AIR TRAFFIC AND NAVIGATION SERVICES SOC LTD

REPUBLIC OF SOUTH AFRICA

REQUEST FOR PROPOSALS: RFP: ATNS/TPQ/RFP005/24.25/ ATC RECORDER AND PLAYBACK SYSTEM.

APPOINTMENT OF A SERVICE PROVIDER FOR THE DECOMMISSIONING AND DISPOSAL OF THE EXISTING; AND THE SUPPLY, DELIVERY, INSTALLATION, COMMISSIONING AND SUPPORT OF NEW ATC VOICE RECORDER AND PLAYBACK SYSTEMS AT ATNS SMALLER AND REGIONAL AIRPORTS.

VOLUME 4

LOGISTICS SUPPORT SPECIFICATIONS

MAY 2024

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ABBREVIATIONS

ANSP	Air Navigation Service Provider
ATA	Aviation Training Academy
ATC	Air Traffic Controller
ATM	Air Traffic Management
ATNS	Air Traffic and Navigation Services SOC. Ltd.
CD	Compact Disk
CMP	Configuration Management Plan
COT	Commercially Off-The-Shelf
DP	Documentation Plan
DVD	Digital Versatile Disk
FAT	Factory Acceptance Test
FIFO	First in First Out
HMI	Human Machine Interface
ICAO	International Civil Aviation Organisation
IP	Internet Protocol
LAN	Local Area Network
LCCP	Life Cycle Cost Plan
LRU	Line Replacement Unit
MPEG	Moving Picture Experts Group
MPG	Moving Picture Group
NEMA	National Environmental Management Act
NTP	Network Time Protocol
OEM	Original Equipment Manufacturer
PABX	Private Automatic Branch Exchange
PBU	Period of Beneficial Use
PCUG	Private Close User Group
PHS&T Plan	Package Handling Storage and Transport Plan
PMP	Project Management Plan
PSTN	Public Switched Telephone Network

RAMP	Reliability, Availability and Maintainability Plan
Rx	Receiver
S&R	Standards and Regulations
SACAA	South African Civil Aviation Authority
SAT	Site Acceptance Test
SLA	Service Level Agreement
SNMP	Simple Network Management Protocol
SP	Spares Plan
SPI	Serial Peripheral Interface
TEP	Test Equipment Plan
TCP/IP	Transmission Control Protocol/ Internet Protocol
TP	Training Plan
Tx	Transmitter
UPS	Uninterrupted Power Supply
USB	Universal Serial Bus
VCS	Voice Communication System
VHF	Very High Frequency
VSAT	Very Small Aperture Terminal
WAV	Waveform Audio
WBS	Work Breakdown Structure

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 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 system that will be implemented for the selected site where the ATC Recording and Playback system will be installed. It furthermore describes the Logistic Support (LS) that is required for the total support of the ATC Recording and Playback system during project phase, as well as post implementation during the utilization of the system till the end of economic life of the equipment. ATNS aims to have a maintenance model that will ensure seamless integration to the existing processes and procedures for maintenance. The new system maintenance philosophy should be aligned to the ATNS maintenance support concept as outlined in **MAINTENANCE SUPPORT CONTRACT** under phase 4.

1.1   Overview of the Logistics Support implementation phases

The Logistics Support implementation will run over a course of four (4) phases covering development, implementation, evaluation as well as application. In each of the phases, the project outputs as outlined in Table 1 will result in the achievement of the following milestones:-

Phase 1A – Short-listing

Phase 1B – Contract award

Phase 2 – Site Acceptance Test

Phase 3 - Verification

Phase 4 –Maintenance hand-over

All cost of the deliverables mentioned on this document must be listed in Volume 1C.

1.2   Table 1 – LS implementation phases

PHASE 1A DEVELOPMENT	PHASE 1B- DEVELOPMENT (Contract award)	PHASE 2- IMPLEMENTATION	PHASE 3 EVALUATION/PBU	PHASE 4 APPLICATION
• Draft RAMP • Draft TP • Draft SP • Draft TEP • Draft DP • Draft PHS&T Plan • Draft CMP • Draft LCCP • Support Contract -Draft	Review and Issue before Contract award • RAMP - Issue 1 • TP – Issue 1 • SP– Issue 1 • Test Equipment Plan – Issue 1 • DP - Issue 1 • PHS&T Plan – Issue 1 • CMP – Issue 1 • LCCP – Issue 1 • Support Contract	• Provision of Training Courses • Delivery of Documentation • Delivery of Spares • Issuing of As-built documents • Delivery of Test Equipment • Delivery of Software Licenses	• RAM Verification • Spares Verification • PHS&T Verification • Documentation Acceptance • CMP Verification • Evaluation of Training Effectiveness • As–Built Documents Verification	• Utilization till end of Economic Life

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 the following maintenance centred: Johannesburg, King Shaka and Bloemfontein and Southern region covering Cape Town, Port Elizabeth, George and East London. The ATNS support concept is with the aim of ensuring that ATNS can achieve the performance objectives as contracted and agreed with its customers. In order 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   Support concept structure

2.1.1   Operator (O) Level support

The operator level support is typical 1st line support in the support concept structure. The activities at 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 by means of Remote Control Monitoring Systems from the allocated maintenance Centre. (I)

2.1.2   Intermediate or (I) Level maintenance

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

2.1.3   Depot or (D) Level maintenance

This support level is typically 3rd line support within the structure, where "D" level maintenance covers all software/hardware failure investigations, advanced troubleshooting and provision of workarounds, rectifications, and enhancements. In addition to specialist ad-hoc maintenance, the scope of "D" level maintenance also incorporates activities related to full software configuration management, software version release and requires an understanding of the application source code, database schemas and workflow in the case of software systems. At the hardware level, this would typically be component level maintenance. (I)

3   GENERAL INSTRUCTIONS TO TENDERERS

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 **M**andatory, **D**esirable, **O**ptional or for **I**nformation 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.

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

declare their level of compliance, formal response and reference 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.

Paragraphs marked "(O)", indicates that the requirement is optional, and the tenderer may decide

how to respond.

4   PHASE 1: DEVELOPMENT PHASE

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

4.1   System Performance Objectives

4.1.1   Availability

[A]   The tenderer shall provide a solution with an operational Availability of 99.98% per year over a system life of 10 years for the ATC Recording and Playback system. The 'system' refers to each site of this project. This excludes the scheduled down-time. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.1.2   Reliability

[A]   The tenderer shall provide a solution with a maximum of four (4) system (critical) failures per year. 'System' refers to each site of this project. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.1.3   Reliability, Availability and Maintainability Plan (RAMP)

[A]   The Contractor 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. (D)

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*)

COMPLIANCE (C/NC)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

5   SUPPORT CONCEPT

[A]   To achieve the performance objectives stated in paragraph 2 above, a support system based on a three-level concept shall be put in place. The Tenderer shall provide a detailed proposal on how they will fulfill the ATNS support concept. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.1   Logistic Support Implementation Strategy

5.1.1   (LSIP) Logistic Support Implementation Plan

[A]   The Tenderer shall include a Logistics Support Implementation Plan that documents all the logistics support deliverables/activities that shall be implemented during phases 1, 2 and 3 as part of the overall project schedule. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.2   Training Plan (TP)

[A]   The Tenderer shall prepare a Training Plan or a Skills Transfer Plan for the benefit of ATNS personnel. This plan details the training courses to be covered, the how, where and when. The training to be offered to maintenance and operational personnel. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.2.1   Operational Training

[A]   The tenderer shall provide operational training to six (6) personnel per control centre. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.2.2   Technical Training

[A]   The Contractor shall, at the ATNS Aviation Training Academy, provide technical training to twenty (20) personnel who will be doing routine maintenance and troubleshooting on the system. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   The Training Plan shall stipulate minimum requirements for all the respective training courses. Trainees will be provided by ATNS, according to the Contractor's requirement specifications. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   The software and applications delivered shall be such that after the system has been commissioned, experienced and qualified programmers are not required for the operation and maintenance of the system. Training provided to technical personnel shall be to a level that they will be able to perform any setup function and changes independent of the Supplier's assistance. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[D]   The Contractor shall train ATNS Training Academy (ATA) instructors and System specialists (six (6) people) to a level that will enable them to provide Continued Training within ATNS. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.2.3   General

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

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   Formal training courses are required. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   The Contractor shall provide all training aids and material, including those for tests, exams and assessments. A suitable certification shall be provided as to their competence. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[D]   The Contractor shall complete all relevant training before the SAT of that specific site. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.3   Spares Plan (SP)

[A]   The Tenderer shall deliver a Spares Plan that details the recommended spares quantities per LRU that is based on the actual MTBF figures, system availability, LRU repair turnaround times, whether consumable or repairable. The quantity of repairable spares must be enough to support the project for a minimum of 10 years and the cost of individual items to be provided on Volume 1C. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   The Spares Plan shall identify all relevant suppliers and agents for all elements of support, where these are to be contracted directly by ATNS. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   The Spares Plan shall identify all recommended spares and their respective quantities, to be kept at OR Tambo, as a centralized storage site. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[D]   The Contractor shall ensure proper coding of the relevant spares so that they can be recorded into the ATNS inventory. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*

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

[E]   The Contractor shall recommend accurate spare LRU quantities with a tolerance of ±3 LRUs. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.4   Documentation Plan (DP)

[A]   The Tenderer shall deliver the Documentation Plan defining all applicable documents to be delivered. The delivery of all documentation is completed prior to the commencement of Phase 3. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   The Contractor shall generate and implement a plan for the compilation, production, validation and maintenance of all relevant technical documentation and data, subject to ATNS acceptance. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   The Contractor shall provide copies of equipment documentation. All documentation shall be provided in electronic medium. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[D]   The Contractor shall, prior to the commencement of the PBU, ensure that the As-built documentation reflects the true configuration of the ATC Recording and Playback systems. The serial numbers of all the LRUs in the system must be recorded on the As-Built documents. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.5   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 the shipping and dispatch of items for repair between ATNS and the supplier, as well as, special storage and handling requirements. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.6   Configuration Management Plan (CMP)

[A]   The Tenderer shall deliver a Configuration Management Plan procedure to identify the configuration and control actions and procedures necessary for the configuration management of the equipment, documentation, logistic resources and software for the Project. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   Any hardware or software changes to the repaired units shall be recorded and ATNS be formally advised of the new configuration status. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.7   Evolution plan

[A]   The required system life cycle is 10 years; otherwise the tenderer shall indicate their proposed system's life cycle. The proposal shall indicate processes, procedures and the cost of upgrading the system to meet the required life cycle. If there are additional costs associated with upgrading the system to achieve 10 years, these shall be indicated in Volume 1C. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.8   Software Licenses

[A]   The Tenderer shall indicate what software licenses will be required for the system, as well as which ones are issued once-off and which are renewable. All licenses must be in ATNS' name. All Software licensing certificates shall be delivered before the SAT. The software license cost must be indicated in Volume 1C. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.9   Other Project Requirements

[A]   All resources required to maintain the ATC Recording and Playback systems must be supplied with the equipment. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

6   LIFE CYCLE COST

[A]   The Tenderer shall provide ATNS with a detailed Life Cycle Cost Plan using the guide in tables 6.1 below. All LCC pricing shall be provided on Volume 1C (not on Volume 4). This plan shall be based on a period of 10 years.

Material List. The Tenderers shall submit a complete breakdown list of ALL LRU's, on all the equipment, to be delivered under this contract. (D)

o   The total number of each item to be delivered

- o Individual item Cost (to be provided on Volume 1C)

- o MTBF figures based on actual/***achieved*** data

- o MTTR per item

- o Is the item repairable and what is the total number of repairs possible per unit?

- o The quantities for consumables shall be sufficient for three (3) years of operation.

Table 6.1

LRU Name	Failure impact on system (channel or system)	Total Quantity in operation	Qty of spares	MTBF (h)	MTTR (h)	Number of Possible repairs	Unit Price	TAT(d)
Consumables								

** ***Unit Price*** should be in South African Rand or UK pound or American dollars

(***h***) hours

(***d***) days

COMPLIANCE (C/PC/NC/NOTED)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

7   PHASE 2: IMPLEMENTATION PHASE

[A]   The deliverables mentioned below must be provided in this phase: (D)

a. Provision of Training Courses

b. Delivery of all Documentation

c. Delivery of Spares

d. Delivery of Software Licenses

e. Delivery of Test Equipment

f. Issuing of As-built documents

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

8   PHASE 3 - VALIDATION PHASE (PBU)

[A]   **PBU Period:** The PBU shall start from the SAT date of the first site and end one (1) year after the SAT of the last site. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   **Verification:** During this phase which is termed PBU, both the guarantee and the verification of Phase 1 and 2 deliverables shall run concurrently. The items that are verified in this phase are: (D)

  a.   Reliability of the equipment
  b.   PHS&T
  c.   Maintenance model
  d.   Spares
  e.   Test Equipment
  f.   Training effectiveness
  g.   Documentation
  h.   Configuration Validation

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   **Deficiency Corrections:** During the PBU, any identified deficiencies in Phase 1 and 2 deliverables, shall be corrected at the Contractor's cost. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[D]   **PBU Closure:** The system shall remain in PBU until all FAT, SAT and PBU deliverables and failures are closed. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

9   PHASE 4: OPERATION/ APPLICATION PHASE

[A]   The duration of this phase is the economic life of the system, which is 10 years. The Maintenance Support Contract compiled, verified during phases 1, 2 and 3, and is now used as the standard control document for the on-going support of the system. (I)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

10   MAINTENANCE SUPPORT CONTRACT

Support Contract Requirements

[A]   **Support Contract Proposal:** The Tenderer shall provide a 10 years Maintenance and Support Contract proposal, as per the ATNS Support Concept. The Maintenance and Support contract will be signed concurrently with the Procurement contract and shall commence at the end of PBU. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B]   **Support Contract Prices:** Detailed prices of the Maintenance and Support contract shall only be provided in Volume 1C. The rest of the Support Contract aspects, excluding pricing, shall be provided on Volume 4. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[C]   **Services and Labour Rates:** The Tenderer shall indicate all labour and/or service rates, for both local and overseas Technical personnel, for normal working hours, weekends and public holidays. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*

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

[D]   **Price Escalation Formula:** The formulae used to determine the cost of all services shall be clearly indicated. The price escalation formula(e) shall clearly indicate all the related variables/elements. The price escalation formula shall be predetermined and applied for the system life cycle. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[E]   **Future Installation Prices:** Should the Contractor be required to install equipment/systems similar to the installed system after the signature of the Support Contract, the maintenance costs shall be similar to equivalent system(s) covered in the initial contract. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[F]   **Performance Guarantee**: The Tenderer shall propose a Support Contract that will guarantee that the specified System Performance Objectives, as mentioned in paragraph 4 are achieved, for the complete system lifespan. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[G]   **Software & Hardware Support:** The Support Contract shall cover a complete system including but not limited to Software, Firmware and Hardware failure corrections. The SLA must be structured to ensure that the system runs continuously on the OEM recommended latest software version release. (D)

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*

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

[H]   **Response Times:** Taking into consideration the required availability figures of the system, the tenderer shall ensure that the proposed solution meets the stipulated KPI indicated on the following tables:

Service Level Indicators

a.   The following service level indicator shall be achieved: (D)

ID	Priority Level	Service cover period	Time to respond (per fault)
10.1.1	Critical	24 hours/day x 7 days/week x 365 days/year	**60 minutes**

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

b.   The following service level indicator shall be achieved: (D)

ID	Priority Level	Service cover period	Time to respond (per fault)
10.1.2	Critical and Major	24 hours/day x 7 days/week x 365 days/year	**60 minutes**

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

c. The following service level indicator shall be achieved: (D)

ID	Priority Level	Service cover period	Time to respond (per fault)
10.1.3	Minor	Business hours (08:00 to 16:30pm, Monday to Friday)	**3 hours**

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[I] **LRU Expenses:** The proposed support agreement shall cover unlimited LRU repair for the life-cycle of the system. The support contract shall cover all LRU associated expenses, including, but not limited to, actual repairs, shipping, insurance, taxes, etc. The incurred expenses shall include sending the faulty LRUs to the factory and returning the repaired LRUs, to ATNS.

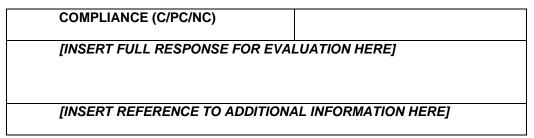| COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[J] **Turn Around Time (TAT):** The Contractor shall return the LRUs/equipment to ATNS within 60 days of receipt.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[K] **ICAO Compliancy:** The Contractor shall ensure that the complete system shall remain compliant with ICAO recommendations during its lifespan.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[L]   **<u>SYSTEM CURRENTNESS:</u>** The Contractor shall ensure that the entire system is always equipped with the latest firmware and software versions. Should the hardware be incompatible with the latest software/firmware, the cost of replacing the hardware shall be included in the maintenance contract.

COMPLIANCE (C/PC/NC)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[M]   **Obsolescence Management:** The Support agreement shall address obsolescence management.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[N]   **Resource Provision:** The Contractor shall make available, within 48 hours after ATNS request, a Technical resource to the specific ATNS site.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[O]   **Help Desk Services:** The tenderer shall provide ATNS with the Help Desk services to address technical assistance requests.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[P]   **System performance reports:** The support shall provide for the quarterly performance service review meeting.

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[Q]   **Penalties:** Should the Contractor not achieve the Service Level targets stated in paragraph 10h and TAT in 10j, ATNS shall impose penalties.

Service penalties will be determined by the Actual downtime (Tact) per incident and calculated as per formula below: -

Service penalty = (Tact)(hours)/ (Tmax)(hours) * (Priority factor*)*(10%* Contract value), up to a total maximum of the value of the Agreement per Agreement period where:

Tmax (hours) = corresponding maximum agreed SLA variables (time to respond/ TAT).

Actual Downtime (Tact) will only be affected if it was a direct result of the equipment failing within the equipment's specifications, this exclude external cause.

Priority factors for the type of failures is as per below

- *Priority factor of 1 for critical incidents

- *Priority factor of 0.5 for major incidents

- *Priority factor of 0.2 for minor incidents

- Priority factor for the TAT shall always be 0.5

COMPLIANCE (C/PC/NC)	*Responding (C/PC/NC) will not automatically be accepted as indicated.*
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

-- END OF VOLUME 4   --