any equipment shall be provided as integrated feature of design, manufacture, and installation. Adequate protection shall be included for ensuring safety of personnel from any possible hazards, including EMI radiation, high voltages etc. The bidder

shall furnish the details of EMI and Safety Standards met by his equipment's and safety features built in.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.5   The equipment shall be constructed on a modular basis throughout, using plug-in type components to the maximum practical content. Parts subject to failure, wear, corrosion or other deteriorations or requiring occasional inspection, adjustment or replacement shall be made accessible and capable of convenient removal. Preferably, all plug-in units and modules shall fit on slide rails and shall be removable from front of cabinet. Connectors shall be keyed to prevent insertions of units in the wrong way or into a wrong slot.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.6   Input/output termination cable shall be properly labelled to permit ready identification of the incoming/outgoing wiring. All interconnecting cables shall also be appropriately labelled to facilitate convenient interconnection and minimize chances of incorrect connection.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.7   All interconnecting cables required to connect the equipment shall be supplied. All cables shall be fully assembled, connector pre-terminated and factory tested as part of overall system check.

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.4.8   The system components shall be installed in 19" 42 U rack enclosures. The bidder shall equip these racks with solid side panels, a vented roof and floor, locking front and rear doors, cable management, and power strips. Each system rack shall use an LCD rack-mount monitor, pull-out keyboard, and at least 8 ports KVM switch to operate all the servers. Each system rack shall be provided two AC power lines.

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.4.9   The system shall provide dedicated terminal applications suitable for the AIMU.

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.4.10 The AIP/eAIP, Dynamic Management, Obstacle Evaluation and Charting systems shall be fully integrated with AIXM 5.1 Database.

COMPLIANCE (C/PC/NC/Noted)
Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

4.4.11 The system supervision, set-up, database maintenance and system monitoring shall be provided by System Administration Terminal.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.4.12 The number and locations of operator positions and system administration positions shall not be limited by the system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5 Interfaces

4.5.1 The system shall provide an interface to send NOTAM over the AFTN/AMHS network based on distribution list.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5.2 The system shall receive messages through the AFTN/AMHS network from external partners.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5.3   The system shall distribute domestic messages through the AFTN/AMHS network.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5.4   The system shall be capable of connecting to an AFTN/AMHS system using asynchronous AFTN/AMHS interface or AFTN over IP.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5.5   The system shall be SWIM-ready through an XML interface for future expandability.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.5.6   The System shall have the capability to exchange aeronautical data with external systems in AIXM (5.1 or higher) data format.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5. System Architecture

5.1 The system shall be developed based on a proven technology and must be in use at other

international airports.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.2 The equipment of the system shall be functionally separated into different modules. The design of the system shall be such that failure of units shall never cause a complete outage of the total system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.3 The core hardware of the system shall be compatible with COTS hardware available from different computer manufacturers.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.4 The system application software shall be designed and developed using proven software engineering methodology e.g. object-oriented design and popular structured high-level language, such as C and Java etc. and it shall be well annotated in English to facilitate ease of future modification and development to meet the evolving ICAO requirements.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.5 The system shall be based on client-server architecture.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.6 The number of terminals/users shall be easily upgraded, e.g., by simply importing a new system license.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.7 The system shall be modular in nature and by using industry standard components, provide a flexible and expandable combination of components, enabling upward growth.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.8 The system application software shall be modular and structured such that incorporation of future requirements shall be achieved by the addition of new modules to the software, with minimum impact to other software modules.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.9 The user terminals/users shall be linked to the system via TCP/IP-based LANs, WANs, and the Internet.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.10   The system shall allow the internet user to access the system via the Internet by using the Internet Gateway.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.11   The system shall allow the www subscriber to access the system by using popular web browsers such as Microsoft Edge, Chrome, and Firefox and others.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.12   The system shall be easily integrated into the following systems without adaptations and modifications:

    a. Message handling system for AFTN/AMHS message exchange; and

    b. Monitoring system for central monitoring

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

5.13   The system shall easily integrate into the existing network infrastructure (i.e., TCP/IP via all communications channels) without adaptations and modifications.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.14   The complete system shall be used with Oracle, Windows, or Linux operating system software capable of providing full networking functionality for real-time applications and supporting multi-user and multi-tasking operations with full software program and data protection in a network environment.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.15   The bidder shall categorize all modules of the software in the tender proposal as follows:

5.15.1 Standard system software e.g., Oracle, Windows or Linux operating system, database management system, and network interface card (NIC) driver.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.15.2 Customized system software e.g., operating system and NIC driver modified by the
Contractor to meet the requirements of this specification.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6. Specification

6.1 Administration and Supervision

6.1.1 System Administration Terminal shall provide the system supervision, set-up,
database maintenance and system monitoring.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.1.2 The number and locations of operator positions and system administration position
shall not be limited by the system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.1.3 System Administration Position and Application Terminal Software shall be provided
with license.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.1.4 Application Terminal Software with license shall be included with AIM User terminal licenses of AIM system for performing the functions of the system as described in this specification.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2 General Requirements

6.2.1 The supplier shall establish and maintain a Quality Assurance program in accordance with ISO 9001, 9002, ISO 14001 and ISO 27001 (Information Security Management System) certified, and a copy of the certification shall be submitted together with the bid.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2.2 The Quality Assurance program shall ensure control of all related parts, materials, processes, fabrication, assembly, and test of the manufactured products.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.2.3   The Quality Assurance program shall also provide provisions and controls to ensure software/firmware products are virus free when shipped.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2.4   The manufacturer of the AIM System software shall provide at least 2 (two) verifiable references for AIS-to-AIM operational projects of a comparable size (or larger) than that requested in this project; such references must specifically establish compliance with the specifications of the corresponding deliverables in this tender.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2.5   The system shall be setup to work as a hub at OR Tambo International Airport (FAOR) which shall be extended to various South African international airports, and all operational regional airports and expandable as a multi-tenant system to neighbouring states.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2.6   The bidder shall therefore provide at least one reference for an operational hub system they have deployed.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.2.7   System environment and interface

      i.   The system shall be composed of a centralized database in which all aeronautical and terrain data are stored. All the workstations shall be connected to the centralized database through the local area network on an Ethernet TCP/IP standard.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      ii.   The database management software and the data structure shall be well known, proven, and widely used in other Air Navigation Service Providers, Civil Aviation Authorities and/or Administrations. The Relational Database Management System (RDBMS) shall be supplied by the tenderer as part of the Aeronautical Information Management Database (AIMDB) package.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      iii.   The tenderer shall deliver as part of the AIM system the necessary Workstations (LINUX and WINDOWS) including original licenses for the operating systems.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

    iv.   All the system components shall store the information in an aeronautical database supporting the AICM/AIXM 5.1(or later) structure and temporal model.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    v.   The proposed system shall be a Commercial Off the Shelf system: no custom development is requested.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    vi.   The software should run on commercial off-the-shelf hardware platforms.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    vii.   The minimum requirements for the hardware to be supplied are mentioned in Section 6.19 and 6.20.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.3 Performance Requirements

6.3.1 All applications and software shall operate in an interactive environment. All functions shall have reasonable response times, compatible with the on-line work of the operators.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.3.2 The software shall be modular and capable of running on positions different from the initial ones for contingency operations. It shall be possible to re-host the software licenses on different compatible hardware during the maintenance phase.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4 Data Collection

6.4.1 The System shall provide a web portal for authorities, airport operators and other authorised parties to input and submit their change requests of aeronautical data or applications for obstacle evaluation.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.4.2 When submitting a change request the authorised originator shall see the current version of the data and shall be able to propose change to those data elements they are responsible for.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.3 The System shall provide the possibility for the user to enter the changes in a form or to upload and import the changes in a file.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.4 The System shall import / upload aeronautical data and information in AIXM 5.1, ARINC and CSV format.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.5 The System shall provide features to enter and edit all unstructured AIP data (text).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.4.6   The user shall be able to enter all required metadata.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.7   The System shall be able the import / upload all additional documentary material for change request or an obstacle application.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.8   The System shall be capable to accept the geographic locations in WGS-84 reference system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.4.9   The System shall be able to import obstacles and surfaces / areas data (eTOD, OLS etc) from other systems (CSV and workflow).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.4.10 The System shall allow multiple concurrent users for origination and collection of aeronautical data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5 Data Visualization and Validation

6.5.1 The System shall be able to check the data against business rules.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.2 The System shall provide 2-D visualization of georeferenced aeronautical data and information on top of geographical maps, orthophotos or satellite imagery.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.3 The System shall provide the coordinate systems for presentation of geographical data in WGS-84 Latitude and Longitude.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.4   The System shall provide coordinate referencing of raster cartographic data and its superposition with vectorised geographical information.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.5   The System shall be capable of displaying background maps from a Web Map Service (WMS).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.6   The System shall be capable of displaying background maps from a Web Map Tile Service (WMTS).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.7   The System shall be capable of displaying data from a Web Feature Service (WFS).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.8   The System's web mapping application shall provide features to:

     a.   Pan and zoom;

     b.   Show and hide information layers; and

     c.   Measure / calculate distances.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.9   The System shall provide 3-D visualization of aeronautical data and information together with geographic information (aerial/satellite imagery, DTM, etc.).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.10 The System shall be able to show a previous version of data and the new version for comparison.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.11 The System shall be based on Geographical Information System (GIS) that is in compliance with aeronautical requirements.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.12 The System shall be capable of Geodetic Transformations and Geodesic calculations such as point intersection (bearing/distance, bearing/bearing, distance/distance etc.) and calculating true and magnetic bearing and distances between known points.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.13 The geodesic calculator shall have a high interactivity with the graphics, i.e., shall be able to type in coordinates or read the coordinates directly from graphic objects selected via mouse click or read coordinates.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.14 The System shall compute the magnetic variation / declination based on the standard models such as IGRF, WMM at a given date (dd/mm/yyyy) or user defined values. Calculations in true bearings shall be also possible.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.5.15 The GIS environment shall be able to import maps on different projections without manipulating projection and datum.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.16 The GIS environment shall be able to import Terrain Models (DTM/DSM or DEM) including (but not limited to) USGS DEM, DTED, BT, SRTM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.17 The GIS environment shall be flexible to utilize digital terrain data (contour and other topographical features) relevant to procedures design, in at least the following datum and projections: WGS-84, UTM and Lambert projection.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.5.18 Terrain database management shall be included (vector, digital terrain models and raster).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6 Data Import / Export and Data Sets

6.6.1 The System shall be able to download aeronautical data as XML files.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.2 Exported metadata shall only contain user-IDs and no usernames.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.3 The System shall provide functionality to select, extract and format aeronautical data in AIXM 5.1 structure and format.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.4 The System shall support the provision of the AIP data set with a minimum scope specified in PANS-AIM 5.3.3.1.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.5   The System shall support the provision of the obstacle data sets as specified in PANS-AIM 5.3.3.2.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.6   The System shall support the provision of the terrain data sets as specified in PANS-AIM 5.3.3.2.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.7   The System shall support the provision of the aerodrome mapping data sets as specified in PANS-AIM 5.3.3.3.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.8   The System should provide web services for obstacles, procedures, and airspaces to export geodata portals.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.9   The System shall be capable of importing and exporting AIXM 5.1 files.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.10 The System shall be capable of importing and exporting CSV files.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.11 The System shall be capable of importing and exporting CSV files with a user defined mapping to the database content maintaining the quality assurance procedures.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.6.12 The System shall be capable of importing/exporting snapshots and updates in the following format: AIXM 4.5, AIXM 5.1, ARINC 424;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.7 User and Workflow Management

6.7.1 The System access shall be controlled by the use of individual usernames and passwords.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.2 The System shall provide a permission-based access model for the administration of rights.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.3 It shall be possible to configure or request configuration of individual user's access levels at the following levels:

6.8.3.1 Access to particular modules and menus.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.3.2 Restriction of individual menu items.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.3.3 Access to specific functions/screens.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.3.4 Access to specific data records.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.4 The System shall provide workflow management to control and automate the processes collection and processing of aeronautical data and information.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.5 User management shall be possible by an authorised user.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.7.6   The System shall provide task assignment on role level.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.7   The System shall provide workflows for the evaluation and approval of change requests of aeronautical data and obstacle applications.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.8   The System shall provide functionality to create / configure the workflows by a trained user.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.9   The system shall include a Workflow Management Module fully integrated with all the other system modules.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.7.10 The Workflow Management (WFM) module shall allow the authorized user to define and customize the workflow from a graphical interface.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.11 The WFM module shall support multiple workflows to be associated to different types of data change requests.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.12 The WFM module shall automatically assign tasks to users according to the workflow and the user roles.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.13 The WFM module shall automatically notify task assignees via email.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.7.14 The WFM module shall be fully integrated with the data originators interfaces for the collection of data change requests.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.15 The WFM module shall be fully integrated with the data management applications allowing for automatic data storage, and change requests collected from data originators.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.16 The system shall allow users to retrieve the history of each data change in terms of:

  a.   Data Originator;

  b.   Reason for the change; and

  c.   Analysis and Validation process.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.17 The WFM module shall include a Web GIS interface allowing previewing data and data changes impact on a map.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.18 The WFM module shall provide fully configurable statistical reporting functions allowing for report retrieval on workflow performances such as:

a.   Error Rate;

b.   Recurring Errors; and

c.   Average Processes Duration.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.7.19 The WFM module shall be based on such Software (SW) architecture that shall ease the system scalability and increase the system resilience.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8   NOTAM Management

6.8.1 The international standard NOTAM format contained in ICAO Annex 15 shall be the reference format for the system NOTAM and forms the base on which the system shall be developed.

COMPLIANCE (C/PC/NC/Noted)	

Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.2 The system shall allow for a NOF [NOTAM Office Identifier] function.

     a.   The NOF [NOTAM Officer Identifier] shall be available for NOTAM storage.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

     b.   The NOF shall be used to determine NOTAM to be managed by the system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

     c.   The NOF shall be dynamically configurable to allow for modification to parameters contained therein.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.3 The system shall allow for a NOTAM Codes and Abbreviations function.

     The NOTAM codes and abbreviations shall conform to ICAO Doc. 8400.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.8.4   The system shall allow for a NOF Creation function for the South African NOF and the NOF of neighbouring and regional states.

NOTAM Creation shall be available for the creation of NOTAM

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.5   The system shall allow for a NOTAM History function.

    a.   All NOTAM records stored shall include historical data for Legal Recording and Investigation [LRI] purposes as well as detailed statistical data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    b.   The NOTAM history shall include the following information:

        i.   Initial Validation;

        ii.   All NOTAM Proposal requests received including emailed NOTAM proposals or proposals done on a mobile application;

        iii.   Replacement NOTAM;

        iv.   Cancellation NOTAM;

        v.   In case of self-cancelling NOTAM, an appropriate system defined code shall be generated.

        vi.   Operator user ID.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

c.   All NOTAM history shall be date and time stamped.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.6   The system shall allow for a NOTAM Management function.

a.   The NOTAM management shall allow for the retrieval of NOTAM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b.   The list of retrieval options available shall include the following:

   i.   NOF [NOTAMOffice Identifier];

   ii.   Status of the NOTAM [All or Valid Only];

   iii.   NOTAM Series;

   iv.   NOTAM Serial Number [Single or Range];

   v.   Date/Time Stamp;

   vi.   Combination of retrieval options;

   vii.   Aerodrome / FIR

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

    c.   All domestic NOTAM issued, shall automatically be assigned the next available NOTAM number based on the NOTAM series as defined in the NOF [NOTAM Office Identifier].

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    d.   All domestic NOTAM issued, shall automatically be saved to the NOTAM Management database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    e.   All foreign NOTAM received, after successful automatic validation, shall automatically be saved to the NOTAM Management database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    f.   All foreign NOTAM received, for which a NOF is not defined, shall be directed to the NOTAM queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

g. All foreign checklist received, after successful automatic validation, shall be processed by the function and send a request for missing NOTAM as and when required.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

h. The request for foreign missing NOTAM maximum gap shall be determined by a dynamically defined parameter setting value.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

i. All foreign missing NOTAM requests shall be requested automatically in the case where the defined maximum gap for consecutive missing NOTAM is not exceeded.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

j. Should the foreign missing NOTAM gap exceed the defined maximum gap for

consecutive missing NOTAM, the request for missing NOTAM shall not be sent automatically but the operator shall be alerted to this effect by means of a "Foreign Missing NOTAM" notification in the NOTAM Queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

k. Incoming [received] requests for domestic missing NOTAM or checklist shall be processed automatically.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

l. Incorrectly formatted or incorrect requests for missing NOTAM or checklist shall be directed to the NOTAM Queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.7 The system shall allow for a NOTAM Monthly Summary function.

a. The monthly NOTAM summary shall include all valid and future NOTAM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

b. The monthly NOTAM summary shall be produced based on a schedule.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

c. This schedule should be customizable to meet operational needs and requirements.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

d. Once produced, the monthly NOTAM summary shall be accessible to the operator at any given time.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

e. The NOTAM monthly summary shall include a unique identifier.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.8   The system shall allow for a NOTAM Queue function.

a.   The NOTAM Queue shall be divided into separate queues displaying the following:

i.   Expiring NOTAM Queue [for domestic EST NOTAM];

ii.   NOTAM Checklist Queue [Foreign checklists requiring manual cross-checking];

iii.   NOTAM Queue [Received NOTAM requiring manual processing and validation];

iv.   NOTAM Park Queue [Erroneous NOTAM that cannot be processed at the time];

v.   Missing NOTAM Queue [All missing NOTAM];

vi.   NOTAM Proposal Queue [NOTAM awaiting processing and validation].

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b.   All rejected NOTAM shall be directed to the NOTAM Queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.9   The system shall allow for a NOTAM Proposal Creation function.

a.   The NOTAM proposal shall include, the following:

i.   Aerodrome Identifier;

ii.   Serial Number;

iii.   Type of NOTAM [N/R/C];

iv.   Series, serial number, year of referenced NOTAM;

v.   Items A, B and E [mandatory];

vi.   Items D, F, G and X [optional].

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      b.   The NOTAM proposal shall enable users to submit proposals to the NOF.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      c.   The system should allow for NOTAM requests/proposal to be emailed to the NOTAM queues for validation.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      d.   The system should allow for NOTAM requests/proposals to be done on a mobile application and the request/proposal be directed to the NOTAM queue for validation.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.10   The system shall allow for a NOTAM Requests function.

a. All requests for missing NOTAM [RQL, RQN and RQR], domestic and foreign, shall be managed automatically.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b. Incorrectly formatted requests received for missing NOTAM shall be directed to the NOTAM Queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.11 The system shall allow for a NOTAM Statistics function.

a. The generation of NOTAM statistics shall be customizable to meet operational needs and requirements.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b. The generation of NOTAM statistics shall be based on the following elements: NOTAM series, NR of NOTAM per Country, NOTAM prepared by NOF including proposals, NOTAM proposals per ATSU, NOTAM distributed by Q code, NR of NEW NOTAM, NR of REPLACED NOTAM, NR of CNL NOTAM, NOTAM per Q codes, NR of NOTAM purged by Operator, NR of NOTAM processed by Operator, the following criteria:

   i. Hourly;

<blockquote>
<blockquote>

ii.   Daily;

iii.   Monthly;

iv.   Yearly;

v.   Aerodrome,

vi.   Area [FIR/UIR];

vii.   Origin Indicator.
</blockquote>
</blockquote>

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

> c.   The elements mentioned in [b] shall be retrievable per user.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

> d.   The operator shall be allowed the option to schedule the generation of NOTAM statistics for automatic generation and distribution to email.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.12   The system shall allow for a NOTAM Storage function.

> a.   All referenced NOTAM shall be stored for as long as valid.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

b. NOTAM cancelled shall periodically be cleaned as operationally determined.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.13 The system shall allow for a NOTAM Summary function.

a. The operator shall be able to produce a NOTAM summary at any given time.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b. The operator shall be able to output the NOTAM summary using the following options:

    i. AFTN or AMHS Address;

    ii. EMAIL Address;

    iii. Printer;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

c. The NOTAM summary shall include all NOTAM valid at the time.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      d.   The NOTM summary shall include a unique identifier.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.14   The system shall allow for a Checklist function.

      a.   The NOTAM checklist shall include all NOTAM valid at the time for all defined NOTAM series.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      b.   The NOTAM checklist shall include a list of all the latest publications valid at the time.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

      c.   On receipt of foreign checklists, the system shall perform an automatic checklist cross checking.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

d. Any NOTAM no longer valid from the checklist cross checking result, shall automatically be flagged as "no longer valid".

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

e. Any NOTAM missing from the NOTAM database after the checklist cross checking, shall automatically be requested.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

f. Rejected checklists shall be directed to the NOTAM Queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

g. The system should generate an alarm, when a checklist has not been received for a NOF.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.15   The system shall allow for a Missing/Expiry NOTAM Behaviour function.

     a.   All missing foreign NOTAM shall be requested automatically based on the defined NOTAM Parameter Settings.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

     b.   The operator shall be alerted to all expiring domestic NOTAM daily [Expiring NOTAM Queue].

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

     c.   The list of all expiring domestic NOTAM shall be accessible via the NOTAM queue.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.16   The system shall allow for a Latest Publication function.

     a.   The function shall automatically compile the list of latest publications.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b.   All latest publication references shall be appended to the monthly NOTAM checklist when produced.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.17 Authorized users with access to the system shall be able to originate NOTAM messages.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.18 The system shall process at least the following NOTAM message types:
   a.   NOTAM N - New NOTAM;
   b.   NOTAM R - Replacement NOTAM;
   c.   NOTAM C - Cancel NOTAM;
   d.   RQN - Request for NOTAM;
   e.   RQL - Request for checklist;
   f.   SNOWTAM - SNOWTAM Message;
   g.   ASHTAM - ASHTAM Message;
   h.   BIRDTAM – BIRDTAM Message; and
   i.   NOTAM Messages in the FAA NOTAM format.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.19   The system shall support upcoming NOTAM classification changes put forth by ICAO. This includes support for 5-digit sequence numbers.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.20   Operators shall file NOTAM messages by using the NOTAM messages template of the system terminal. The template shall provide syntactic as semantic fields checks. These facilities shall be specified in detail in the tenderer proposal.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.21   Users shall be prevented from sending erroneous or incomplete messages.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.22   The NOTAM shall be displayed with error description if one or more checks have failed. In this case, the NOTAM operator shall have the option to send an appropriate deny or

query message to the originator, in order to correct the NOTAM or to delete it.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.23   The system shall automatically assign the serial number for domestic NOTAM. Series supported include all alphabet letters except "S" which is reserved for SNOWTAM. A distribution list containing addressee indicators shall be defined for each NOTAM series letter in use.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.24   The coordinate fields of Item Q shall be automatically set by the system according to the given Aerodrome entry in Item A and the system's static database entries. A default value for radius shall be also filled up.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.25   All mandatory data items shall be entered in the system as NOTAM template according to the selected NOTAM type (N, R, C). These facilities shall be specified in detail in the tender proposal;

| COMPLIANCE (C/PC/NC/Noted) | |
| *Responding with C/PC/NC without substantiation will not be accepted.* | |

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.9.10.1 Incoming NOTAM messages shall be validated and automatically processed by the system when they are received.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.2 Incoming NOTAM messages shall update the NOTAM database automatically.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.3 The system shall process NOTAM messages in ICAO standards.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.4 The NOTAM series number shall be automatically allocated and assigned when a NOTAM message is originated by a system user.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.9.10.4.1 Multi-part NOTAM shall be produced in the case where the text of field E is longer than normally considered acceptable for insertion of the NOTAM in an AFTN message, i.e. the total length of the NOTAM exceeds 1800 characters. When a NOTAM C is received, the referring NOTAM shall be cancelled accordingly (field B =issuing time).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.4.2 A NOTAMR shall replace exactly one NOTAM. Both NOTAMs shall belong to the same NOTAM series.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.4.3 The original NOTAM shall be cancelled accordingly at the reception of the NOTAM R (field B = issuing time), with the NOTAM R having its own validity.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.4.4 NOTAMC shall not cause the immediate deletion of the NOTAM in the

database. Instead, the NOTAM shall be logically tagged as cancelled and is therefore not an active NOTAM anymore.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.5 NOTAM which become invalid before the given end of validity or which do not have a defined end of validity ("EST" in field C), shall be replaced, or cancelled at any time by authorized users. The System shall indicate the existence of NOTAM Message about to expire, with a configuration variable indicating the number of days in advance a NOTAM Operator shall be alerted.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.6 If an incoming NOTAM was lost, i.e. if the system detects a discrepancy in the message series number, the system shall automatically request the missing NOTAM(s).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.7 The checklists shall be issued as a NOTAM in the series they refer to. A separate Checklist shall be issued for each NOTAM series.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.8 The system shall automatically generate and distribute checklists on request for a specific NOTAM series.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9.10.9 The system shall support the manual and automatic generation of NOTAM summaries. A NOTAM summary shall be a plain language list of the NOTAM currently in force, selected by Aerodrome(s), NOF(s), or FIR(s).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.26 Authorized operators shall interrogate the NOTAM database. The items should be referenced in a custom query. These facilities shall be specified in detail in the tender proposal.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.27 The data items shall be logically associated, allowing the creation of complex retrieve filters. Once a retrieve has been specified, it shall be stored by the operator for later

recall.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.28 The result of a database query results in a list of NOTAM messages shall match the specified filter criteria (details in the tender proposal).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.29 AFTN/AMHS operators shall request NOTAM messages by sending a RQN message. The message shall be automatically processed by the system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.30 NOTAM Subsystem shall manage and allow receipt, initiation, and dissemination of all types of NOTAM by users with adequate authorization, NOTAM database shall store National NOTAM, International NOTAM, International SNOWTAM, International ASHTAM and NOTAM processing shall have the following capabilities:

a. Check and Validate NOTAM;

b. Correct NOTAM text fields;

c. Send message to the originator of a NOTAM asking for clarification, abnormal functioning, and NOTAM rejection notification;

d. Delete and modify stored NOTAM (Original message is not modified);

e. Create or modify lists of addressee indicators to NOTAM series letters for distribution; and

f. Print out NOTAM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.31 The NOTAM Subsystem shall embed a Digital NOTAM platform interacting with NOTAM Processing Function.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.8.32 Non-Functional requirements for NOTAM sub-system

i. The System definition shall follow the paradigm of an internal intranet architecture hosting the main functionality and the database centrally. The internal intranet Architecture shall be designed with modularity and expandability to allow future additions of modules. The GUI shall be designed considering the criteria to minimize the possibility of human errors and optimizing time for data insertion.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

ii. The System shall make use of a central aeronautical database that is AIXM 5.1 (or later) compliant.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

iii. The System shall guarantee a future-proof solution in terms of interoperability with external systems and adaptability to new trends or regulations adopting state of the art frameworks, technologies, and standards.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

iv. The System programming language shall be platform independent to ensure portability to different hardware platforms.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

v. The Human Machine Interface (HMI) shall be Internal Intranet based, so that it can be used even from remote stations.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

vi. The System shall incorporate an automated Flight Planning System that complies with ICAO Doc 4444 PANS- ATM / 501 Appendix 2 - Flight Plan, and Appendix 3 - Air Traffic Services Messages in handling the preparation, validation, storage, and

distribution of flight plan messages, including filed Flight Plan (FPL) and ATS update messages.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    vii.   The System shall incorporate an automated NOTAM Subsystem that complies with the NOTAM function as defined in ICAO Annex 15.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    viii.   The System should incorporate an automated METEO Subsystem that complies with the WMO specification as defined in:

          a.   ICAO Annex 3 – Chapter 7, Chapter 9, Chap. 10, Chapter 11; and

          b.   WMO 306 Vol II and WMO 386 Vol I.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

    ix.   The System shall be developed and maintained satisfying the objectives identified in EUROCAE, ED-153.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

> x. In the event of failure of the master, the System shall automatically switch from master active server to the slave passive server. If there is a failure in the system that cannot be automatically recovered, one of the slaves shall be promoted to be the new master.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

> xi. All invalid or expired Aeronautical Data shall be kept accessible in the system for a configurable amount of time. A System administrator shall be allowed to change this retention time (by default 3 months) parameter to any positive value.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.9 AIP/eAIP Publishing

The following requirements are for the production of Aeronautical Publications:

6.10.1 The System shall allow the production and maintenance of all the sections of the standard ICAO AIP (including AIP Amendments, AIP Supplements and AIC) according to the PANS-AIM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.2 The System shall be a web-based solution.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.3 The System shall allow to extend the structure of the AIP by:

    a.   Defining sections not included in the default AIP; and

    b.   Excluding sections included in the default AIP.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.4 Modify the structure of sections included in the default AIP.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.5 The System shall extract from the Aeronautical Database the structured data to be published in the AIP.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.6 The System shall allow for maintaining the textual information, images and formats in a

XML based environment, word processor environment.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.7 The System shall automatically incorporate Aeronautical Charts (e.g. in PDF format) in the produced AIP.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.8 The System shall control configuration of all the AIP documents and templates by:

    a. Applying version control;

    b. Maintaining multiple effective versions at multiple effective dates;

    c. Avoiding concurrent access to documents (Check In, Check Out); and

    d. Maintaining the history of all the changes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.9 The System shall automatically produce, at each publication cycle:

    a. AIRAC and non AIRAC Amendments;

    b. Supplements;

    c. Cover Page (list of pages to add and to delete);

    d. Checklist; and

    e. T.O.C. Table of contents.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.10   The System shall allow users to produce the AIP in multiple formats including:

    a.   MS Word

    b.   PDF

    c.   HTML

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.11   The System shall automatically generate a full searchable eAIP (Electronic AIP) in accordance with Eurocontrol eAIP specifications (v 3.0) including:

    a.   AIP Amendments

    b.   AIP Supplements

    c.   Aeronautical Circulars (AIC)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.12   The System shall allow to define and assign tasks to be executed integrated to a workflow management system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.10.13   The System shall control access to the publishing functions according to:

   a.   User Rights

   b.   Workflow Definition

   c.   Tasks Assignment

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.14   The System shall be based on such Software (SW) architecture that shall ease the system scalability and increase the system resilience.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10   Aeronautical Chart Production

The following requirements are for producing charting (graphical) products:

6.10.1   General System Characteristics

   a.   The System shall be based on Geographical Information System (GIS) that follows aeronautical requirements.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

b. The system shall be interoperable and interface with other AIM systems.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

c. The System shall import data of the following data formats including:

    i. AIXM 5.1 (or later)

    ii. Shape files SHP

    iii. DGN, DWG/DXF

    iv. KML

    v. Georeferenced Image (ex. GeoTIFF)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

d. The System shall archive and maintain charts and configuration files in a Shared Repository.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

e. The System shall generate and maintain aeronautical charts from the static data database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

f. The System shall allow for the following charting parameters to be used and maintained:

    i. Chart Specifications;

    ii. Graticule Definitions;

    iii. Ellipsoid Definitions;

    iv. Symbolisation.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

g. The System shall have the ability to create aeronautical charts by allowing the user to:

    i. Setup a chart by defining its geographical reference;

    ii. Compose a chart by adding elements from a database;

    iii. Synchronise a chart by checking annotations against a database;

    iv. Update a chart by providing changes for new effective dates;

    v. Maintain chart specifications by defining chart attributes, grid references and element symbolisation;

    vi. Generate charts in PDF XML formats or as operationally required;

    vii. Publication of the generated charts.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

h. The function shall make aeronautical charts available through a web-based aeronautical information service.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.2 Chart management

a. The System shall allow for the creation of a new template from a product series specification (e.g. ERC);

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b. The System shall allow the creation of a new template as a copy of an existing template.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

c. The System shall allow the creation of a new Chart from a predefined Template.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

d. The System shall allow the creation of a new Chart as a copy of an existing Chart.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

e. The System shall highlight the list of charts that need to be updated for a defined production cycle, due to incoming data changes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

f. The System shall visualize in a graphical view the data changes that impact on a selected chart,

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

g. The System shall visualize in a tabular view the data changes that impact a selected chart, having the capability to export the report of the data changes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

h.   The System shall highlight the list of charts that need to be updated due to Template changes (e.g. Template symbol changes).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

i.   The System shall remember the manual edit performed to finalize previous version of the charts

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.10.3   Lay outing and printing

a.   The System should be capable to automatically produce all the chart types described in ICAO Annex 4.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

b.   The System shall produce output files in the following selectable output formats

   i.   PDF

   ii.   TIFF

   iii.   GeoTIFF

   iv.   JPEG

   v.   PNG

   vi.   BMP

   vii.   KML

   viii.   DWG/ DXF

   ix.   SHP

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11   Dynamic Data Management

6.11.1   The system shall support different user profiles. The user profiles shall be set up and maintained by the system administrator.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.11.2   The users shall be assigned one or more roles, such as some users can have full access rights, while others are only some applications.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11.3   All messages generated on the system shall be sent to the AMHS system in order to be forwarded to the messages' destinations addresses.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11.4   The database system shall provide redundant database solution ensuring a high operational availability and high data safety for operational critical dynamic data.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11.5   The database shall provide fast write operations in order to have a maximum traffic throughput.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.11.6   The database system shall be open source and shall have capability to be used by more than 300 users simultaneously.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11.7   The system shall manage a Location list, which shall contain lists of Airports or FIR to be used in FPL, NOTAM and PIB validation.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.11.8   The system shall backup the current database and configuration for troubleshooting and investigation purposes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12   Static Data Management

The following requirements are for Static Data Management:

6.12.1   The system shall include an Aeronautical Database where all Structured
         Aeronautical Data shall be maintained.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.2   The System shall cover the data scope defined in the aeronautical data catalogue
         in PANS-AIM (Appendix 1).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.3   The Aeronautical Database shall support temporality. Multiple effective versions of
         the same data shall be available at multiple effective dates.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.4   The system shall support validation levels. Multiple versions of the same data shall
         be available at multiple validation levels.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.5   The system shall allow to extend the structure of the Aeronautical Database by:

a.   Adding new features

b.   Adding attributes in existing features

c.   Adding relations between features

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.6   The system shall allow access to Aeronautical Data for different users according to the defined user rights.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.7   The system shall allow access to the Aeronautical Database via alphanumerical data entry forms.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.8   The system shall allow access to the geographical information stored in the Aeronautical Database via a GIS based geographical interface (Map View)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.12.9   All the changes to the Aeronautical Database structure shall be automatically reflected into the data entry forms.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.10   The system shall allow entering (add\edit\archive) aeronautical data at different effective.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.11   The system shall provide dedicated interfaces for editing complex aeronautical features (e.g. Navaids, Airspace, Routes, Declared Distances)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.12   The system shall allow to import digital data in the following formats:

      a.   AIXM 4.5

      b.   AIXM 5.1

      c.   ARINC 424

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.12.13   The system shall track all the changes done on the Aeronautical Data stored in the Aeronautical Database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.14   The system shall allow to query for each data change the following information:

- a. Effective Data
- b. Action Date
- c. User
- d. Reason for the Change
- e. Data Originator
- f. Process executed to validate the change

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.15   The system shall support data validation by:

- a. Performing data entry validation on the data entry forms according to:
    - i. Type of data;
    - ii. Range constraints; and
    - iii. Allowed values (codelist).
- b. Performing Validation via Business Rules
    - i. Schematron shall be supported by the business rule framework;

ii. Jython shall be supported by the business rule framework; and

iii. BPM shall be supported by the business rule framework.

c. Independent re-entry of the same data by another user (blind re-key)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.16   The system shall support AIXM 5.1 Business Rules

The system shall allow extending the business rules set by:

a. Defining Custom Rules

b. Modifying Default rules

c. Deactivating Default Rules (inactive rules won't be used in the validation)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.17   The system shall allow exporting digital data in the following formats:

a. AIXM 4.5

b. AIXM 5.1

c. ARINC 424

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.18   The system shall allow defining and extracting custom data reports in the following formats:

a. XLS

b. CSV

c. HTML

d. XML

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.19 The system shall allow defining and extracting map reports from the geographical interface in the following formats:

a. JPG

b. PNG

c. PDF

d. TIF

e. GEOTIFF

f. SHAPE

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.20 The system shall have a geodesic calculator allowing geodesic computations in terms of:

a. True and magnetic bearings

b. Distances

c. Radial/radial intersection

d. Radial/arc intersection

e. Magnetic Variation

f. Geographic Coordinates (e.g. WGS 84)

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.21   The system shall control access to the data maintenance functions according to:

   a. User Rights

   b. Workflow Definition

   c. Tasks Assignment

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.22   All modifications to the database shall be archived and a logging capability shall be provided to show why, when and by whom the update has taken place.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.23   The data should be accessible by different users according to a specific security policy (user rights management).

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.24   The system shall be able to work in an operational workflow following the AIRAC cycle. The data shall have information relevant to the temporality (effective date) and the source for further track changes.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.25   The system administrator shall be capable of defining and controlling the rules for extracting the data from the database for different purposes (charting, AIP production, digital data distribution) and in different custom formats. Procedure Design, Charting and AIP production will retrieve data from the AIXMDB and/or from the Charting Database automatically, no manual rules should be applied. For digital data distribution, digital data sets distributed as recommended by ICAO and published in PANS-AIM Doc 10066

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.26   The users shall be capable of navigating through the aeronautical data by means of a flexible graphic user interface. There must be at least two options for editing/maintaining the data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.27   A standard alphanumerical menu driven interface to edit/insert/update/validate

values. This interface shall reflect the database structure also when it is customized by the end user. All features in the database can be edited by means of this interface.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.28   A GIS based database interface specially designed for the maintenance of complex features like for instance airways and bounded airspaces. This GIS based interface shall also have capabilities of validating the data by computing the basic geodesic information (like true and magnetic bearings, geodesic distances etc.) and shall be able to check published data against calculated data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.29   The system shall be able to handle aeronautical data of multiple authorities or organizations and provide mechanisms for a clear separation and isolation of their responsibilities.
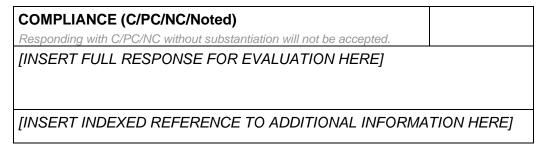
COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.30   The aeronautical database shall be a native AIXM 5.1 database model not an upgrade from the AIXM 4.5 database model.

COMPLIANCE (C/PC/NC/Noted)	

Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.31   The system shall support the bidirectional retrieving of referenced features.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.32   A human readable identification shall be available for all AIXM 5.1 data. The definition and evaluation of this identification shall be configurable for each feature type as part of the system customization.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.33   To ensure the interoperability with other systems, it shall be possible to pre-process AIXM 5.1 data to be imported.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.34   To ensure the interoperability with other systems, it shall be possible to post process exported AIXM 5.1 data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.35 External systems shall be able to subscribe and unsubscribe for the notification on data changes. Thereby a filter on the AIXM data shall be definable that restricts the data sets for which notifications are to be send.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.36 All forms for viewing and editing data shall be capable of handling additional data in the format of AIXM 5.1 extensions and application schemas. The UI shall support the additional proprietary information that are defined by the system and that are not part of the AIXM 5.1 standard.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.37 For the semantically grouping of AIXM 5.1 data a hierarchy shall be defined on top of the AIXM 5.1 data types that reflects the associations and links between them. This hierarchy shall contain certain data types that define the entry points for searching for associated data or data types.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.12.38   The user interface shall allow editing XHTML properties (of type "aixm:XHTMLType") in a WYSYWYG editor.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.12.39   It shall be possible to customize the forms for AIXM 5 data (grouping, hiding, rearranging, and properties). The default configuration shall reflect the AIXM 5.1 model as it is including the annotations. It shall be possible to customize the forms for AIXM 5 data depending on user profiles.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13   Electronic Terrain Obstacle Database

6.13.1   The contractor shall supply an integrated, COTS system for:

         a. Aerodrome terrain and obstacles survey data management;

         b. 3D aerodrome/Annex 4,14 and 15 model creation and processing; and

         c. Natural and Artificial obstructions DB storage and management;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

> *[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]*

6.13.2   The eTOD system shall support ICAO Type A & B Obstacle charts automatic construction and maintenance.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.3   The eTOD system shall be designed to collect, validate, process and maintain the terrain and obstacle data required by ICAO Annex 4, 14 and 15 (latest amendment) requirements and in accordance with PANS-AIM Doc 10066.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.4   The eTOD system design concept and functional requirements should have been endorsed by ICAO and either FAA or Eurocontrol.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.5   The eTOD system shall be COTS software, that has been in commercial use for more than one year and used to create and manage eTOD data for a minimum of five (5) international airports.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.13.6   The eTOD system shall functionally enable:

16.14.6.1   Airport Areas Modelling; and

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

16.14.6.2   DTM and Orthophoto Production

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.7   The integrated eTOD system shall be COTS-based software and shall have been in commercial use for more than one year. Any offer requiring the development of the eTOD system shall be deemed non-compliant.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9   The system should support other air navigation applications including, but not limited to, the following:

6.14.9.1 Instrument procedure design;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9.2 Determination of en-route "drift-down" procedure and en-route emergency landing location;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9.3 Advanced Surface Movement Guidance and Control System;

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9.4 Aeronautical chart production; and

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9.5 Aerodrome obstacle restriction and removal.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.13.8 The System shall validate data to assure its quality and integrity. In particular, the system shall verify the presence of all ICAO required attributes, CRC and data range validity;

  a. If all ICAO data attributes are present in the data set;

  b. If data set is in the area for which it has been required;

  c. If all auxiliary documents required are present in the data set;

  d. If data syntax and format are observed;

  e. If data accuracy is observed;

  f. If the associated CRC is correct; and

  g. If the data are in a range of values set by the user.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.9 The System shall manage different type of import methodologies. It shall import new data, update or overwrite old data. It shall resolve data conflict during import. It shall also import different data formats.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.10 The System shall store all survey results. Specifically, all data shall be divided into a "family" structure. The System shall manage all documents, digital photos, orthophoto and so on and their metadata. It shall produce a report on data history

and manage document versioning.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.11   The System shall employ a database design that divides data into three categories:

      a.   Aerodrome data (threshold, runway end, holding points, stand points, centerline points, start TORA (or declared distances) points);

      b.   Navaid data; and

      c.   Obstacle data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.12   The System shall produce, for all data types, reports on data history and users who have modified data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.13   The System shall have the capability to produce on-line data sketches. This type of sketch has to display object photos stored in the DB.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.13.14   The system shall be capable of automatically detecting and resolving conflicts in terrain and obstacle information during the import process when two different data objects with the same or very close geographic positions are detected.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.15   The system shall allow the user to associate imported terrain and obstacle information to an ICAO Annex 15 Area.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.16   The system shall store all imported terrain and obstacle files within the aeronautical database with associated metadata.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.13.17   The system shall be capable of visualizing terrain and obstacle data along with Aeronautical Data within both a GIS and Computer Aided Design environment in 2D and 3D.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.13.18   The system shall be capable of exporting terrain and obstacle data in the following formats:

     a.   OGC compliant formats;

     b.   AIXM v5.1;

     c.   KML; and

     d.   Configurable ASCII files.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14   Airport & Obstacle Design & Analysis

6.14.1   The Airport & Obstacle Analysis functions shall be available on the Electronic Terrain and Obstacle Database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.2   The system shall allow the user to create individual projects for obstacle analyses using data from the Aeronautical Database.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

> *[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]*

6.14.3   Terrain and obstacle data shall be capable of being loaded into the project.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.4   The following aeronautical data shall be capable of being loaded into the project**:** Runways; Helipads; Taxiways; Aprons; Vertical Structures; Construction Areas; Survey Control Points; NAVAIDS; etc.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.5   The user shall be able to select the temporal validity period for the data to be loaded so as to perform analysis on the published data or using future data.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.6   Multiple versions of each project each with their own data parameters shall be supported.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.14.7   The system shall provide automated tools for the user to design the obstacle limiting surface of Annex 14.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.8   The system shall allow the user to modify the standard parameters of the Annex 14 surfaces in order to create customized surfaces included curved ones.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.9   The user shall be able to perform an obstacle (man-made or not) assessment against the obstacle limiting surfaces of Annex 14.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.10   The user shall be able to produce and save in the Aeronautical Database a report of an assessment against the obstacle limiting surfaces of Annex 14.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

6.14.11   The system shall provide automated tools for the user to design data collection surfaces (ICAO Areas) of Annex 15.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.12   The system shall allow the user to modify the standard parameters of the Annex 15 surfaces in order to create customized surfaces.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.13   The user shall be able to perform an obstacle (man-made or not) assessment against the Annex 15 data collection surfaces.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.14.14   The user shall be able to produce and save in DB a report of an assessment against the Annex 15 data collection surfaces.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

6.15 Main Power Supply

6.15.1 All equipment shall operate with an AC power varying from 220-230 Volts (±15%) single phase 50 Hz ± 5%. Reliable over voltage and over current protection circuits shall be provided in the power supply units.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.15.2 The power supply units shall be self-protecting, and protect connected equipment against conducted interference, noise, voltage dips and surges & impulses. Mains Power Supplies used should be rugged enough to withstand above stated variation in mains voltage and frequency over a long period of time so that the failures in the equipment due to power supply are minimized.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.16 Environmental Conditions

6.16.1 The systems shall be able to operate properly under the following temperature and relative humidity:

Temperature: -5°C to +45°C

Relative Humidity: up to 90%

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.17   Data Migration

6.17.1   The Tenderer shall support ATNS in migrating the current ATNS data to the new aeronautical database.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.17.2   The Tenderer shall include as part of their offer a service to migrate the existing aeronautical data which resides in the Aeronautical Information Products into the Aeronautical Database.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.17.3   The Tenderer shall include as part of their offer a service to implement the current look and feel, styles, formats, and structure of the existing Aeronautical Information Products into the new AIM System so that the Publications produced by ATNS shall be identical.

COMPLIANCE (C/PC/NC/Noted) *Responding with C/PC/NC without substantiation will not be accepted.*	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.17.4   The Tenderer shall include as part of their offer a service to implement the current look and feel, styles, formats, and structure of the existing Aeronautical Charts into the new AIM system so that the Aeronautical Charts produced by ATNS shall be identical.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.17.5   The Tenderer shall include as part of their offer a service to customize the workflow and process management system to conform to the workflows and processes currently in use at ATNS.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18   Training and Training Platform

6.18.1   The Tenderer shall include as part of their offer a training course on Transition from AIS to AIM.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.2   The Tenderer shall include as part of their offer a training course on Aeronautical Information Management.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.3   The Tenderer shall include as part of their offer a training course on management of AIXM 5.1 or higher.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.4   The Tenderer shall include as part of their offer a product technical training course.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.5   The Tenderer shall include as part of their offer a product training course on Aeronautical Data Management.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.6   The Tenderer shall include as part of their offer a product training course on Dynamic Data Management.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.7   The Tenderer shall include as part of their offer a product training course on Aeronautical Publications.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.8   The Tenderer shall include as part of their offer a product training course on Electronic Terrain and Obstacle Management.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.9   The Tenderer shall include as part of their offer a product-training course on AIM Workflow & Process Management.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.18.10   The Tenderer shall include as part of their offer a system administration-training course.

COMPLIANCE (C/PC/NC/Noted)

Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.18.11   The Tenderer shall include as part of their offer a training platform or environment to achieve the above training objectives without interfering with the operational system.

COMPLIANCE (C/PC/NC/Noted)

Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.18.12   A training platform shall be proposed to ensure that staff are able to operate and provide continued maintenance of the equipment, and that they are fully trained in situations where automated functions need to be taken over after a failure. This training platform shall not only be available in the initial phases of introduction but shall be available for continuous training to maintain staff competency.

COMPLIANCE (C/PC/NC/Noted)

Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.18.13   A training platform mimicking all components of an actual operational system shall be provided to facilitate training.

COMPLIANCE (C/PC/NC/Noted)

Responding with C/PC/NC without substantiation will not be accepted.

[INSERT FULL RESPONSE FOR EVALUATION HERE]
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]

6.18.14   Changes on the training platform shall in no way impact on the performance of the operational system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.19   System Support Suite (SSS)

6.19.1   The system and equipment that will be used for disaster recovery, test and evaluation (software and external sources integration evaluation) shall be installed in the System Support Suites (SSS) at FAOR. This system shall interface with the main system.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.20   Equipment / Components Requirements

6.20.1   The AIS Automation System should consist of but not limited to the following major components:

Type of system
Redundant Static AIM Database and Management Server Systems (N+1)
Redundant Dynamic AIS Database and Management Server Systems (N+1)
Aeronautical Information Product Subsystems

NOTAM Subsystem
MET Workstations
Aeronautical Information Management Subsystem (Static Data Management)
Aeronautical Charting & Aerodrome Mapping Subsystem (Charting)
System Administrator Management Workstation
eTOD Management Subsystem
KVM Switches, Network Routers and Ethernet LAN
GPS Clock

6.21 Hardware Requirements

6.21.1   Minimum requirements for the Hardware

The hardware requirements listed below shall be considered as the minimum acceptable. The hardware market being flexible, and the hardware available frequently updated by the different vendors, the bidder must propose and recommend the configuration which will match the quantity and specifications as described below and additionally which will be most suitable for the solution the bidder is proposing.

COMPLIANCE (C/PC/NC/Noted)	
Responding with C/PC/NC without substantiation will not be accepted.	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT INDEXED REFERENCE TO ADDITIONAL INFORMATION HERE]	

6.22 List and Specification of Hardware

6.22.1   This section provides minimum requirements of the hardware recommended for the project.

Item
Racks
TFT Display/Keyboard/Touchpad Drawer
KVM Switches

Servers
Security Appliances
Firewall
System LAN Switch
Working Position PCs
23" TFT Display for Working Positions

Airport	Location	Quantity
Bloemfontein Airport	Air Traffic Control Tower	1x UWS
Cape Town International Airport	Air Traffic Control Tower	1x UWS
King Phalo Airport	Air Traffic Control Tower	1x UWS
George Airport	Air Traffic Control Tower	1x UWS
Germiston Rand Airport	Air Traffic Control Tower	1x UWS
Grand Central Airport	Air Traffic Control Tower	1x UWS
Head Office [Bruma]	Air Traffic Control Tower	1x UWS
Kimberley Airport	Air Traffic Control Tower	1x UWS
King Shaka International Airport	Air Traffic Control Tower	1x UWS
Lanseria International Airport	Air Traffic Control Tower	1x UWS
Mafikeng Airport	Air Traffic Control Tower	1x UWS
O.R Tambo International Airport	Air Traffic Control Tower	1x UWS
	Aeronautical Reporting Office	10x UWS
	Aeronautical Rescue Coordination Centre	1x UWS
	Central Airspace Management Unit	1x UWS
	Flight Data Operator	1x UWS
	FAOR & FACT Emergency Tower	2x UWS
Disaster & Recovery System	FAOR & FACT SSS	8x UWS
Pietermaritzburg Airport	Air Traffic Control Tower	1x UWS
Pilanesburg Airport	Air Traffic Control Tower	1x UWS
Polokwane Airport	Air Traffic Control Tower	1x UWS
Chief David Stuurman Airport	Air Traffic Control Tower	1x UWS
Richards Bay Airport	Air Traffic Control Tower	1x UWS
Umthatha Airport	Air Traffic Control Tower	1x UWS
Upington Airport	Air Traffic Control Tower	1x UWS
Virgina Airport	Air Traffic Control Tower	1x UWS

| Wonderboom Airport | Air Traffic Control Tower | 1x UWS |
| ATNS Training Academy | Training & Evaluation System | 9x UWS |

Airport	Location	Quantity
O.R Tambo International Airport	Aeronautical Telecommunication Network	3x OWS
	Technical Support [Maintenance]	3x OWS
Disaster & Recovery System	Technical Support SSS Building (FAOR & FACT)	2x OWS
	FAOR & FACT SSS Building	4x OWS
ATNS Training Academy	Training & Evaluation System	2x OWS

6.22.2   Rack

Parameters	Description
Requirements	Rack Infrastructure should support redundant or backup power supplies and security devices.

	Standard Rack Power Distribution Unit (PDU) (Vertical)- with minimum 15 sockets (12 IEC Ca3 and 3 IEC C19) for each rack with minimum 2 meter power cord (each rack having two PDU's)
	19" rack mount Power output device with necessary breakers mounted in rack and should not consume more that 3U rack space.
	IP based monitoring facility of all the passive parameters inside racks must be provided with email alerts.
	42U: min (1950 x 800 x 1000) mm (h x w x d)
Basic frame	Rack frame must be scalable and modular with safe load carrying capacity of minimum 1200kg on enclosure frame and minimum 1000kg on 19" mounting angle.
Doors:	Front glass door for complete 42U height front and rear plane; door with stiffener for strength.
Cable entry:	Standard, from the top and bottom.

6.22.3   TFT Display/Keyboard/Touchpad Drawer

Type: 19" TFT drawer

Resolution: Maximum 1280 x 1024 pixels

Keyboard: US International-Layout

Pointing device: Touchpad

Onscreen display: Editable

Mounting: 19" mounting on telescopic ball bearing sliders

6.22.4   KVM Switch

The KVM switch connects the servers to the TFT/keyboard drawer and allows a remote operation via the keyboard. The KVM switch can handle up to 16 servers by connection to one single operator console.

Type: 19" rack mountable, 1 U

Console connection: One local system connection; HDB15, PS/2

System connections: 16x RJ45; via remote KVM extender module KA7570 Resolution: Up to 1600x1200/60Hz up to 40m

6.22.5   Server (Or as per OEM Recommendation)

Operating System: LINUX and WINDOWS for charting

Type: 19" rack mountable, 1 U, Telescopic bars for easy replacement

Processor: One Intel 6-core Xeon (E5-2620v3) 2.4 GHz

RAM: 16 GB DDR4-2133

Graphic: Graphic system: minimum 1 GB RAM Graphic Card, supporting OpenGL 2.0 or newer versions (dating back to 2006 or later, NVIDIA Quadro series recommended)

Cache Memory: 15 MB, Level 3

Video: Integrated Matrox G200 video standard 1280 x 1024 (32 bpp) 1920 x 1200 (16 bpp)

RAID Controller: Smart Array P440ar/2GB FBWC

Storage: 3 x 600GB 6G(SAS), RAID5, hot-swap, 10k RPM, SFF

Optical drive: DVD/CD RW SATA

LAN: Four RJ45 10/100/1000 BaseTx ports on-board

Power Supply: Redundant, 2x 500W, hot-swappable

USB 3.0 ports: 1 front, 2 rear, 2 internal

PCI: 2x PCI Express

6.22.6   Security Appliance

Interfaces: 6x Gigabit Ethernet

Features: Network Firewall, NAT, Native Windows Remote Access IPSec/SSL, ATP, VPN, Intrusion Protection, DoS Protection

Additional Licenses: Webserver Protection, Network Protection

6.22.7   Firewall

Interfaces: 6x Gigabit Ethernet

Features: Stateful inspection, VPN, Data Encryption, Instrusion Protection

6.22.8   System LAN Switch

48x 10/100 BaseTx Ports

Four SFP-based Gigabit Ethernet ports Auto-negotiation, manageable, SNMP

6.22.9   Working Position PC

Operating System: Microsoft Windows 11 Pro or above

Processor: Intel Core i3-7100, 3.9 GHz

Memory: 8 GB DDR RAM (16 GB recommended in case of 64 bits)

Graphic: Graphic system: minimum 1 GB RAM Graphic Card, supporting OpenGL 2.0 or newer versions.

Storage: 2 x 500 GB Hard Disk SATA DVD: DVD/CD +/- RW SATA

LAN: 1 x Ethernet 10/100/1000 Base Tx, on-board 1 x Ethernet 10/100/1000 Base Tx, PCIe-based

Sound: On-board

USB: 2.0, 3.0

Keyboard: USB, International-Layout

Mouse: USB, Optical Scroll Mouse

6.22.10　　TFT Display for Working Position

　　　　　Type: 23" IPS w/LED backlight

　　　　　Aspect ratio: 16:9

　　　　　Resolution: 1920x1080

　　　　　Contrast ratio: 1000:1

　　　　　Response time: grey to grey 7 ms

　　　　　Brightness: 250 cd/m²

　　　　　Colour depth: 16.7 Million colours (24 bit)

　　　　　Input: 1x VGA, 1x HDMI, 1x DisplayPort

　　　　　Viewing angle: 178°/178° (horizontally/vertically)