

AIR TRAFFIC AND NAVIGATION SERVICES SOC. Ltd.



UAS FLIGHT INSPECTION

TECHNICAL TENDER SPECIFICATION (Volume 2, 3 & 4)

Revision 1.0

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ACRONYMS AND ABBREVIATIONS

2D	Two-Dimensional
3D	Three-Dimensional
ATC	Air Traffic Controller
ATCC	Air Traffic Control Centre
ATM	Air Traffic Management
CAMU	Central Airspace Management Unit
CARs	Civil Aviation Regulations
CATS	Civil Aviation Technical Standards
CNS	Communication, Navigation and Surveillance
DME	Distance Measuring Equipment
Doc	Document
GCMS	Ground Control and Monitoring Subsystem
GNSS	Global Navigation Satellite System
GUI	Graphical User Interface
HMI	Human Machine Interface
ICAO	International Civil Aviation Organisation
ILS	Instrument Landing System
km/h	Kilometres per hour
NOTAM	Notice to Airman
RF	Radio Frequency
RPS	Reference Position Subsystem
SACAA	South African Civil Aviation Authority
SAT	Site Acceptance Test
SIS	Signal-In-Space
UA	Unmanned Aircraft
UAS	Unmanned Aircraft Systems
UIS	UAS Inspection System
VHF	Very High Frequency
Vol	Volume
VOR	VHF Omnidirectional Range

1 INTRODUCTION

1.1 Background

Communication, Navigation and Surveillance (CNS) systems are required to meet certain performance criteria prior to their introduction into service/operations. The essence of the performance criteria is to ascertain their accuracy, availability, reliability, and integrity in relation to established standards. The performance of CNS systems is assessed in two ways: through ground inspections and airborne inspections. Airborne inspections are mostly conducted using manned aircraft, however, in some instances high masts are used to aid with some low altitude inspections.

The application of Unmanned Aircraft System (UAS) in multiple industries and businesses has increased the demand and operations for UAS. Even with this demand, there is minimal research on the use of UAS for the inspection of radio navigation aids. This could be attributed to the fact that many States could still be working on regulations and concepts for harmoniously and seamlessly accommodating and integrating UAS into their national airspace. Hence it was deemed necessary for ATNS to take advantage of this opportunity and invest in research focusing on the inspection of CNS systems using UAS.

1.2 Equipment Inspection

The International Civil Aviation Organisation (ICAO) requires that radio navigation aids available for use by aircraft engaged in international air navigation be subject to periodic inspections. These inspections are required to examine, among other things, the Signal-In-Space (SIS) as received at an aircraft after being influenced by external factors such as site conditions, ground conductivity, terrain irregularities, metallic structures, propagation effects, etc. This is crucial in determining whether an equipment complies with established standards and in confirming that the radiated SIS is safe for use by aircraft.

1.3 Response to this Document

The following general instructions shall be adhered to in the compiling of the tender documentation to be submitted. Not complying with any of these instructions may result in a Tender only being evaluated at the discretion of the Customer:

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

To assist Tenderers only, each paragraph or article has been classified as “M”, “D”, “O” or “I”, to indicate whether the requirement is mandatory, desirable, optional or for information only. Paragraphs that are mandatory will be clearly marked. Paragraphs that have made provision for a response are by default desirable. Any other paragraph can be taken to be for information only.

TENDERERS SHALL RESPOND IN FULL TO EACH ITEM IN THE FORMAT PROVIDED AND REFERENCES TO DOCUMENTS AND RELEVANT INFORMATION SUPPORTING THE RESPONSES SHALL BE INDICATED IN THE SPACE PROVIDED. THIS INFORMATION WILL BE THE ONLY RESPONSE USED FOR 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. Tenderers shall ensure that the response correctly addresses the requirement stated. Responses not addressing the requirement of the specific paragraph shall be interpreted as "Not Compliant".

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

- Noted: Noted and accepted (applicable to articles not containing requirements);
- C : Fully compliant (confirms compliance to the requirement/specification);
- PC : Partly compliant (solution of the vendor only partially meets the requirement/specification);
- NC : Not compliant (requirement/specification cannot be complied with without specific development efforts)

For paragraphs marked "PC" or "NC", Tenderer's shall 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.

If there is any uncertainty about the extent of compliance supplied, the specific response to the requirement shall be assumed to be "Not Compliant".

Tenderers shall submit proof of evidence for each item of compliance that is claimed.

Where necessary, the compliance detail shall state how the requirement is complied with.

Tenderers shall note that the compliance columns are the only place where compliance can be motivated and detail can be provided.

No other documentation other than that provided or referenced in the compliance columns shall be considered for the tender evaluation.

1.4 Scope of Work

The scope of work for the project includes the supply, delivery, commissioning, operation, and maintenance of a UAS flight inspection system that will be used for the inspection of Very High Frequency (VHF) Omnidirectional Range (VOR), Distance Measuring Equipment (DME) and Instrument Landing System (ILS) at identified sites.

The Tenderer acknowledges to undertake the complete scope of the project and ensure the successful delivery of the project.

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

ATNS at its sole discretion may require additional UAS inspection systems from the successful Bidder (contracted Supplier) upon successful delivery of the project. The Tenderer takes note of the above statement.

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

1.5 Document Structure

The document comprises of five (5) parts, namely:

- **Part 1:** Preliminary – operational concept and proposed system design overview.
- **Part 2:** Functional and Technical Specifications – the functional and technical requirements of the project and system.
- **Part 3:** Project Management Specifications – the project management requirements for the project.
- **Part 4:** Integrated Logistic Support Specifications – the logistic support requirements for the project.

PART 1: PRELIMINARY

2 OPERATIONAL CONCEPT

2.1 General

The UAS flight inspection system will have to follow all the necessary processes, procedures and protocols that have been put in place to ensure safety. As an example, it is assumed that regulations might not have been reformed during the implementation phase of the project and as such, this means that regulations as promulgated will still be binding to the project. All the necessary flight planning will have to be done appropriately and so is coordination of availability of the airspace intended for usage, with both the affected Air Traffic Control Centre (ATCC) and the Central Airspace Management Unit (CAMU). Furthermore, proper risk assessment will have to be conducted to ensure that safety is not comprised at any stage of the inspection process.

2.2 Inspection Process

For every equipment (VOR, DME, ILS), particular points of interest or flight pattern will be defined, as illustrated in Figure 1. These points serve as reference points for where measurements of the SIS for the equipment should ideally be verified. Once a flight pattern or all points of interests have been inspected, the inspecting Unmanned Aircraft (UA) can return to base and an analysis report should be generated based on the collected measurements. Should any unfavourable event (e.g. loss of communication) occur during the inspection process the appropriate risk mitigation as defined in the safety file shall be implemented.

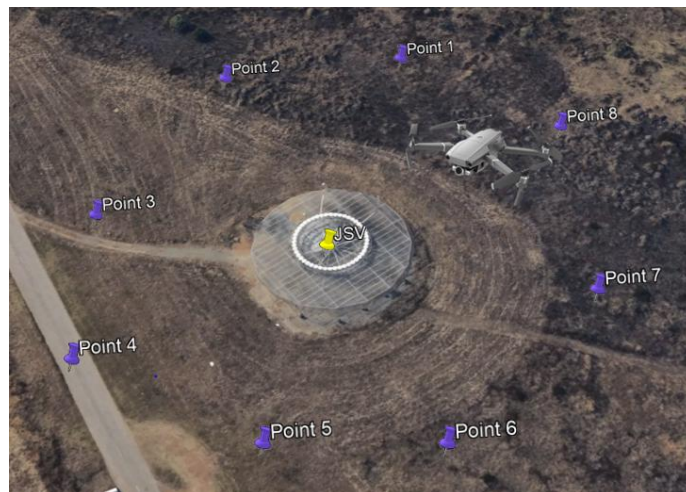


Figure 1: Equipment Points of Interest Example

3 PROPOSED SYSTEM DESIGN

3.1 System Users

The user classes for the UAS Inspection System (UIS) and their uses of the system are provided in the table below:

Table 1. User classes and Use

Class No.	User	Use
1	Administrators	Managing the system
2	Inspection Specialist	UA flight control and monitoring
3	Technician/Specialist/Engineer	Verification of compliance against regulations/standards
4	Remote Pilot	System operation and data analysis.

3.2 System Description

The decomposition of the system on a high-level is provided in Figure 2 below. The UIS processes Radio Frequency (RF) signals received from various CNS systems, through the RF sensors onboard the UA, to decode these signals and assess their alignment/compliance to defined standards. The assessment requires the presence of an alternative or secondary navigation system for comparison purposes. Furthermore, the system manages the flight of the UA and relays all necessary communication to the relevant recipients.

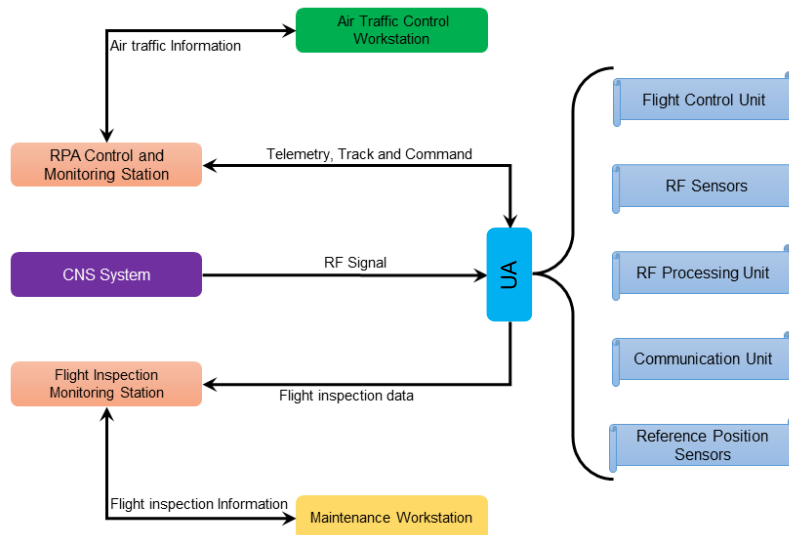


Figure 2: High Level System Block Diagram

PART 2: FUNCTIONAL AND TECHNICAL SPECIFICATIONS (VOLUME 2)

4 GENERAL REQUIREMENTS

4.1 Technical Capability

4.1.1 The Tenderer shall have experience with inspection of radio navigation aids using UAS. The Tenderer shall provide at least one reference letter as substantiation of their compliance with this requirement.

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

4.2 Environmental Conditions

4.2.1 The system shall be capable of being operated during the day and during the night. The Tenderer shall provide proof that the proposed system can be operated during the day and during the night without degrading in performance. Moreover, information on how night operations are managed shall be provided.

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

4.2.2 The system shall operate optimally within a Dry bulb temperature (DBT) range of 5°C to 40°C, inclusive. The Tenderer shall provide as part of the system specifications or supporting documents the operational temperature range for the system.

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

4.2.3 The system shall operate optimally and survive operational winds of 40 to 56 km/h. The Tenderer shall provide as part of the system specifications or supporting documents the typical operational and survival wind/s for the system.

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

4.2.4 The system shall operate normally under relative humidity ranges of 30% to 80%. The Tenderer shall provide as part of the system specifications or supporting documents the relative humidity ranges under which the system can operate.

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

4.2.5 The system shall operate in average rainfall of 4 mm to 5mm per hour. The Tenderer shall provide as part of the system specifications or supporting documents the average rainfall under which the system can operate. The Tenderer shall indicate the ingress protection (IP) rating for the UAS.

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

4.2.6 The system shall be protected against electromagnetic interference and susceptibility, especially those radiated in an airport environment where such interference may be elevated. The Tenderer shall indicate and elaborate on how the system is protected against electromagnetic interference and susceptibility.

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

4.3 Regulatory Compliance

4.3.1 The operation of the system shall comply with the latest requirements of Part 101 of the South African Civil Aviation Authority (SACAA) Civil Aviation Regulations (CARs) and Civil Aviation Technical Standards (CATS). The Tenderer acknowledges that the operation of the system shall comply with the latest requirements as stipulated in Part 101 of the SACAA CARs and CATS. The Tenderer shall state the RPAS operation (e.g., VLOS, BVLOS, R-EVLOS) for which the system and its operator are certified.

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

4.3.2 The system shall be capable of performing inspection of radio navigation aids as recommended in the latest version of ICAO Doc. 8071 Vol 1. The Tenderer acknowledges that the inspection of identified radio navigation aids will be performed as per the recommendations of the latest version ICAO Doc. 8071 Vol 1.

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

4.4 Software and Hardware

4.4.1 The system shall be supplied with all software, hardware and auxiliaries required for its proper operation and appropriate maintenance. The Tenderer shall provide the list as well as specifications of all hardware, software, and auxiliaries for the system.

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

4.4.2 All supplied software, hardware, data and auxiliaries as well as associated licenses shall be the property of ATNS. The Tenderer acknowledges that all hardware, software, data and auxiliaries provided as part of the project will be the property of ATNS.

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

4.4.3 The minimum life span of the overall system shall be at minimum equivalent to five (5) years. The Tenderer shall indicate the operational hours or life span of the system and parts thereof, and the required support and maintenance for the system to operate to the end of its life.

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

4.5 Inspection Service

4.5.1 The system shall have the capability to inspect the following systems:

- ILS
- VOR and Doppler VOR (DVOR)
- DME

The Tenderer shall provide a list of CNS systems, networks (e.g., DME-DME network) and airport lighting systems (e.g. precision approach path indicator lights), that the system is capable of inspecting.

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

4.5.2 The Tenderer shall provide an inspection service for two CAT I/CAT II ILS', one VOR/DVOR system and one DME system at King Phalo Airport (FAEL) and for two CAT I/CAT II ILS', one VOR/DVOR system and one DME system within the Gauteng province. The Tenderer acknowledges that they will provide inspection for a minimum of four CAT I/CAT II ILS', two VOR/DVOR systems and two DME systems as stated above. The Tender shall provide as part of the pricing schedule the cost of providing the inspection service for the identified systems and include the travelling cost for the specified locations.

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

4.5.3 All required tools and equipment to support the inspection exercise shall be made available. The Tenderer shall provide a list of all tools and equipment required for a successful inspection of the identified systems.

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

4.5.4 All operational procedures and processes required to support the inspection exercise shall be defined and communicated accordingly to relevant stakeholders. The Tenderer shall take the responsibility to draft and communicate accordingly all operational procedures and processes required to support the inspection exercise.

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

4.5.5 Multiple inspections shall be performed to ascertain the results obtained and where possible, these results should be compared against manned aircraft results for the same inspection exercise. The Tenderer acknowledges to perform multiple inspections on the identified systems to quantify the accuracy of the results obtained/observed.

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

4.5.6 The performance of the system during the inspection exercise, including all observed issues, risks and problems shall be recorded for future reference. The Tenderer acknowledges to keep a record of all issues, risks and problems encountered during the inspection exercise including all resolutions and mitigation plans that were implemented.

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

4.5.7 The outcome of the inspection exercise shall be recorded to establish the performance baseline of the equipment under inspection. The Tenderer takes the responsibility to ensure the appropriate recording of the equipment performance baseline upon conclusion of the inspection exercise.

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

4.5.8 There shall be minimal disruption of the equipment performance because of all other supporting tools and equipment used during the inspection exercise. The Tenderer acknowledges that there shall be minimal disruption of the equipment performance as a result of all other supporting tools and equipment used during the inspection exercise.

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

4.5.9 Potential sources of interference or disruption, other than the tools and equipment used for supporting the inspection exercise, shall be identified and where possible, measures shall be taken to mitigate the effect of the disruption. The Tenderer takes the responsibility to ensure that mitigations are put in place for any identified potential sources of interference.

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

4.5.10 The flight inspection shall be performed on both airport and off-airport (or remote) radio navigation aid facilities. The Tenderer shall indicate that the system can support both on-airport and off-airport operations.

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

4.5.11 The appropriate operational status of the radio navigation aid facility shall be set accordingly during the inspection exercise. The Tender acknowledges that the appropriate operational status of the radio navigation aid facility under inspection will be set accordingly.

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

4.5.12 Permits for personnel that have to be included in the inspection exercise shall be arranged in advance for sites located on airfields. The Tenderer acknowledges to provide all the necessary information required for obtaining access permits for all personnel that will be included in the inspection exercise.

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

4.5.13 Only authorised entities and qualified personnel shall be allowed to perform the inspection. The Tenderer acknowledges that they have the capacity, licensing, qualifications, and expertise to perform the inspection of radio navigation aids using UAS.

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

4.5.14 The estimated inspection time will be approximately 60 minutes (for VOR and DME) and 90 minutes (for ILS). The Tenderer shall acknowledge that the system shall support the estimated inspection time.

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

5 PRIMARY FUNCTIONAL REQUIREMENTS

5.1 Flight Planning

5.1.1 The system shall provide a means to plan a flight mission for the inspection e.g., defining waypoints, flight path etc. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.1.2 The system shall provide the option to modify a defined flight mission. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.1.3 The system shall provide the option to delete a defined flight mission. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.1.4 The system shall provide the option to save a defined flight mission for an extended period. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality. The Tenderer shall indicate the storage capacity available on the system for storage of data.

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

5.1.5 The system shall provide an option to either opt for an automated control operation of the UA or for a manual control operation of the UA. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.1.6 The system shall use the World Geodetic System 1984 (WGS84) reference system for all coordinates. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.2 Data Processing

5.2.1 The system shall have the capability to process data from all of the radio navigation systems stipulated under 4.5.1. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.2.2 The system shall process data from the Reference Position Subsystem (RPS). The Tenderer shall provide the specifications of the RPS for the system.

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

5.2.3 The system shall perform the analysis of the RF signal received from the radio navigation aid facility online during the inspection exercise. This is required for the whole inspection coverage. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.2.4 The system shall perform the analysis of the RF signal received from the radio navigation aid facility offline after the completion of the inspection exercise. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.2.5 The system shall manage and handle the UA flight, handle all communication and data measurements performed during flight concurrently without degrading in performance. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.2.6 The system shall make a comparison of the data received both from the RPS and the radio navigation aid facility under inspection for specified inspection points/zones to establish the compliance of the radio navigation facility to standards. The Tenderer shall provide the system specifications or operations manual or documentation highlighting this functionality.

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

5.3 Data Recording

5.3.1 The system shall record raw data received from the ILS, VOR, DVOR, DME, and RPS during flight. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.3.2 The system shall record data pertaining to system faults and errors for ease of auditing purposes. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.3.3 The system shall record data in a user readable format for ease of export onto other devices if required. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.3.4 The system shall provide storage, for recorded information, equivalent to at least three (3) months at a minimum. The Tenderer shall indicate the systems' available storage capacity for recordings and the Tenderer shall also indicate how long data can be recorded on the system.

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

5.3.5 The system shall protect recorded data to ensure that it is only accessible to authorised persons. The Tenderer shall indicate the mechanisms employed by the system to protect/restrict information/data access on the system.

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

5.3.6 The system shall provide the option to export recorded data, including generated reports, onto external storage mediums. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

5.4 Report Generation

5.4.1 The system shall generate, in a readable format like pdf, an inspection report once the inspection is completed based on the outcome of the analysis that was performed. The Tenderer shall indicate the supported formats for reports that are generated on the system.

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

5.4.2 The system shall also have the capability to generate system health reports on request based on the health status of the various components that the systems is monitoring. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6 SUB-SYSTEMS/MODULES

6.1 Primary Modules/Subsystems

6.1.1 The system shall incorporate a UA that meets the requirements at stipulated under 6.2. The Tenderer acknowledges that the system includes a UA.

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

6.1.2 The system shall make provision for a Ground Control and Monitoring Subsystem (GCMS) that meets the requirements as stipulated under 6.3. The Tenderer acknowledges that the system includes a GCMS.

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

6.1.3 The system shall make provision for a communication module that meets the requirements as stipulated under 6.4. The Tenderer acknowledges that the system includes a communication module.

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

6.1.4 The system shall make provision for a RF sensory module that meets the requirements as stipulated in 6.5. The Tenderer acknowledges that the system includes a RF sensory module.

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

6.1.5 The system shall include a Reference Position Subsystem (RPS) (preferably the Global Navigation Satellite System (GNSS)) that will be used for measurement comparison purposes and that meets the requirements as stipulated under 6.6. The Tenderer acknowledges that the system includes a RPS.

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

6.2 Unmanned Aircraft

UA as referred to hereunder is an aircraft intended to operate with no pilot on board.

6.2.1 The UA shall include a power unit that will enable it to complete a planned inspection and the required endurance as stipulated hereunder. The Tenderer shall provide power unit specifications or documentation of the UA.

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

6.2.2 The UA shall be manually operated through a ground control system supplied with the UA. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.3 The response time of the UA to the instructions of the GCMS shall not exceed one (1) second. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.4 The UA shall be operated automatically through programming or defining of the UA's flight path or mission before take-off. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.5 The UA shall be protected against overvoltage and undervoltage. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.6 The UA shall accept manual intervention even when operating in automatic mode. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.7 The endurance of the UA shall be at minimum three (3) hours to accommodate the time required to complete an inspection exercise. This should still hold true even with the inspection platform on board the UA. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.2.8 The UA with the necessary supplementary elements shall be capable of measuring the SIS of an ILS to a radius of approximately 25 nautical miles. The Tenderer shall indicate the maximum coverage range that the UA can accommodate and if this is less than the specified nautical miles, the Tenderer shall provide proposals on how this requirement will be achieved.

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

6.2.9 The maximum coverage range of a VOR is approximately 120 nautical miles. The Tenderer shall indicate the maximum coverage range that the UA can accommodate and if this is less than the specified nautical miles, the Tenderer shall provide proposals on how this requirement will be achieved.

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

6.2.10 The UA shall operate within the environmental conditions as defined herein 4.2. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

COMPLIANCE (C/PC/NC)	<i>Only responding C/PC/NC will not be accepted without proof.</i>	
[[INSERT FULL RESPONSE FOR EVALUATION HERE]]		

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

6.2.11 The UA shall be protected from dust ingress and water spray or light rain. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.2.12 The UA shall have the capability to detect and avoid obstacles (e.g., other aircraft, mountains, trees, birds, etc.). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.13 The UA shall maintain a steady flight while carrying the inspection payload. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.2.14 The UA shall incorporate fail-safe mechanisms (e.g., “return to base”) to ensure that the UA can safely land in case of some emergencies (e.g., low power, lost link etc.). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

COMPLIANCE (C/PC/NC)	<i>Only responding C/PC/NC will not be accepted without proof.</i>	
[INSERT FULL RESPONSE FOR EVALUATION HERE]		

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

6.2.15 The UA shall be fitted with all the necessary communication, navigation and surveillance equipment to enable their operation within controlled airspace. The Tenderer shall indicate the maximum operating ceiling for the UA and provide all the communication, navigation and surveillance equipment fitted to the UA or supporting elements to enable its detection, visibility, navigation and communication with other stakeholders or systems.

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

6.2.16 The UA shall be designed to carry the payload required for the inspection of the radio navigation facilities as stipulated under 4.5.1. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.2.17 The UA shall be designed with a landing platform to enable it to land safely. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.2.18 The UA shall have the capability to monitor its flight data (e.g., speed) and health data (e.g., component failure). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.19 The UA shall relay, at regular time intervals, its flight data and health data to the GCMS for monitoring purposes. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this functionality.

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

6.2.20 There shall be mechanisms in place to minimise the interference that the UA might have on the received RF signals. The Tenderer shall provide all the mechanisms that are employed to minimise the operation of the UA from interfering with the received RF signals.

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

6.2.21 The UA shall incorporate a means to prevent it from being hijacked and to also recover from a hijack. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3 Ground Control and Monitoring Subsystem (GCMS)

The GCMS is a combination of a portable control unit, monitoring station and all components necessary to enable a user to interact with the UA and other parts of the system either for control or monitoring purposes.

6.3.1 The GCMS shall monitor the operational status of the system. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3.2 The GCMS shall enable a user to send instructions to the UA's flight control unit to control its operation. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3.3 The GCMS shall generate alerts whenever an error or fault occurs for any monitored part of the system. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3.4 The GCMS shall generate both visual and audible alerts. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3.5 The GCMS shall flag alerts until they are acknowledged. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.3.6 The GCMS shall detect any conflicting instructions that might constitute a safety incident during the operation of the UA. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4 Communication Module

The communication module as referred hereunder comprises of the communication links, transmitter and receiver units that enable the system to communicate with other subsystems, systems, and stakeholders in the system ecosystem.

6.4.1 The communication module shall enable communication between the UA and GCMS. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.2 The communication module shall enable communication between the UA and the RPS. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.3 The communication module shall enable communication between the UA and the inspection station on the ground. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.4 The communication module shall enable communication between the Pilot and the Air Traffic Controller (ATC). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.5 The communication module shall relay both voice and data to relevant clients without compromising the integrity of the voice and data. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.6 The communication module shall incorporate a means to secure the transmission of information. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.4.7 The communication module shall introduce a minimal delay within the system. This delay shall not exceed one (1) second. The Tenderer shall indicate the maximum delay that can be introduced by the utilised communication medium for the system.

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

6.4.8 The communication module shall be designed such that it contributes minimal electrical noise or interference to the received RF signals. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5 Radio Frequency (RF) Sensory Module

The sensory module as referred hereunder is constituted of all the sensors/antennae and receiver/transmitter units required for the interaction of the system with an ILS, VOR and DME facility on the ground.

6.5.1 The RF sensory module shall enable the reception of a VOR signal. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.2 The RF sensory module shall enable the reception of a DME signal. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.3 The RF sensory module shall enable the transmission of a DME signal. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.4 The RF sensory module shall enable the reception of an ILS (both glide path and localiser) signal. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.5 The RF sensory module shall be mountable and dismountable onto the UA mounting platform. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.6 The RF sensory module shall survive the operational weather conditions as specified herein under 4.2.2 and **Error! Reference source not found.** The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.5.7 The RF sensory module shall have the capability to demodulate the received RF signal for processing purposes without adding significant noise or distorting the received RF signal. The Tenderer shall indicate any noise contribution that can be attributed to the RF sensory module.

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

6.6 Reference Position Subsystem (RPS)

The RPS is a high-fidelity positioning system, compared to the radio navigation systems defined herein, that provides position or navigation data that is referenced for the purposes of the inspection analysis.

6.6.1 The RPS shall relay reference position/navigation data to the system (or UA) for inclusion in the inspection analysis. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.6.2 The RPS shall include all the tools and equipment for enabling its operation and maintenance. The Tenderer shall list all tools and equipment intended to support the operation of the RPS.

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

6.6.3 The RPS shall have a higher position accuracy in comparison to that of a VOR, DME and ILS. The Tenderer shall indicate the position accuracy of the proposed RPS for the system.

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

6.6.4 The RPS shall be portable and easy to configure to alleviate the preparation of the inspection exercise/process. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

6.6.5 The RPS shall survive the operational weather conditions as specified herein under 4.2.2. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7 NON-FUNCTIONAL REQUIREMENTS

7.1 Security Requirements

7.1.1 The system shall provide a means to control access to the system or part thereof. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7.1.2 The system shall ensure that data is securely stored and made available to authorised persons. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7.1.3 The system shall be protected against harmful interference or attempts to take over the control of the system by external unauthorised parties to the system. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7.1.4 The system shall not interfere with the operation of other systems within the aerodrome environment, especially those critical for safe air traffic operations. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7.2 Safety Requirements

7.2.1 Preparations shall be made in advance to ensure that the inspection is performed safely and efficiently. The Tenderer shall a checklist that indicates the preparatory activities or items that needs to be checked or verified prior to the commencement of the inspection to ensure a safe operation.

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

7.2.2 Proper functioning of the radio navigation aid facility and associated subsystems shall be verified prior to the commencement of the inspection. The Tenderer takes the responsibility to confirm the proper functioning of the radio navigation aid facility prior to the commencement of any inspection.

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

7.2.3 The system shall be equipped with all the necessary components to enable it to perform a safe flight/operation. The Tenderer shall provide all the safety considerations necessary for supporting safe flight/operation.

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

7.2.4 Any adjustments or modifications to the radio navigation aid equipment deemed necessary shall be made either prior to the inspection or during the inspection of the equipment by a qualified/authorised person. The Tenderer acknowledges to accommodate adjustments to the settings of the radio navigation aid equipment either prior to the inspection or during the inspection by a qualified/authorised person.

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

7.2.5 Airspace users shall be notified of the inspection exercise as this exercise might temporarily disrupt the performance of the equipment under inspection. This should be done in the form of a Notice to Airman (NOTAM) and coordinated with ATCs or CAMU, where required. The Tenderer acknowledges to follow defined procedures for flight planning, UAS operation, radio navigation aid equipment inspection, handling of emergencies and aerodrome access.

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

7.2.6 The planned flight path or operational area of the system shall be disclosed in advance to CAMU. The Tenderer acknowledges to disclose their planned operation to CAMU.

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

7.2.7 The system Pilot shall communicate with the ATCs, monitoring the airspace where operations are taking place, pertaining to the UA operation when required. The Tenderer shall provide an elaboration of how communication between the Remote Pilot and an ATC will be managed.

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

7.2.8 All emergencies experienced during the inspection shall be appropriately recorded and communicated to relevant stakeholders (e.g., ATC). The Tenderer acknowledges to appropriately record and communicate to relevant stakeholders any emergencies that are experienced during the inspection.

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

7.2.9 An operational safety risk assessment shall be conducted to ensure that mitigation measures are considered and put in place for all risks associated with the operation of the system. Where possible, this shall be done in accordance with the guidance of the Safety and Regulations Specialist/Department. The Tenderer shall provide all identified potential risks associated with their operation in line with their safety file and based on the requirements stipulated herein.

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

7.2.10 All mitigation measures intended to prevent possible occurrence of safety incidences or accidents shall be implemented during the inspection exercise. The Tenderer shall provide the mitigation measures or plans for identified safety related risks for the UAS radio navigation aid equipment inspection operations.

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

7.3 Usability and Expandability

7.3.1 The system shall be portable and include a packaging unit/s for safe storage, ease of movement and protection against external damage (e.g., if dropped). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

7.3.2 The system shall incorporate a modular design to enable the isolation of components/modules and for ease of expansion in the future if required. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

COMPLIANCE (C/PC/NC)	<i>Only responding C/PC/NC will not be accepted without proof.</i>	
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[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

7.4 Environmental Sustainability Requirements

7.4.1 The system shall incorporate materials that are environmentally friendly (reducible, reusable, and recyclable). The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

COMPLIANCE (C/PC/NC)

Only responding C/PC/NC will not be accepted without proof.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

7.4.2 The system shall incorporate components that are energy efficient. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

COMPLIANCE (C/PC/NC)

Only responding C/PC/NC will not be accepted without proof.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

7.4.3 Waste generated during the execution of the project shall be disposed-off in accordance with ATNS' environmental sustainability guidelines/procedures. The Tenderer shall indicate how waste generated during the project will be properly disposed-off.

COMPLIANCE (C/PC/NC)

Only responding C/PC/NC will not be accepted without proof.

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

8 INTERFACE REQUIREMENTS

8.1 Human Machine Interface (HMI)

8.1.1 The HMI includes all controls, displays and accessories for enabling the interaction of the system with a user. The Tenderer shall provide a list of all parts of the system that make up the HMI.

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

8.1.2 The Tenderer shall include as part of the HMI list a First Person View (FPV) headsets as an optional item for supervisory purposes during system operation.

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

8.1.3 The HMI shall incorporate a Graphical User Interface (GUI). The Tenderer shall include as part of the tender the GUI for the system.

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

8.1.4 The HMI shall enable a user to make input into the system or interact with the system. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

8.1.5 The HMI shall not require any special skills for operation. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

8.1.6 The HMI shall provide feedback to the user based on their input. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

8.1.7 The HMI shall provide a display of the planned flight and operation of the UA in a two-dimensional (2D) or three-dimensional (3D) environment. The Tenderer shall indicate what dimensional view/s is utilised by the system.

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

8.1.8 The HMI shall display alerts, faults or any errors encountered by the system. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

8.1.9 The HMI shall display the analysis of inspected points/zones. The Tenderer shall provide the system specifications or operations manual or documentation highlighting/supporting this requirement.

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

8.2 Air Traffic Management (ATM) System Interface

8.2.1 All required communication, navigation and surveillance system required to interface the system with the ATM shall be provided as the system will be used for inspection in an aerodrome within controlled airspace. The Tenderer shall provide an elaboration of how the system could be integrated into the current ATM system as viewed from the ATCC to ensure that ATCs are able to monitor the UA in flight during the inspection operation.

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

8.3 Communication Interface

8.3.1 The system shall employ all necessary protocols and communication links units necessary to enable the system to exchange information with internal subsystems and external systems when required. The Tenderer shall indicate the communication protocols and communication links that will be utilised by the system for both internal and external communications.

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

PART 3: PROJECT MANAGEMENT SPECIFICATIONS (VOLUME 3)

9 PROJECT MANAGEMENT REQUIREMENTS

9.1 Project Management Plan

9.1.1 A comprehensive project management plan shall be developed for the project. The Tenderer shall provide with the tender a draft project management plan that will be reviewed with ATNS and used as a baseline upon review for the overall management of the project.

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

9.2 Schedule

9.2.1 A schedule, detailing all the activities and timelines for the successful completion of the project, shall be compiled and used as a baseline for tracking the implementation of the project. The Tenderer shall submit a draft schedule as proof of their understanding of the project scope of work.

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

9.3 Human Resources

9.3.1 The implementation of the project shall require skilled personnel. The Tenderer shall provide a list of all personnel, including their roles and responsibilities, that will be involved during the execution of the project.

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

9.3.2 All proposed personnel for the project shall have at minimum three (3) years of experience with UAS, inspection of radio navigation aids as well as with the use of UAS for inspection of radio navigation aids. The Tenderer shall provide evidence (including qualifications and curriculum vitae) to substantiate compliance with this requirement.

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

9.3.3 As some of these CNS systems will be in airport environments or national key points, the Tenderer acknowledges to adhere to the application and vetting processes required to offer access to these personnel.

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

9.4 Communications Management

9.4.1 The Tenderer shall provide a plan articulating how communications relating to the project will be managed/handled. The Tenderer shall provide a draft communication plan with the tender.

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

9.4.2 Formal and informal meetings shall be inevitable to keep all parties actively updated on the project progress. Biweekly formal meetings shall be held either at the Tenderer’s premises or ATNS’ premises or virtually to discuss the project status. The Tenderer shall include as part of the proposed communications management plan the frequency of meetings to be held.

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

9.4.3 The meeting agenda shall be made available to ATNS a week prior to a set meeting date and meeting minutes shall be noted and submitted to ATNS within a week after a meeting. The Tenderer shall include as part of the proposed communications management plan the period when a set meeting agenda will be available to ATNS and the period when meeting minutes will be submitted to ATNS.

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

Risk Management

9.4.4 A risk register, for recording all associated project risks, shall be kept as a work in progress document during the execution of the project. The Tenderer shall provide a draft risk register, as part of the tender, that stipulates all potential project risks that the Tenderer has identified based on the scope of work and requirements as set out within this document.

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

9.5 Quality Management

9.5.1 The Tenderer shall provide a proposed plan describing how quality control and assurance will be achieved for the project.

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

9.5.2 A Site Acceptance Test (SAT) and flight acceptance test shall be conducted to confirm the compliance of the supplied system and all its associated supplementary components to requirements. The Tenderer acknowledges to participate in the SAT and the flight acceptance test and develop any procedures necessary for conducting these tests.

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

PART 4: INTEGRATED LOGISTIC SUPPORT SPECIFICATIONS (VOLUME 4)

10 LOGISTIC SUPPORT REQUIREMENTS

10.1 Delivery

10.1.1 The system and supporting components shall be delivered at ATNS premises for configuration and subsequently for operation.

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

10.1.2 The Tenderer shall provide all instructions for packaging, handling, storage and transportation.

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

10.2 Spares

10.2.1 The Tenderer shall provide a complete set of spares for sustaining the operation and maintenance of the system until its end of life. The Tenderer shall provide a list of all spares for the system to sustain it until its end of life.

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

10.3 Warranty

10.3.1 A minimum warranty of one (1) year to account for any system defects, faults, errors or bugs shall be provided. The Tenderer shall indicate the warranty period for the system.

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

10.3.2 The contractor shall afford ATNS a period of at least 12 months, a period of beneficial use, for ATNS to evaluate that the system indeed meets the requirements as stipulated herein.

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

10.4 Training

10.4.1 Training shall be provided, at ATNS premises, to identified ATNS personnel. The Tenderer shall include as part of the tender the training plan detailing the training structure and outlining the training that will be provided as part of the project to assist ATNS employees in acquiring knowledge about the system.

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

10.5 Documentation

10.5.1 All documentation (including training manuals) that will assist in advancing the understanding and knowledge of the system shall be provided. The Tenderer shall provide a list of all documentation that will be provided as part of the project.

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

10.6 Support and Maintenance Contract

10.6.1 A support and maintenance contract shall be negotiated and provided upon successful negotiations. The Tenderer shall provide a draft support and maintenance contract for consideration and review by ATNS.

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

-----The End-----