

**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 4**

**LOGISTICS SUPPORT REQUIREMENTS**

**APRIL 2024**

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## ABBREVIATIONS

ATA	ATNS Training Academy
ATC	Air Traffic Control
ATNS	Air Traffic and Navigation Services State Owned Company Limited
ATNS HO	Air Traffic and Navigation Services State Owned Company Limited Head Office
ATS	Air Traffic Services
ATSU	Air Traffic Services Unit
BITE	Built in Test Equipment
CAA	Civil Aviation Authority
CDRL	Contract Data Requirement List
CMP	Configuration Management Plan
CSCI	Computer Software Configuration Item
COTS	Commercially off-the shelf
EAM	Enterprise Asset Management
DP	Documentation Plan
DME	Distance Measuring Equipment
ET	Engineering Technician
FABL	Bloemfontein Control Centre (Bram Fischer Airport)
FACT	Cape Town Control Centre (Cape Town International Airport)
FAEL	East London Control Centre (King Phalo Airport)
FAGG	George Control Centre (George Airport)
FAOR	Johannesburg Control Centre (Olive Tambo International Airport)
FAPE	Port Elizabeth Control Centre (David Stuurman Airport)
FAT	Factory Acceptance Test
FIR	Flight Information Region
FRC	Fault Reporting Centre
HAT	Hardware Acceptance Test
ICAO	International Civil Aviation Organization
ICD	Interface Control Document
ILS	Integrated Logistic Support
LAN	Local Area Network
LCC	Life Cycle Costing
LRU	Line Replacement Unit
LS	Logistic Support
LSA	Logistic Support Analysis
LSAP	Logistic Support Analysis Plan
LSAR	Logistics Support Analysis Report
LSIP	Logistic Support Implementation Plan
LSP	Logistic Support Plan
LSPP	Logistic Support Program Plan

MAS	Minimum Acceptable Service
MDT	Mean Down Time
MMS	Maintenance Management System
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
OEM	Original Equipment Manufacturer
OJT	On the Job Training
OJTI	On-the-Job Training Instructor
PBU	Period of Beneficial Use
PC	Personal Computer
PHS&T	Packaging, Handling, Storage and Transportation
RAM/RMA	Reliability, Availability and Maintainability
RAMPP	Reliability, Availability and Maintainability Program Plan
RCMS	Remote Control and Monitoring System
RF	Radio Frequency
RFT	Request For Tender
SAAF	South African Air Force
SAT	Site Acceptance Test
SAN	Storage Area Network
SLA	Service Level Agreement
SME	Subject Matter Expert
SP	Spares Plan
SSR	Software Support Report
SSS	System Support Suite
TEP	Test Equipment Plan
TP	Training Plan
URS	User Requirement Statement
WAN	Wide Area Network

## GLOSSARY OF TERMS

**Availability**

The measure of a hardware or software system, subsystem or equipment operational time represented by a ratio of total actual functional time over the total time it is required or expected to function. The availability will be measured and expressed as a percentage.

**MTBF**

A measure of the reliability of repairable hardware or software system, subsystem or equipment items, represented by the number of functional life units measured in hours, during which all hardware or software system, subsystem or equipment perform within their specified limits in a given period.

**MTTR**

A measure of the maintainability of repairable hardware or software system, subsystem or equipment items, represented by the average (mean) time measured in hours to repair or restore a failed component of a hardware or software system, subsystem or equipment.

**Reliability**

It is the ability of a hardware or software system, subsystem or equipment to consistently perform according to its specifications over a specified period. Reliability is determined by the measure of how often an item fails in a given period expressed in terms of (MTBF).

**PBU**

PBU is the equivalent of a guarantee and warranty period where support validation takes place. During this period, the system is maintained as per the LSP, under the responsibility of the supplier and where there will be concurrent running of both the warranty and the verification of Phase 1 and 2 deliverables.

## 1 INTRODUCTION

This document defines the basic and minimum logistic support requirements for the supply, installation, commissioning and operational acceptance of the systems that will be implemented for all the sites where the AIM system will be installed. It furthermore describes the Logistic Support (LS) System that is required for the total support of the AIM system during project phase, as well as post implementation during the utilization of the system till the end of economic life of the equipment. With already existing and complementary infrastructure assets in place, ATNS aims to have a maintenance model that will ensure seamless integration to the existing processes and procedures for maintenance. The new AIM system maintenance philosophy should be aligned to the ATNS maintenance and support concept outlined in Section 2.

### **Overview of the Logistics Support implementation phases**

The Logistics Support implementation will run over a course of four (4) phases, that is, development phase 1A (Submission of Tender); development phase 1B (Contract Baseline); implementation phase 2 (Project Roll-Out); evaluation phase 3 (PBU) and the application phase 4 (System Lifespan).

In responding to this tender, tenderers are required to deliver all the draft documents/plans listed in the "SUBMISSION OF TENDER" column (Phase 1A – Development).

Each phase deliverables will result in the achievement of the following milestones:

**Table 1 – LS implementation phases**

SUBMISSION OF TENDER	CONTRACT BASELINE	PROJECT ROLL-OUT	PBU	SYSTEM LIFESPAN
PHASE 1A - DEVELOPMENT	PHASE 1B - DEVELOPMENT	PHASE 2 - IMPLEMENTATION	PHASE 3 - EVALUATION	PHASE 4 - APPLICATION
<ul style="list-style-type: none"> <li>• LSIP - Draft</li> <li>• LSAR - Draft</li> <li>• LSP - Draft</li> <li>• RAMP - Draft</li> <li>• Training Plan – Draft</li> <li>• Spares Plan– Draft</li> <li>• Test Equipment Plan – Draft</li> <li>• Documentation Plan</li> <li>• PHS&amp;T Plan – Draft</li> <li>• CMP – Draft</li> <li>• TOTAL LRU REPAIR COSTS – Draft</li> <li>• ICD Document - Draft</li> <li>• Support Contract -Draft</li> <li>• Transition Plan – Draft</li> <li>• FMECA - Draft</li> </ul>	<ul style="list-style-type: none"> <li>• Review and Issue before Contract award</li> <li>• LSAR – Issue1</li> <li>• LSP – Issue 1</li> <li>• RAMP - Issue 1</li> <li>• Training Plan – Issue 1</li> <li>• Spares Plan– Issue 1</li> <li>• Test Equipment Plan – Issue 1</li> <li>• Documentation Plan - Issue 1</li> <li>• PHS&amp;T Plan – Issue 1</li> <li>• CMP – Issue 1</li> <li>• TOTAL LRU REPAIR COSTS – Issue 1</li> <li>• ICD Document-Issue 1</li> <li>• Support Contract</li> <li>• Transition Plan – Issue 1</li> <li>• FMECA – Issue 1</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of Training Courses</li> <li>• Delivery of Documentation</li> <li>• Delivery of Spares</li> <li>• Issuing of As-built documents</li> <li>• Delivery of Test Equipment</li> </ul>	<ul style="list-style-type: none"> <li>• RAM Verification</li> <li>• Spares Verification</li> <li>• PHS&amp;T Verification</li> <li>• Documentation Acceptance</li> <li>• CMP Verification</li> <li>• LSP Update</li> <li>• Evaluation of Training Effectiveness</li> <li>• As–Built Documents Verification</li> </ul>	<ul style="list-style-type: none"> <li>• Utilization till end of Economic Life</li> <li>• Continuous training and updated document throughout the evolution of the system as needed</li> </ul>

## **2 ATNS Logistics Maintenance and Support Concept**

The ATNS maintenance is segmented into two regions that comprise of Northern and Southern Regions, where Northern region covers maintenance centres such as O.R. Tambo (Johannesburg), King Shaka (Durban) and Bram Fischer (Bloemfontein) and Southern region covering Cape Town, David Stuurman (Port Elizabeth), George and King Phalo (East London). The ATNS support concept's aim is to ensure that ATNS can achieve the performance objectives as contracted with its customers. To achieve the performance objectives, the ATNS maintenance and support concept is based on a three-tiered support model comprising of Operator, Intermediate and Depot level support.

### **2.1 Operator (O) Level support**

The operator level support is typical 1st line support in the support concept structure. The activities in the O level are carried out by ATNS technical personnel. The activities include first line monitoring through the Fault Reporting Centre, Equipment fault diagnosis and restoration of service by reconfiguration is done by means of Remote Control Monitoring Systems from the allocated maintenance Centre. (I)

### **2.2 Intermediate or (I) Level maintenance**

The Intermediate level support is typical 2<sup>nd</sup> line support within the support concept structure. The "I" level activities will be carried out by ATNS technical staff located at the sites and the local maintenance centre or workshop. The scope of work done during 2<sup>nd</sup> line support includes corrective and (routine) preventative maintenance for software application, database and hardware down to both CSCI and LRU levels where applicable. (I)

### **2.3 Depot or (D) Level maintenance**

This support level is typically 3<sup>rd</sup> line support within the structure, where "D" level maintenance covers all software/hardware failure investigations, advanced troubleshooting and provision of workarounds, rectifications and enhancements. At hardware level, this would typically be component level maintenance. (I)



### 3 TENDER RESPONSE

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

To assist TENDERERS only, each paragraph or article has been appended throughout with the letters “(M)”, “(D)”, “(O)” or “(I)”, to indicate whether the requirement is **Mandatory**, **Desirable**, **Optional** or for **Information only**.

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

TENDERERS 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 Tenderer’s offer meets the requirement. Tenderer’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”**.

Tenderer’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: partly compliant = 1 point;

NC: not compliant = 0 points.

Noted: Noted and accepted (applicable to paragraphs marked as “I”, not containing requirements)

Tenderer’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 Tenderer is expected to comply. The Tenderer 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 Tenderer is still expected to respond and provide information if requested. Any information gathered herein may form part of the contractual terms.

**4 PHASE 1: DEVELOPMENT PHASE**

During this first phase, the overall support programme and all the support elements shall be developed and documented. (I)

**4.1. System Performance Requirements**

- A. The tenderer shall provide a turnkey AIM system with a system availability of be 99.95% (4.4 hours downtime), per site, per year, on a 24 hours, 7 days per week basis, over a complete system lifespan. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The tenderer shall provide a turnkey AIM system with a reliability of 98.4% per site, over 24 hours. This is equivalent to 6 system failures per site, per year. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. In addressing all the failures, the failure severities shall be determined using table 4. The Tenderer shall submit a draft plan to manage each of the severity ratings in order to achieve the required System performance. (D)

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<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

## 5 SUPPORT CONCEPT

To achieve the system performance requirements stated in Section 4.1 above, ATNS uses a support system that is based on a three-level concept (explained in section 2 above). The Tenderer shall provide a proposal demonstrating how the requirements of the ATNS support concept will be met.

(D)

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<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

### 5.1 (LSIP) Logistic Support Implementation Plan

The Tenderer shall deliver a Logistics Support Implementation Plan that documents the schedule for all the logistics support deliverables/activities to be implemented during phases 1, 2 and 3, as listed in Table 1 (Section 1.). All the Logistic Support deliverables shall be integrated into the Project Management Plan (PMP) under a section called 'Logistic Support Implementation'. These activities shall be clearly shown on the overall Project Schedule and Work Breakdown Structure. (D)

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<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

### 5.2 Logistic Support Plan (LSP)

The Tenderer shall deliver a Logistics Support Plan to define the support system that will be implemented for the ongoing support of the AIM system during its life cycle (15 years). The support system used during phase 3 will strictly follow this LSP, in order to verify the effectiveness of this plan prior to final acceptance and implementation in phase 4.

The following sections forms part of this plan:

RAM, Training, Spares, Test equipment, Documentation, PHS&T and Maintenance Planning (Concept, type and level). (I)

**5.2.1 Reliability, Availability and Maintainability Plan (RAMP)**

- A. The Tenderer shall deliver a Reliability, Availability, and Maintainability Plan to describe the RAM model to be used and how the RAM studies are to be conducted. The plan shall define the verification process and the classification and definition of failures, as well as, the remedial action to be taken should deviations be found. RAM Programme shall be initiated during Phase 1 and maintained throughout the life cycle of the equipment

Tasks: System Models (*Block diagrams of equipment & LRU MTBF and MDT*)  
 Predictions (*Reliability, Availability and Maintainability*)  
 Analysis (*Reliability, Availability and Maintainability*)  
 Verification (*Reliability, Availability and Maintainability*). (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

- B. The Contractor shall define and conduct a RAM Plan aimed at improving the supportability of the AIM. (D)

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

- C. The Tenderer shall define and conduct a program aimed at achieving the guaranteed Reliability, Availability and Maintainability of each individual system. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

- D. The model shall be applicable to:
  - All Hardware
  - Operating System Software
  - Application Software
  - AIM communication infrastructure
  - Firmware (D)

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

E. The Tenderer shall define under which conditions the RAM models are achievable. (D)

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

F. Tenderer shall provide the general RAM Models (RAM Flow Diagrams) and relevant figures, examples of calculations, and the results of their predictions, as part of their tender. The reliability predictions shall be based on guaranteed actual MTBFs. (D)

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

G. The Tenderer shall provide a RAM Report containing all Reliability and Availability calculations of all equipment, sub-systems and the total defined system. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

H. The Tenderer shall include a RAM evaluation as part of all design reviews. (D)

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

### 5.3 Failure Modes Effects and Criticality Analysis (FMECA)

The Tenderer shall submit a (FMECA) report, as per the suggested structure, but not limited to, in the table 2 below. (D)

**Table 2: FMECA**

Action	Output Summary
Step 1: Identify, Define and List the Possible Hardware and Software Functional Failures	List of identified possible System functional failures
Step 2: Identify and List the Potential Effects of each of the Hardware and Software Failures	List of System and subsystem Effect(s)
Step 3: Assess and rate each effect according to the criticality and consequences of its impact	Criticality assignment for each effect FMECA Table
Step 4: Assign a Probability or likelihood to each Failure Mode	Probability or likelihood assignment for each failure
Step 5: Identify and document any concerns or possible vulnerable areas of the analysis	Documented assumptions, concerns and vulnerable areas of the analysis model
Step 6 Determine the impact of failures on the cost, schedule, and/or technical performance independently or simultaneously	List of impact of failures
Step 7 Prioritize the failure modes by ranking them from the highest priority to the lowest based on the probability of occurrences and their impacts	A prioritized list of failure modes Updated and prioritized table
Step 8: Identify Corrective Actions to Eliminate or Reduce the High Probability Failure Modes	List of actions to eliminate failure modes; or documented workarounds Measures to reduce probability of failure or their impacts; Software/hardware modification to include fault protection.

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

**5.4 Training Plan (TP) (Including provision of training)**

- A. Based on the ATNS support concept, the Tenderer shall prepare a Training Plan to document the training of ATNS personnel. (I)
  
- B. This plan details the material to be covered, duration of training, location where training will be held. Training shall be provided to both the Technical Maintenance and ATC personnel. (D)

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[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

- C. The Training Plan shall stipulate minimum requirements for all the respective training courses. (D)

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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.4.1 Operations Training**

- A. The tenderer shall provide a basic Operational training to twenty (20) personnel per discipline. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The tenderer shall also provide advanced Operational training to ten (10) personnel per discipline, which will enable them to provide future training within ATNS. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.4.2 Technical Maintenance Training**

- A. The Tenderer shall provide an Advanced Technical Maintenance Training to eight (8) personnel based on the ATNS Support Concept, which will enable them to provide future training within ATNS.

In addition to the tenderer's recommended training courses, the tenderer shall provide, but not limited to, the following modules as part of the syllabus: (D)

- Architectural Training
- Application Training
- Data and communication Model
- Database Management
- System configuration and set-up
- Troubleshooting and fault finding

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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
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B. The tenderer shall provide a basic Technical training to ten (10) personnel. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.4.3 Software and Firmware Training**

Training provided to technical personnel, shall be to a level that they will be able to perform any setup function and all changes independent of the Supplier’s assistance. Software and Firmware training shall be provided to the level required for normal operation of the system and its upgrades. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.4.4 Training Requirements**

A. In addition to standard training, the tenderer shall also provide E-Learning training, to ensure effective and comprehensive training of all existing and future system operators and technicians. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

B. The Contractor shall provide on-the-job-training during installation. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	



<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>
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- C. All proposed training courses shall have competency assessments and issue official certification. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.4.5 General**

- A. The medium of instruction shall be English, and the instructor(s) must be able to present the training in comprehensible English. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The tenderer shall provide course syllabi with Lesson Plans, Training Aids material stipulating the objectives, level, methodology and duration of each training. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. All training shall take place at the ATNS Aviation Training Academy (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- D. The Contractor shall complete all relevant training before the SAT (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.5 Spares Plan (SP)**

- A. The Tenderer shall deliver a Spares Plan that details the level and distribution of all spares and is based on the MTBF predictions. Total System availability, turnaround times and storage location shall be considered. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The tenderer shall submit a spares plan that will ensure that the required performance of the full system to be delivered through this tender is guaranteed for a minimum of 15 years. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. The tenderer shall propose consumable spares that will cover at least the first two years of operation. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- D. The Spares plan shall distinguish between local and overseas sourced items, ATNS reserves the right to procure locally sourced items directly. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- E. The Spares Plan shall identify all recommended spares and their respective quantities, to be kept at FAOR. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- F. Should the PBU indicate that the tenderer’s recommended spare parts and consumables are deficient, the contractor shall supply additional new spares/consumables at their own cost. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.6 Test Equipment Plan (TEP)**

- A. The tenderer shall submit a Test Equipment Plan that details the requirement, acquisition, distribution, and support of all standard and specialised test equipment, required for the support of the system. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The Test Equipment Plan shall include details on the type of Test Equipment and its Support plus the allocations to the different Maintenance Levels. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

C. The Plan shall describe all Test Equipment calibration requirements. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

D. The Test Equipment Plan shall cover Built-in Test Equipment and any Diagnostic Software modules. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

E. The Contractor shall validate the sufficiency, capacities and number of Test Equipment during the PBU. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.7 Documentation Plan (DP)**

A. The Tenderer shall deliver a Documentation Plan defining all applicable documentation, to be delivered. The delivery of all documentation is completed prior to the commencement of Phase three. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	

<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>
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B. System Documentation (System maintenance & installation) (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

C. Operator Documentation (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

D. Hardware Maintenance (Equipment maintenance LRU replacement). (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

E. Software and/or Firmware Documentation (Basic Software and/or Firmware, Operating system, utilities. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

F. Training Documentation (as per the training plan) (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

G. The Contractor shall provide the documentation to FAOR Maintenance Centre. The documentation will be in a format and quality acceptable to ATNS. All documentation shall be provided in electronic medium. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

H. The Contractor shall, prior to the commencement of the PBU, ensure that all documentation reflects the true configuration of the systems, the serial numbers of all the system LRUs must be recorded on the As-Built documents. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

I. The Contractor shall supply full documentation for the installation, connection and configuration of all hardware and software modules, and cabling for the As-built installation. As-built document shall consist of: (D)

- Device and system verification sign-off sheets

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- Site configuration

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- Software and/or Firmware configuration

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- Design drawings

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- Equipment Power consumptions schedules

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- Cable schedule

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- List of cables and markings

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

J. The Contractor shall document any changes / upgrades necessary during the PBU. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.8 Package Handling Storage and Transport Plan (PHS&TP)**

- A. The Tenderer shall deliver a Package Handling Storage and Transport Plan that addresses the requirements for resources, processes, procedures, design, considerations, and methods to ensure that all system, equipment, and support items are preserved, packaged, handled, and transported properly during both the implementation and support phases of the project. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. All Packaging material shall be recyclable. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**5.9 Configuration Management Plan (CMP)**

- A. The Tenderer shall deliver a Configuration Management Plan to identify the configuration and control actions and procedures necessary for the configuration management of the equipment, documentation, logistic resources plus Software and Firmware for the System project during phases 1, 2 and 3. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. The CMP shall provide a formal standard procedure for addressing all engineering changes and support system changes that may be required. (D)



<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. The CMP shall make provision for procedures to ensure that, at the end of the PBU, the backup software and firmware at each centre, contain all the upgrades and patches implemented during the PBU. This activity is the responsibility of the Contractor and shall take the form of a configuration audit jointly performed by the Contractor and ATNS. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- D. The Contractor shall remain responsible for the system configuration management for the duration of the system life-cycle. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- E. Any hardware, Software and Firmware changes to the repaired units shall be recorded and ATNS be formally advised of the new configuration status. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- F. Towards the end of the PBU, the project team consisting of ATNS and the Contractor, shall conduct an audit of the total configuration status of all hardware and Software and Firmware, inclusive of all documentation and support plans. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>

**5.10 Total LRU Repair Costs (over the System Lifespan)**

A. The Tenderer shall provide total LRU repair costs, over the complete system lifespan, using the guide on tables 3. (D)

<p><b>COMPLIANCE (C/PC/NC/Noted)</b>                  Responding with C/PC/NC only without proof will not be accepted.</p>	
<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>	
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>	

B. The Tenderer shall submit a complete breakdown of all the LRU's of the system. The following information, but not limited to the list, should be contained with respect to each LRU in the list. (D)

- The total number of each LRU installed
- Each LRU MTBF figure (based on actual data)
- Is the LRU repairable?
- Number of possible LRU repairs during the system lifespan
- Individual LRU Cost.
- Etc.

**Table 3: Total LRU Repair Costs**

Description	MTBF (Hours)	Total Number Installed	Repairable (Yes/No)	Number of Possible repairs per lifespan	Unit Price (as at tender)	Total Repair costs
LRU 1						
LRU 2						
LRU 3						
LRU4						

<p><b>COMPLIANCE (C/PC/NC/Noted)</b>                  Responding with C/PC/NC only without proof will not be accepted.</p>	
<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>	
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>	



### 5.11 System Lifespan

The required system life cycle shall be 15 years. Tenderer shall indicate, in their proposal, proven processes and interventions to ensure that the system meets the 15-year required lifespan. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

### 5.12 Interface Control Document (ICD)

The Tenderer shall provide a full list of all ICD's for all components and interfaces of the proposed system detailed in Volume 2, as per international best practices, as part of the tender response. The System shall be delivered with a complete and comprehensive set of Interface Control Documents that includes a comprehensive and full description for all interfaces, whether implemented at the time of system acceptance and commissioning or not. All relevant information, processes and methods on how to activate and implement the interfaces shall be made available to ATNS before the commissioning date. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

## 6 PHASE 2: IMPLEMENTATION PHASE

The provision of the deliverables mentioned below must be provided in this phase. (D)

- Provision of Training Courses
- Delivery of all Documentation
- Delivery of Spares
- Issuing of As-built documents
- Delivery of Test Equipment

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

## 7 PHASE 3 - VALIDATION PHASE

### 7.1 PBU

- A. The PBU shall start from the SAT of the system and end one (1) year after the SAT. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. During the PBU, both the warranty and the verification of Phase 1 and 2 deliverables shall be executed concurrently. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. The warranty shall cover all system repairs and replacements of hardware including the software and firmware corrections and modifications. The warranty shall also cover the correction of any other system errors not detected during FAT & SAT. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- D. The PBU shall only start when all the Phase 1 and 2 deliverables are provided to ATNS' satisfaction. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- E. During the PBU, the ATNS technical personnel maintain the system in accordance with Phases 1 and 2 deliverables, however, the delivered system remains the responsibility of the Contractor. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- F. All the Phase 1 and 2 deliverables shall be validated by both ATNS and the Contractor to determine whether the support system is proving effective. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- G. During the PBU, any identified deficiencies in Phase 1 and 2 deliverables, shall be corrected at the Contractor’s cost. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- H. The PBU shall end when all the clauses mentioned in Phase 3 (Validation Phase) are performed, as determined by ATNS. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- I. The PBU shall be extended by 12 months should any of the installed systems not meet the stipulated performance criteria mentioned in paragraph 4.1 A and 4.1 B. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- J. The system shall remain in PBU until all PBU deliverables are delivered and outstanding failures are closed. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

**7.2 Verification**

- A. System Performance Verification

The Contractor shall provide regular equipment failure monthly reports on the actual system performance/RAM figures achieved. The Contractor shall initiate remedial action where deficiencies are identified. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- B. Spares Verification

The list of spares, as proposed by the tenderer is verified during this phase. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- C. Test Equipment Verification

The list of proposed specialized Test Equipment, as proposed by the Tenderer, is verified during this phase. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

D. PHS&T Verification

The Packaging, Handling, Storage and Transport of all spares and support material is verified during this phase, with special attention being paid to the turnaround time of modules returned for repair or replacement. This aspect has direct bearing on the level of spares holding decided upon. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

E. Evaluation of Training effectiveness

The training received will be verified during the PBU period, if is found that the training given was not adequate, the Contractor shall retrain the personnel at its cost. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

F. Documentation Acceptance

Final acceptance of all support documentation takes place at the end of this phase. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	



**8 PHASE 4: APPLICATION PHASE**

The duration of this phase is the economic life of the system, which is considered to be 15 years. This phase commences with the acceptance of all the elements of the Logistic Support Plan, validated during beneficial use, and the transfer of maintenance management responsibility to ATNS. (I)

**8.1 Application of Logistic Support Plan**

The LSP compiled, updated and verified during phases 1, 2 and 3, is now used as the standard control document for the on-going support of the system. (I)

**9 Contract Data Requirement List**

A. The Tenderer shall take note of all the phases 1, 2 & 3 Logistics Support requirements/deliverables and the indicated delivery time frames, as depicted in Table 1 (section 1.2). Using the information in Table 1, the tenderer shall provide a CDRL document. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

B. The tenderer shall adhere to the failure severity levels indicated on table 4 below: (D)

TABLE 4 - Definition of severity levels

Priority Level	Description
Critical (S1)	Emergency with the highest priority, indicating severe and acute operational problems where the availability of the service or essential functionality is severely impaired. Critical impact on business such as, but not limited to: <ul style="list-style-type: none"> <li>• Total outage of primary equipment</li> <li>• Equipment failure or significant reduction in traffic handling capacity</li> <li>• Prevented access to the equipment due to system failure</li> <li>• Severe impairment of system administration</li> <li>• Loss of access to recovery operations</li> <li>• Failure of an important feature (upgrade from Minor service)</li> <li>• Loss of major functionality such as inability to add needed/required services, loss of access to the equipment, inability to perform equipment backups (upgrade from Major)</li> <li>• Failure of redundant equipment (Upgrade from Major)</li> <li>• When 3 Major problems have occurred and are pending resolution, the priority level should be escalated to Critical</li> </ul>

	<ul style="list-style-type: none"> <li>Priority factor of 1 for critical incidents shall apply for the purpose of calculating penalties</li> </ul>
Major (S2)	<p>The availability of the service is considerably restricted. Major impact or potential major impact on business such as, but not limited to:-</p> <ul style="list-style-type: none"> <li>One server non-operational</li> <li>Problem threatens to escalate to Critical priority</li> <li>Prevents collection of data required for the equipment. This can typically include extraction of data/statistics</li> <li>Acute technical problem of primary equipment</li> <li>Loss of diagnostic functionality</li> <li>Significant degradation of access for recovery operations on peripherals</li> <li>Significant degradation of equipment alarms, critical, major or trouble reporting</li> <li>More than 1 (internal to ATNS) operational/technical position experiencing a similar SW or HW related problem. A single external client service failure due to any CSCI or any other system SW or HW failure as a result of any system related SW bug, upgrade, modification, configuration, interference, system design or baseline of the system performed/supplied by the vendor/supplier.</li> <li>Priority factor of 0.5 for major incidents shall apply for the purpose of calculating penalties.</li> </ul>
Minor (S3)	<p>Queries and problems that are related to non-acute operational problems and important technical queries. Medium impact on the business such as, but not limited to:</p> <ul style="list-style-type: none"> <li>Failure of non-critical warnings and alerts</li> <li>Any problem deemed less significant than the ones above</li> <li>Any item, including documentation that can generate procedural problems.</li> <li>General queries. Minor impact on business such as:-</li> <li>General documentation problems</li> <li>Input / Output message format problems</li> <li>No impact on customers or any other systems integrating to the network</li> <li>Priority factor of 0.2 for minor incidents shall apply for the purpose of calculating penalties.</li> </ul>

<p><b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.</p>	
<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>	
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>	

C. The tenderer shall adhere to the failure response times and/or restoration times indicated on table 5 below: (D)

TABLE 5 – SERVICE LEVELS (Fault response times)

<u>Priority</u>	<u>Service cover period</u>	<u>Time to respond per incident/failure</u>
<u>Critical</u>	24 hours/day x 7 days/week x 365 days/year	20 minutes
<u>Major</u>	24 hours/day x 7 days/week x 365 days/year	1 Hours

Minor	08:00 to 16:30, Monday to Friday	24 Hours
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<p><b>COMPLIANCE (C/PC/NC/Noted)</b>          Responding with C/PC/NC only without proof will not be accepted.</p>	
<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>	
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>	

**10 Maintenance Support Contract Requirements**

- A. **SUPPORT CONTRACT PROPOSAL:** The Tenderer shall provide a 15 year Maintenance and Support Contract proposal, as per the ATNS Support Concept. The Maintenance and Support contract will be signed concurrently with the System acquisition contract and shall commence at the end of PBU. (D)

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

- B. **EXPLICIT INDICATION OF EXCLUSIONS:** Listed below, as requirements, are minimum maintenance and support services, therefore, the Tenderer shall detail all their proposed maintenance support services in their bid. The tenderer shall explicitly emphasise the excluded maintenance support services, if any, plus the rationale for their exclusion. (D)

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

- C. **SUPPORT CONTRACT PRICES:** Tenderer shall provide detailed prices of the Maintenance and Support contract proposal only in Volume 1C. The rest of the Support Contract aspects, excluding pricing, shall be provided in Volume 4. During each year, the Maintenance and Support shall cater for quarterly invoicing in arrears, in line with paragraph P below. (D)

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

- D. **SERVICE & LABOUR RATES:** The Tenderer shall submit a schedule of all labour and service rates, for both local and overseas resources, for normal working hours, weekends and public holidays. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- E. **SYSTEM PERFORMANCE GUARANTEE:** The Tenderer shall propose a Maintenance and Support Contract that shall guarantee that the specified System Performance Requirements, as mentioned in section 4.1 are achieved, for the complete system lifespan. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- F. **SOFTWARE & HARDWARE SUPPORT:** The Maintenance and Support Contract shall cater for the complete turnkey solution, including, but not limited to, third party hardware and software. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- G. **RESPONSE TIMES:** For Hardware, Software and Firmware failure corrections, the Maintenance and Support Contract shall adhere to the maximum response times (Service Level Agreement) indicated in table 5. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- H. **FAILURE CORRECTION REPORT:** The Contractor shall provide ATNS with a failure correction report, within 7 days of each fault correction. (D)

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

- I. **LRU EXPENSES**: The proposed Maintenance and Support Contract shall cover unlimited LRU repairs/replacements, for the System lifespan. The maintenance and support agreement shall also cover all the LRU repair/replacement associated expenses, including, but not limited to, actual repairs/replacements, shipping, insurance, taxes, etc. The incurred expenses shall include, but not limited to, sending away to factory the faulty LRUs and returning the repaired LRUs to ATNS. (D)

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

- J. **LRU REPAIR TURN AROUND TIME (TAT)**: The Contractor shall return each repaired LRU to ATNS, within 45 business days of receipt of the faulty one. (D)

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

- K. **ICAO COMPLIANCY**: The Tenderer shall ensure that the system shall remain compliant with ICAO standards and recommendations during the expected lifespan. This upgrade/change shall include training of users should there be a need. (D)

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

- L. **SYSTEM TO MAINTAIN A CURRENT STATUS**: The Contractor shall ensure that the entire system is always equipped with the latest Systems Software, Applications Software, Firmware versions and hardware throughout its expected lifespan (15 years). (D)

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<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- M. **OBsolescence Management**: The Tenderer shall submit an Obsolescence Management strategy that will be implemented throughout the system lifecycle to ensure that the system remains compliant to performance requirements stipulated herein and in Volume 2. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- N. **Resource Provision**: In the event of emergencies, the Contractor shall make available, within 48 hours after ATNS request, a Technical resource to the specific ATNS site. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- O. **System Performance Reports**: The Support shall cater for both monthly and quarterly system performance and LRU repair TAT reports. The Service review meetings shall be held every 3 monthly, for the duration of the maintenance contract. (D)

<b>COMPLIANCE (C/PC/NC/Noted)</b> Responding with C/PC/NC only without proof will not be accepted.	
<i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i>	
<i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i>	

- P. **Penalties**: Should the Contractor breach the LRU REPAIR TAT (Point J. above), ATNS shall impose penalties.

In the event that each LRU Repair TAT exceeds 45 working days, the total number of days for the breach (for all LRUs in breach), over a measurement period of three (3) months, the service provider shall pay a penalty as follows:

Quarterly Service Penalty =  $T_{act} [hours] / T_{max} [hours] * (Priority\ factor) * (10\% * Annual\ Contract\ value)$ , up to a total maximum of the annual value of the Agreement, per Agreement period, where: Priority factor is as per definition in Table 4.

The Priority Factor for LRU Repair TAT [days] shall be 0.5

$T_{max} [hours]$  = corresponding priority level maximum response (time to respond, time to restore, interim solution, permanent solution and LRU Repair TAT)

Actual Downtime/Transgression ( $T_{act}$ ) will only be affected if it was a direct result of the equipment failing within the equipment’s specifications, this excludes failures due to external causes.

Note: The penalty only applies to where the service levels (**LRU Repair TAT, fault restoration and resolution times**) have been transgressed. (D)

<p><b>COMPLIANCE (C/PC/NC/Noted)</b>                  Responding with C/PC/NC only without proof will not be accepted.</p>	
<p><i>[INSERT FULL RESPONSE FOR EVALUATION HERE]</i></p>	
<p><i>[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]</i></p>	