

AIR TRAFFIC AND NAVIGATION SERVICES SOC LTD



REQUEST FOR INFORMATION

(REFERENCE NUMBER: ATNS/HO/RFI002-IRM/2021/22)

**BUDGETARY ESTIMATES FOR THE CAPITAL INITIATIVES
RELATING TO THE 2023/2024 PERMISSION APPLICATION**

NOVEMBER 2021

**REQUEST FOR INFORMATION FOR BUDGETARY ESTIMATES FOR THE
CAPITAL INITIATIVES RELATING TO THE 2023/2024 PERMISSION
APPLICATION**

RFP REFERENCE NUMBER:	ATNS/HO/RFI002-IRM/2021/22
CLOSING DATE:	03 December 2021
CLOSING TIME:	14h00, CAT (no late and or facsimile responses will be accepted)
VIRTUAL BRIEFING MEETING	N/A
DESCRIPTION:	ATNS/HO/RFI002-IRM/2021/22
DEPOSITED IN THE BID BOX SITUATED AT:	ATNS SOC Limited, Eastgate Office Park, Block C, South Boulevard Road, Bruma,2298
ONLINE SUBMISSION	Should a bidder require to submit their documents online, they must send an email to tenders@atns.co.za to express their interest to do so and will be sent a link to upload the documents electronically. On the email Bidders must specify on the subject line – the tender number and description.
PROCUREMENT SPECIALIST:	Busisiwe Molapisi
TELEPHONE:	(011) 607 1000/1325
E-MAIL:	BusisiweMo@atns.co.za

CAPACITY UNDER WHICH THIS BID IS SIGNED:

IMPORTANT NOTICE

The information contained herein, is given without any liability whatsoever to Air Traffic & Navigation Services Company Limited (ATNS) and no representation or warranty, express or implied, is made as to the accuracy, completeness or thoroughness of the content of this Request for Bid (RFB).

This RFB is for the confidential use of only those persons/companies who are participants of this RFB. Each recipient acknowledges that the contents of this RFB are confidential and agrees that it will not without the prior written consent of ATNS, reproduce, use or disclose such information in whole or in part, to any other party other than as required by law or other regulatory requirements.

The Bidder shall bear all costs incurred by him in connection with the preparation and submission of his Bid Response and for finalisation of the contract and the attachments thereof. ATNS will in no case be responsible for payment to the Bidder for these costs.

The Company reserves the right to reject any or all Bids, to undertake discussions with one or more Bidders, and to accept that Bid or modified Bid which in its sole judgment, will be most advantageous to the Company, price and other evaluation factors having been considered.

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The participants shall bear all costs incurred by him in connection with the preparation and submission of his information and supporting documents. ATNS will in no case be responsible for payment to the participants for these costs.

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1 INTRODUCTION

1.1 Company Background

The Air Traffic and Navigation Services (ATNS) Company of South Africa is the major provider of air traffic management, communication, surveillance, navigation and associated services (including training) within South Africa. ATNS manages 10% of the world's airspace.

Standing strong with over 1100 employees, ATNS strives to continuously provide safe airspace, orderly, expeditious and efficient management of Air Traffic Management services. The company operates at 21 aerodromes within the country, including OR Tambo, Cape Town and King Shaka International Airports.

In the rest of the African Continent, ATNS provides amongst others the Aeronautical Satellite Communication (VSAT) networks.

This service extends from Cape to Cairo interconnecting more than 33 states in Africa and Middle East. Other services include ATS and technical training, WGS 84 surveys, airspace design, AIP documentation, billing and consultancy services.

Vision

ATNS's Vision is to be the preferred supplier of air traffic management solutions and associated services to the African continent and selected international markets.

Mission

Our Mission is to provide safe, expeditious and efficient air traffic management solutions and associated services, whilst ensuring long-term economic, social and environmental sustainability.

- Our business is driven through our embedded Values, being:
- Accountability
- Safety and customer service
- Continuous improvement and innovation
- Employee engagement and development
- Fairness and consistency
- Open and effective communication

The Air Traffic and Navigation Service Company Limited (ATNS) is a State-Owned Company (SOC), established in 1993 in terms of the ATNS Company Act (Act 45 of 1993) to provide air traffic management solutions and associated services on behalf of the State. These services accord with International Civil Aviation Organisation (ICAO) standards and recommended practices, and the South African Civil Aviation Regulations and Technical Standards. As an air navigation services provider (ANSP), ATNS is governed by the nation's legislative and administrative framework.

ATNS is also a commercialized ANSP operating on the "user pays" principle that relies on current revenues and debt funding for its operational and capital expenditure requirements.

Our business offerings are divided into Regulated and non-regulated activities:

Regulated Business

At present 90% of ATNS's revenue is facilitated through its regulated business:

Air navigation services and infrastructure

The principal activities of ATNS's regulated business encompass the planning, operating and maintenance of safe and efficient air traffic management services in the airspace for which the State is responsible. Airspace infrastructure consists of the following main components:

- Communications, navigation and surveillance (CNS) infrastructure.
- Auxiliary aviation services, such as aeronautical information publications, flight procedure design and aeronautical surveys.
- Air traffic management.

ATNS's infrastructure development is informed by user expectations and regulatory requirements at a global level; as well as the needs of the air traffic management (ATM) community and new enabling technologies.

Air traffic service charges

As a monopoly service provider, ATNS is regulated economically by the Economic Regulating Committee (RC) that is a statutory body formed and appointed by the Shareholder, the Department of Transport (DoT). The RC is empowered by the ATNS Company Act (Act 45 of 1993) to issue permission to ATNS. The permission regulates the increase in specified tariffs that ATNS can issue and lays down minimum service standards requirements for the regulated business. ATNS is, through the permission, authorised to levy air traffic service charges on users (aircraft operators) for the use of air navigation infrastructure and/or the provision of an air traffic service. The permission has a five-year life span.

Training institution

ATNS runs a successful training institution as a division within the Company, namely: the Aviation Training Academy (ATA). The ATA provides a full range of air traffic services training, technical support training and related training to delegates in South Africa and the broader African continent in the disciplines of engineering, air traffic services and management. The ATA is an ISO9001:2000 accredited institution and has international cooperation agreements in place with partners, enabling the academy to maintain mutually beneficial partnerships in the presentation and accreditation of international courses in air traffic services (ATS). The ATA is a world-renowned academy, and in both 2012 and 2013 was formally recognized as the International Air Transport Association (IATA) Worldwide Top Regional Training Partner.

Non-Regulated Business

ATNS's non-regulated business currently contributes 10% of the Company's revenue. The non-regulated business encompasses a long-term strategy to facilitate regional expansion through a subsidiary vehicle presently known as "ATNS International". ATNS International will enable the Company to take a more robust and agile stance in the non-regulated business market without posing undue risks to its regulated market and Shareholder. It will also enable ATNS to enter into joint ventures and partnerships with

external suppliers so that the Company can harness more valuable market opportunities and extend its regional influence and reach.

Additional information is available on ATNS website – www.atns.co.za

1.2 Purpose of the RFI

ATNS invites Suppliers to provide budgetary estimates for the capital initiatives relating to the 2023/2024 permission application.

1.3 Special conditions

- This is an RFI for research purposes on the budgetary estimates for this project.
- This process will not lead to any award decision nor result in a shortlisting of suppliers.
- Suppliers are welcome to suggest more information to enhance the solutions.

1.4 Correctness

- While every effort has been made to provide comprehensive and accurate background information, requirements and specifications, service providers must form their own conclusions about the solutions needed to meet the requirements set out in this RFI.

1.5 Important Notes

- Please note that this enquiry is a Request for Information only and does not constitute a guarantee of business, or an agreement.
- This RFI is a stand-alone information gathering and market-testing exercise, intended only to inform and assist ATNS further decisions.
- ATNS reserves the right not to proceed with any further engagement on the requirements presented.

2 GENERAL INSTRUCTIONS AND ADMINISTRATIVE REQUIREMENTS

2.1 Correspondence during RFI Period

All correspondence shall be referenced as “**ATNS/HO/RFI002-IRM/2021/22** permission application” and may be sent by email to BusisiweMo@atns.co.za

2.2 Proposals

The submitted responses should include at minimum the following:

- A document that addresses the requirements set out below and other pertinent information
- The cost of the proposed solution

2.3 Submission of Proposals

All responses shall be delivered at the address stated in below. Proposals should be submitted at no later than 03th December 2021, in both hard and soft copy (CD or USB) and addressed as follows:

Project Description: RFI-2021/2024 PERMISSION APPLICATION

RFI Reference Number: **ATNS/HO/RFI002-IRM/2021/22**

Supplier Name/Company Name:

Attention: Busisiwe Molapisi

Tel: 082 875 5025

Email: BusisiweMo@atns.co.za

Printed and bound documents for the RFI, 1 (one) original document and 1 (one) electronic copy (Memory Stick) in **PDF format** are required (delivered at the reception). Failure to adhere to this instruction will result in your proposal being disqualified. No RFI forwarded by telegram, telex, facsimile, e-mail or similar medium will be considered.

Eastgate Office Park, Block C, South Boulevard Road, Bruma, South Africa. LATE RFI WILL REGRETTABLY, NOT BE ACCEPTED OR

Should a bidder require to submit their documents online, they must send an email to tenders@atns.co.za to express their interest to do so and will be sent a link to upload the documents electronically. On the email Bidders must specify on the subject line – the tender number and description.

3 BUDGETARY ESTIMATES SPECIFIC REQUIREMENTS

This Request for Information (RFI) document sets out the planned Capital investments foreseen for the next Permission Period that will be applicable from 2023/24 to 207/28. The identified investments are still being consulted through various forums within the ATM Community.

To facilitate a Constructive Engagement process with the Committee and ATM Community, ATNS endeavors to represent accurate information. For this reason, ATNS would like to invite OEM's, suppliers and local representatives to participate in this process by providing accurate budgetary estimates to inform the budgetary provisions associated with the potential Capital investments for the next period.

The list of potential Capital investments for the next period is not firm nor is it a commitment that they will be executed, as numerous processes still have to be finalized prior to inclusion into annual budgets.

3.1 General

ATNS has identified Capital Investments and need to ensure that the budgetary provisions are adequate and realistic. It is appreciated that the scope of these projects are still not finalized as the detailed design and specification processes will commence after the approval of the permission.

In responding to the list of identified initiatives, provide budgetary cost per equipment and per solution, foreign currencies, assumptions, dependencies, exclusions, etc. as required to guide ATNS in cost assumptions.

3.2 Identified initiatives:

The following table provides a list of the identified initiatives and a high-level description:

Project	Background /Project description	Scope of work
Recorder (voice) Replacement at Regional and Smaller Airports	<p>The voice recording and playback system records all the voice/noise in the tower control room and records all audio spoken to/from the ATC through any communication system (VCS, direct speech, Telephone, etc.). The system can retrieve archived files for incident/accident investigations or learning purposes. Currently, the recording system records the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> PABX; <input type="checkbox"/> PCUG; <input type="checkbox"/> radios (VHF); <input type="checkbox"/> PSTN lines; <input type="checkbox"/> VCS position; and <input type="checkbox"/> [Ambient audio (Microphone)]. <p>The system has a technical workstation that is used to configure, maintain and service the recording system. The playback function is that has the playback software installed on it.</p>	<p>The scope of the project is to supply, deliver, install, commission, and support a recording and playback systems at 13 airports and ATA. The scope further includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decommissioning and disposal of the old recording system. <input type="checkbox"/> Training of ATNS staff <input type="checkbox"/> Maintenance and support plan <p>The system shall recorder, PABX, PCUG, Radios, PTSN lines, VCS position and ambient audio. The system should support IP and Analogue inputs. The following voice recording channels are required per station: FAKM, FAKN and FAWB – 36 channels FAMM, FAPN, FAUP, FABE, FAUT, FAPM, FAGM, FAVG, FAPP and ATA – 16 channels</p> <p>The system shall be operational for a minimum of 10 years. The system shall include FAT and SAT. The system shall be delivered and installed in the above-mentioned stations. The system shall be integrated to the PABX, PCUG, Radios, PTSN lines, VCS position and ambient audio. The system requires a support and maintenance contract.</p>

	Technical team also have a software that allows them to access the recordings and recorder configuration remotely. carried out by a multipurpose computer (operational workstation) sitting in the tower room	
ATIS replacement for smaller airports	<p>The ATIS system provides terminal information to both departing and arriving aircraft in an aerodrome.</p> <p>The current ATIS installed in FAEL, FAPE, FAGG, and FABL, broadcasts voice messages that are less than 30 seconds long and updated every 30 minutes. The ATIS receives MET information, NOTAMS, etc. from various sources such as the AWOS. The system also allows ATC or ATSA to manually update information such as NOTAMS and runway status by merely entering parameter values in the graphic user interface (GUI) and the system automatically generates an ATIS format message. These ATIS messages are converted into voice messages via a speech synthesizer that generates voice messages from the text. This audio output is then fed to the VHF transmitter for broadcasting</p>	<p>The scope of the project is to supply, deliver, install, commission and support a new ATIS system at the four (4) airports. The scope further includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decommissioning and disposal of the old ATIS system. <input type="checkbox"/> Training of ATNS staff <input type="checkbox"/> Support and maintenance plan <p>The system should have a voice sythensiser that converts text ATIS messages to voice messages. Which then should be fed to the VHF transmitter for broadcasting. The system shall be integrated with the AWOS, VHF radios, AFTN/AMHS, DAID, PABX (for call in).</p> <p>The system shall be operational for a minimum of 10 years.</p> <p>The system shall include FAT and SAT.</p> <p>The system shall be delivered and installed at the four stations mentioned above.</p>

ATNS Building Equipage	<p>The indoor air monitoring system monitors the air within the building to ensure that the air is clean, free from potentially harmful chemicals and pollutants.</p> <p>Replacement of air conditioning filters with High Efficiency Particular Air (HEPA) filters to capture human-generate viral particles associated with Covid-19.</p> <p>Installation of UPS systems at ATA and HO.</p>	<p>The scope of the project is the supply, delivery, installation and commission of the indoor air monitoring system. Furthermore, the scope includes:</p> <ul style="list-style-type: none"><input type="checkbox"/> the support and maintenance of the system.<input type="checkbox"/> Replacement of air conditioning (a/c) filters with HEPA filters or similar.<input type="checkbox"/> Installation of UPS systems at HO and ATA<input type="checkbox"/> Delivery of a Pallet Jack machine<input type="checkbox"/> Delivery and installation of a water boiler. <p>Moreover, the scope includes the following.</p> <table><tr><th>Requirement</th><th>Quantity</th></tr><tr><td>40kVA Server UPS with battery pack</td><td>1</td></tr><tr><td>40kVA Study room UPS with battery pack</td><td>1</td></tr><tr><td>4kVA Rack UPS with battery pack</td><td>4</td></tr><tr><td>25L Hydro boiler</td><td>1</td></tr><tr><td>Pallet Jack</td><td>1</td></tr><tr><td>Classroom Speakers</td><td>32</td></tr><tr><td>Classroom Plasma screens</td><td>15</td></tr><tr><td>Classroom Smart boards</td><td>12</td></tr><tr><td>Auditorium Audio system</td><td>1</td></tr><tr><td>Voice Alarm System</td><td>1</td></tr></table>	Requirement	Quantity	40kVA Server UPS with battery pack	1	40kVA Study room UPS with battery pack	1	4kVA Rack UPS with battery pack	4	25L Hydro boiler	1	Pallet Jack	1	Classroom Speakers	32	Classroom Plasma screens	15	Classroom Smart boards	12	Auditorium Audio system	1	Voice Alarm System	1
Requirement	Quantity																							
40kVA Server UPS with battery pack	1																							
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Classroom Plasma screens	15																							
Classroom Smart boards	12																							
Auditorium Audio system	1																							
Voice Alarm System	1																							

		<p>The air monitoring system should be able to monitor the air in real time and provide this information. The system should be able to sensor the following pollutants: Carbon dioxide, carbon monoxide, organic chemicals, Ozone, and biological agents (bacteria and viruses).</p> <p>The HEPA filter should fit in the different a/c sizes such as 18 000, 24 000 BTUs.</p> <p>The air monitoring system will be installed in 22 air traffic service units. The buildings will need to be prepared for the installation of the sensors. The HEPA filter shall be installed in the currently installed a/c.</p>
FACT SSS Chiller Plant Replacement	<p>The two (2) air-cooled Chiller Plants (HVAC system) at FACT SSS building were installed in 2002 and have since reached end of design life, some components of the system have become obsolete, and the maintenance cost is increasing. The existing Chiller Plants utilizes refrigerants that are no longer compliant with OHAS regulation. These refrigerants require special handling and disposal by duly authorized contractors according to South African National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008).</p>	<p>The scope of the project is the supply, delivery, installation and commission of two (2) Chiller Plants (HVAC system) with building management system. Furthermore, the scope includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decommission and disposal of the old system as per the South African National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) <input type="checkbox"/> Required civil works <input type="checkbox"/> the support and maintenance of the system. <p>The system should be able to do at least the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cooling of electronic/I.T equipment <input type="checkbox"/> Temperature control for human operator <input type="checkbox"/> Humidity and temperature control <input type="checkbox"/> Ventilation of air <input type="checkbox"/> Minimum and maximum temperature control

		<p>The system shall be provided with building management system (BMS), including hardware and software. Software licenses for the BMS must be provided.</p> <p>Factory Acceptance Testing (FAT) is not required Site Acceptance Testing (SAT) is required.</p> <p>The system will be installed in the FACT (Cape Town International Airport) SSS building. The building will need to be prepared for the installation of the new Chiller Plants and transitioning from the old to the new system.</p> <p>The system shall be delivered to FACT control center.</p> <p>Civil works required for air ducting, piping, etc. Underground tanks not a requirement.</p> <p>The Chiller Plants system and BMS shall be installed.</p> <p>The system will require both maintenance and support.</p>
HF Replacement	<p>The current HF equipment at Isando and Bapsfontein was installed in 2009/2010 financial year with a design life of 15 years. This implied that the existing HF equipment is scheduled to be replaced in the 2024/2025 financial year. However, due to equipment obsolescence, the project needs to be expedited. The HF equipment consists of the HF transmitter and the HF Receiver/Exciter. The current equipment is no</p>	<p>The scope of the project is to supply, install and commission a turnkey HF system for use for communication between aircraft and air traffic controllers in the South Atlantic and Indian Ocean regions; and for search and rescue purposes. The project scope further includes, at least the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Environment Impact Assessments (EIAs) scoping; <input type="checkbox"/> Decommissioning and disposal of existing equipment; <input type="checkbox"/> Installation, testing and commissioning of all the HF equipment and auxiliaries;

	<p>longer be manufactured and no longer supported. Should any of the equipment or its components breakdown, it will lead to the extended downtime of the system while trying to source any refurbished components that can be used to repair the system. This may affect the availability of the system and Service Level Agreements (SLA) that ATNS has with its clients.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Interfacing the HF system to the Voice Communication and Control System (VCCS) <input type="checkbox"/> Civil works; <input type="checkbox"/> Backup power supply, e.g. Uninterruptable Power Supplies (UPS) and batteries; <input type="checkbox"/> Establishment of the communication link/network between sites; <input type="checkbox"/> Establishment of the communication link/network to maintenance the centre at FAOR; <input type="checkbox"/> Installation and set to work of Remote Control, Maintenance and Management System (RCMMS); and <input type="checkbox"/> Maintenance and support agreement for the lifespan of the HF equipment. <p>The maintenance position shall have full control and status monitoring functionalities over all the HF and associated equipment. It should be possible to tune any transmitter or receiver to another frequency, and fully configure the system from the Maintenance position.</p> <p>The HF system shall provide adequate voice communication in the oceanic region, i.e.:</p> <ul style="list-style-type: none"> <input type="checkbox"/> South Atlantic (SAT) region; <input type="checkbox"/> Indian Ocean (INO) region; and <input type="checkbox"/> Address the search and rescue requirements. <p>The ATCs should have the capability of selecting any transmitter or receiver and any frequency as pre-defined in the system via the Control Computer or VCS (voice control switch).</p>
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		<p>The HF system shall come with the SELCAL (selective calling) facilities or functionality to allow the ATC once he/she gets a call from an aircraft on a receiver to select the transmitter on his/her VCS and then select the frequency or channel. The ATC shall be able to activate the PTT function and talk on the microphone. The SELCAL function shall be activated by selecting the respective tones on the SELCAL unit as per the ICAO requirement as amended.</p> <p>Factory Acceptance Testing (FAT) is required Site Acceptance Testing (SAT) is required.</p> <p>The HF system will be installed at the Bapsfontein Receiver site and the Delmas Transmitter site. These sites are existing sites, but they will still require site preparation for installation, that will include transitioning from old to new system at Bapsfontein.</p> <p>The HF system equipment and its auxiliary components shall be delivered to sites where it will be installed, i.e., Bapsfontein, Delmas and FAOR control centre. Security of the equipment will be the supplier's responsibility.</p> <p>Civil works will be required</p> <p>A turn-key HF system will be installed as per the requirement and specification.</p> <p>All integration and commissioning activities will form part of the project to deliver a turn-key solution</p>
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		The system will require both maintenance and support for a period of 15-year life cycle.
FAOR Elevator Replacement	<p>There two FAOR Elevator systems were installed in the year 1987 and as a result some of the associated systems have become old and malfunctional.</p> <p>The requirement is to replace the two elevator systems and all associated auxiliaries.</p>	<p>-Supply:</p> <p>The scope of the project is to supply, install and commission two new Elevator's systems with all associated auxiliaries to allow for a complete system operation at FAOR, the scope further includes the decommissioning and disposal of old Elevator systems.</p> <p>Moreover, the scope should cater for the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Elevator communication and control system <input type="checkbox"/> Electrical system <input type="checkbox"/> Intercom system <p>- Design and specifications:</p> <p>The two Elevators Cars cover a height of 60m / 22 Floors.</p> <p>The Elevators doors open at the Ground Floor, First Floor and the 2nd Floor.</p> <p>The two elevator cars must be designed such that they may function independently, where only one car may respond to a call button. That is, when one Car is at the bottom the other must be at the top.</p> <p>The Elevator doors must open and close from both sided of the Car.</p> <p>The Elevator must be able to carry a weight of at least 1ton.</p> <p>The installation must be designed and constructed such that it adheres to requirements stipulated in the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> National Building Regulations <input type="checkbox"/> Occupational Health and Safety Act, Act 85 of 1993 <input type="checkbox"/> Lift, Escalator and Passenger Conveyor Regulations (LEPCR) within 5 years from the date of promulgation of Driven Machinery Regulations of 2015

		<p><input type="checkbox"/> SANS 1545-1:2016 Safety rules for the construction and installation of lifts Part 1: Electric lifts</p> <p>- FAT: FAT and SAT shall be carried out in line with the relevant regulation.</p> <p>- Site Preparations: <i>The Elevators will be replaced at the O.R Tambo International Airport ATNS Tower. As a result of the site location, provision shall be made for the personnel and vehicle permit access. The Transition process shall make provision for one Elevator to operate to allow continuation of operation.</i></p> <p>- Shipment, transportation, and delivery: <i>The Elevator systems shall be delivered and installed at FAOR ATNS Tower.</i></p> <p><i>The system shall be installed at the FAOR site.</i> The Elevator maintenance and support shall be provided.</p>
FAOR Elevator Retrofitting / Modernization	<p>There two FAOR Elevator systems were installed in the year 1987 and as a result some of the associated systems have become old and malfunctional.</p> <p>The requirement is to Retrofitting / Modernization the two elevator systems and all associated auxiliaries.</p>	<p>-Supply: The scope of the project is to Retrofitting / Modernization the Elevator's systems with all associated auxiliaries to allow for a complete system operation at FAOR. Moreover, the scope should cater for the refurbishment of the Elevator communication, control system, Electrical system and the Intercom system.</p> <p>- Design and specifications: The two Elevators Cars cover a height of 60m / 22 Floors. The Elevators doors open at the Ground Floor, First Floor and the 2nd Floor.</p>

		<p>The two elevator cars must be designed such that they may function independently, where only one car may respond to a call button. That is, when one Car is at the bottom the other must be at the top.</p> <p>The Elevator doors open and close from both sides of the Car.</p> <p>The Elevator carries a weight of 1ton.</p> <p>The Retrofitting / Modernization shall adhere to the requirements stipulated in the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> National Building Regulations <input type="checkbox"/> Occupational Health and Safety Act, Act 85 of 1993 <input type="checkbox"/> Lift, Escalator and Passenger Conveyor Regulations (LEPCR) within 5 years from the date of promulgation of Driven Machinery Regulations of 2015 <input type="checkbox"/> SANS 1545-1:2016 Safety rules for the construction and installation of lifts Part 1: Electric lifts <p>- FAT:</p> <p>SAT shall be carried out in line with the relevant regulation.</p> <p>- Site Preparations:</p> <p><i>The Elevators will be refurbished at the O.R Tambo International Airport ATNS Tower.</i></p> <p><i>As a result of the site location, provision shall be made for the personnel and vehicle permit access.</i></p> <p><i>The Transition process shall make provision for one Elevator to operate to allow continuation of operation.</i></p> <p>- Shipment, transportation, and delivery:</p> <p><i>The works shall take place at FAOR ATNS Tower.</i></p>
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		<p>- Installation:</p> <p><i>The system shall be installed at the FAOR site.</i></p>
Electrical and Mechanical Equipment FALE	<p>The current FALE tower UPS system employs two UPS and battery bank systems connected in parallel for redundancy. The UPS system is connected to a generator and reside in room dedicated to the UPS system. The UPS system was installed in the 2009/2010 financial year and is planned for replacement in the 2024/2025 financial year. The current batteries reach their replacement cycle in 2027/2028 financial year. The replacement for the existing FALE tower building UPS system and batteries is required to be used as backup power supply in the event of mains power outages, and thereby ensure continuation of operations without interruptions at FALE Air Traffic Service Unit (ATSU).</p>	<p>The scope of the project is to replace the existing uninterrupted power supply (UPS) system and batteries at the King Shaka international airport (FALE). The existing batteries will be removed from the UPS room will be disposed of. Furthermore, the scope shall include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Commissioning of the new equipment; <input type="checkbox"/> The decommissioning of existing equipment; <input type="checkbox"/> Disposal of the existing UPS equipment; <input type="checkbox"/> Disposal of 8-year life batteries with 4 year remaining life; <input type="checkbox"/> Training; and <input type="checkbox"/> Maintenance and Support <p>A 100 kVA UPS system and battery bank providing a 6 hour runtime backup power supply at we tested at 20kVA loading is required to replace the existing system.</p> <p>The system shall be operation for a minimum of 10 years.</p> <p>The project shall include SAT.</p> <p>All installations should be fitted in the current UPS room.</p> <p>The system shall provide redundancy.</p> <p>The system shall be integrated with the current generator, load and communication infrastructure for alerting technical support of any technical issues.</p> <p>The system will require maintenance and support.</p>
D-ATIS Replacement FAOR, FACT & FALE	<p>The Digital Air Traffic Information Service (DATIS) system is a digital recording and playback system which used by ATC for transmitting aeronautical information to aircraft entering the Terminal Control Area (TMA). All speech is generated</p>	<p>The scope of the project entails the replacement of the D-ATIS systems and supporting infrastructure at FAOR, FALE, FACT and ATA.</p> <p>The project will include, at least the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decommissioning and disposal of existing equipment;

	<p>synthetically. The system receives MET information, NOTAMS and Information on the runway in use and available approaches from various sources. Information such as runway in use, available approaches and NOTAMS is updated manually by an ATC or Air Traffic Service Assistant (ATSA) through a graphic user interface (GUI) at their positions and thereafter repeatedly replayed until the information is updated. The DATIS systems for FACT, FALE and FAOR enables the delivery of the ATIS information to the cockpit in text format through transmission of the ATIS information via datalink.</p> <p>All the ATIS systems are connected through a Wide Area Network. The FAOR ATIS will receive the text based ATIS reports generated by the other ATIS systems (FACT and FALE), for distribution to the datalink network. The ATA has a similar D-ATIS system for training purposes. The ATA system is capable of simulating data.</p> <p>The system has a technical workstation that is used to configure, maintain and service the recording system. The ATCs have in the tower</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Commissioning of the new hardware/software <input type="checkbox"/> Training of the technical personnel at all four stations and <input type="checkbox"/> The support and maintenance of installed systems. <p>The system should have a voice synthesizer that converts text ATIS messages to voice messages. Which then should be fed to the VHF transmitter for broadcasting. The system connects with the DAID, AWOS Server, NTP server, VHF Radio transmitters, Datalink, PABX (for calling in to receive ATIS messages).</p> <p>The system should be IP based.</p> <p>The system shall be redundant.</p> <p>The system should make use of virtual server/s.</p> <p>The ATA system shall have capability to simulate data for training purposes</p> <p>The following workstation and displays are required for FAOR, FACT and FALE:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Technical Support <input type="checkbox"/> ATC(x 2) and <input type="checkbox"/> MET data display <p>ATA system should have ATC client workstation.</p> <p>The system should a minimum design life of 10 years.</p> <p>The system shall include FAT and SAT.</p> <p>The system requires a support contract for the 10-year life.</p>
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	workstations and displays to monitor and update ATIS information.																							
Test Equipment	<p>Aviation Training Academy (ATA) recruits between six and twelve engineering students annually with the purpose of assisting them to attain their academic qualifications. ATA also provides Air Traffic Safety Electronics Personnel (ATSEP) training to impart knowledge and skills to the technical personnel operating and maintaining air traffic management (ATM) terrestrial Communication, Navigation and Communications (CNS) systems used in aviation. The ATA requires the test equipment to complement and enhance the quality of training provided to ATSEPs and new university engineering recruits.</p> <p>Test equipment is required by the Technical Services staff to enable them to perform the maintenance functions at the level as required by the South African Civil Aviation Authority (SACAA) and the Original Equipment Manufacturer (OEM). Critical safety parameters (e.g. frequency) for CNS systems need to be maintained within certain tolerances, in</p>	<p>The scope of the programme is the acquisition, supply and delivery of test equipment for all ATNS stations, namely, FAOR, FABL, FAUP, FAEL, FALE, FAPE, FAGG, FACT, FALA, FAKM, FAPP, FAPM, FAVG, FAPN, FAMM, FABE, FAUT, FAKN, FAGM, FAWB and ATA. The programme scope further includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decommissioning of old test equipment and <input type="checkbox"/> Disposal of the old test equipment <p>The test equipment should have a minimum lifespan of 10 years.</p> <p>The following item should be provided for respective stations.</p> <table border="1"> <thead> <tr> <th>Station</th><th>Description</th><th>QTY</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td>TEST EQUIPMENT</td><td></td></tr> <tr> <td rowspan="6">ATA</td><td>Spectrum Analyser</td><td>1</td></tr> <tr> <td>UHF Peak Power Meter</td><td>1</td></tr> <tr> <td>Data Transmission Analyser with E1 tester</td><td>3</td></tr> <tr> <td>Audio Analyser</td><td>3</td></tr> <tr> <td>Directional Coupler</td><td>6</td></tr> <tr> <td>4 channel Digital Oscilloscope</td><td>1</td></tr> </tbody> </table>	Station	Description	QTY					TEST EQUIPMENT		ATA	Spectrum Analyser	1	UHF Peak Power Meter	1	Data Transmission Analyser with E1 tester	3	Audio Analyser	3	Directional Coupler	6	4 channel Digital Oscilloscope	1
Station	Description	QTY																						
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	Directional Coupler	6																						
	4 channel Digital Oscilloscope	1																						

	accordance with OEM's guidelines, and test equipment assist in verifying these parameters.			Earth Leakage Tester	1	
				Fibre line identifier	1	
				P-Series Power Meter with Wideband Power Sensor	1	
				Communications Test Set	1	
			FAGG	Signal Generator		
				Fibre Reflectometer	1	
				VHF Interference Finder	1	
				Spectrum Analyser	1	
			FAUP	Audio Analyser	1	
				Spectrum Analyser	1	
				Cable & Antenna Analyser	1	
				VOR Analyser	1	
				Scope Meter	1	
				Peak Power Meter	1	
			FACT	Cable and Antenna Analyser	1	
			FAPE	Spectrum Analyser	1	
				Power Meter	1	
				Oscilloscope	1	

				Frequency Meter	1	
			FABL	Communications Test Set	1	
				Audio Analyser	1	
				Scope Meter	1	
				Dummy load	1	
				Attenuator	2	
				AC Clamp	1	
			FAEL	Oscilloscope	1	
				Antenna Tester	1	
			FALE	Scope Meter	2	
				Protocol Analyser	1	
				LAN Tester	1	
				Frequency Counter	2	
				Portable Digital Wattmeter	3	
				Signal Generator	3	
				Communications Test Set	2	
				Navigation Systems Analyser	2	
			FAOR	Earth Ground Tester	2	
				Telephone Line Tester	1	

				Audio Analyser Set	1	
				Universal RF Coaxial Connectors 41 Item Kit	1	
				Cable and Antenna Tester (1-4500MHz)	1	
				Cable and Antenna Analyser (100 kHz to 8GHz)	2	
				Peak Power Meter	1	
				Spectrum Analyser	1	
				OTDR	1	
				Handheld Communications Test Set	1	
				Directional Power Sensor	1	
				Communications Test Set	1	
				Navigation Systems Analyser	2	
				Oil Cooled Dummy load	1	
				Site Master	1	

		<table><tr><td></td><td>Network/Lan Analyser with function</td><td>Cable with VOIP</td><td>1</td></tr></table> <p>The test equipment should come with a calibration certificate.</p> <p>The system shall be delivered to FAOR, FABL, FAUP, FAEL, FALE, FAPE, FAGG, FACT, and ATA.</p> <p>Calibration for the equipment will be required over 5 years.</p>		Network/Lan Analyser with function	Cable with VOIP	1
	Network/Lan Analyser with function	Cable with VOIP	1			
Computer Equipment	The associated CNS computer, that include status monitoring and maintenance systems have a shorter lifespan than associated Communication, Navigation and Surveillance (CNS) and ATM enabling display systems. The referred computer equipment is mostly associated with monitoring and analysis of CNS systems' performance and associated systems. Furthermore, new operational computer systems requirements associated with CNS infrastructure were identified. Hence, an intervention to replace the aged computer systems of the associated CNS and ATM enabling display systems computer equipment at the end of their design life is critical to ensure that air traffic service provision is maintained.	<p>The scope of the project is the acquisition, supply and delivery of computer equipment for , FAOR, FAEL, FACT, and ATA. The project scope further includes:</p> <ul style="list-style-type: none"><input type="checkbox"/> Decommissioning of old test equipment<input type="checkbox"/> Disposal of the old test equipment and<input type="checkbox"/> The commissioning of new test equipment				

		Station	Description	QTY	
		FAOR	Laptop PC ("i7 CPU, 16GB RAM, 500GB SSD, 1TB HDD for storage, DVD Optic Drive. USB, Ethernet Wireless Connectivity. Laptop for portable use between sites")	1	
			NSGIB (AWDS Weather Server) (CPU: minimum latest Intel Xeon processors Memory: minimum 64 Gb Hardware: minimum 3.4TB)	2	
		FACT	Laptop PC – RASS (HP Zbook 17 G6 or equivalent, 64 bit Windows 10, 32 Gb RAM	1	

			1 Tb SSD drive, Dedicated display adapter e.g. Nvidia Quadro RTX 4000)		<p>The test equipment should have a minimum lifespan of 5 years.</p> <p>The following item should be provided for respective stations.</p> <p>The system shall be delivered to FAOR, FAEL, FACT and ATA</p>
			Monitor – RASS (23 Inch LED)	1	
			Laptop PC - TopSky Grafata application	1	
			PC- OTN Monitoring (i7 CPU, 8GB ram, 500GB HDD)	1	
		FAEL	PC -OTN Monitoring (8g RAM, core i7, 250G HDD, dual ethernet ports)	1	
		ATA	PC - PAE Radios PC (MARC PC)	2	
			Monitor - PAE Radios PC (MARC PC)	2	
			PC – OTN Monitoring (8g RAM, core i7, 250G HDD, dual ethernet ports)	1	

Potgietersrus Site Refurbishment	<p>In 1999, ATNs commissioned the Potgietersrus Radar including the installation of the radar equipment container. The radar equipment was replaced in 2013 and several other equipment has since been installed in the same container that was installed in 1999. No refurbishments have taken place on any of the buildings located at this site.</p> <p>The working environment has an impact on the staff's morale which also has a direct impact on service provision. For a hazardous free and conducive working environment, appropriate facilities should be in place. In accordance with Government Regulation Gazette No. 26636 of 2004 a minimum requirement is the provision of facilities that are "maintained in a clean, hygienic, safe, whole and leak free condition", sanitation facilities as well as drinking water. Thus, the refurbishment of the site is essential for ATNS personnel to carry out their duties and it's one of the building blocks for a conducive working environment.</p> <p>ATNS has identified the need to refurbish the ATNS site during the new permission</p>	<p>[a] Replace/Refurbish the Equipment Container</p> <p>[b] Refurbish the Radar Tower</p> <ul style="list-style-type: none"> <input type="checkbox"/> An inspection is required by a consultant to evaluate the structural integrity of the tower, and thereafter any work with regards to maintaining the structural integrity is to be carried out in a phased approach <input type="checkbox"/> Phase 1 <input type="checkbox"/> Consultant to evaluate structural integrity of the Tower <p>[c] Phase 2:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Based on the report and recommendation of the consultant in [c] effect all repairs and refurbishments to the tower <input type="checkbox"/> Replace/Refurbish the Bathroom Facilities <input type="checkbox"/> WBS below <table border="1" data-bbox="1003 842 2031 1362"> <thead> <tr> <th colspan="3">OPTION A – REPLACEMENT of Container and bathroom Facilities</th></tr> <tr> <th>Description</th><th>Unit of measure</th><th>Quantity</th></tr> </thead> <tbody> <tr> <td colspan="3">Container Replacement</td></tr> <tr> <td>New (larger) Container</td><td>6m x 9m</td><td>1</td></tr> <tr> <td>Equipment Movement and Reinstallation (Thales, VSAT, UPS, VHF) <ul style="list-style-type: none"> Project management Technical staff to move and reinstall </td><td>No off</td><td></td></tr> </tbody> </table>	OPTION A – REPLACEMENT of Container and bathroom Facilities			Description	Unit of measure	Quantity	Container Replacement			New (larger) Container	6m x 9m	1	Equipment Movement and Reinstallation (Thales, VSAT, UPS, VHF) <ul style="list-style-type: none"> Project management Technical staff to move and reinstall 	No off	
OPTION A – REPLACEMENT of Container and bathroom Facilities																	
Description	Unit of measure	Quantity															
Container Replacement																	
New (larger) Container	6m x 9m	1															
Equipment Movement and Reinstallation (Thales, VSAT, UPS, VHF) <ul style="list-style-type: none"> Project management Technical staff to move and reinstall 	No off																

		Equipment Functional Tests - Thales	No off	
		Equipment functional Tests - VSAT	No off	
		Equipment functional Tests - Other	No off	
		Removal and Disposal of existing containers	No off	2
		Air conditioner reinstallation	No off	3
		New gutters installation	10.15m	1
		Rain protection(corrugated iron) installation	10,15m x 1m	1
		Bathroom Facilities		
		Removal and disposal of septic tank	No off	1
		Removal and disposal of bathroom furniture	No off	1
		New Septic Tank	No off	1
		New bathroom furniture (toilet, toilet seat and roll holder)	No off	1
		New bathroom door that seals (incl. frame)	No off	1
		Tile Bathroom	1,5m x 2m x3	/m ²
		Radar Tower - Phase 1		
		Consulting Services - evaluation of radar tower	hrs	40
		Consulting Services - report including recommendation of repairs/replacement	hrs	40

		Radar Tower - Phase 2		
		Repairs and replacement tasks as advised by Phase 1		
		SHIPMENT,TRANSPORTATION AND DELIVERY		
		Delivery Charges (Suppliers premises to Potgietersrus)		
		PRELIMINARY AND GENERAL		
		SHEQ Compliance		
		Project Manager		
		Project Engineering		
		Car Hire (Project Manager & Engineer)		
		Travelling _Flights (Project Manager & Engineer)		
		Accommodation & Meals (Project Manager & Engineer)		
		Installation		
		Civil Works		
		OPTION B -Refurbishment of Container and bathroom Facilities		
		Description	Unit of measure	Quantity
		Container Replacement		
		Replace and Seal Radar Equipment Container panels	4.82mx5.93 m	1

		Replace and Seal VSAT container panels	2.6mx2.2m	1
		Change roof pitch to 10° (radar equipment container)	To fit	1
		New gutters installation	10.15m	1
		Rain protection installation	10,15m x 1m	1
		Bathroom Facilities		
		Removal and disposal of septic tank	No off	1
		New Septic Tank	No off	1
		New bathroom door that seals (incl. frame)	No off	1
		Paint Bathroom (gloss enamel)	Litres	5
		Radar Tower- Phase 1		
		Consulting Services - evaluation of radar tower	Hrs	40
		Consulting Services - report including recommendation of repairs/replacement	hrs	40
		Radar Tower - Phase 2		
		Repairs and replacement tasks as advised by Phase 1		
		SHIPMENT,TRANSPORTATION AND DELIVERY		
		Delivery Charges (Suppliers premises to Potgietersrus)		

		PRELIMINARY AND GENERAL		
		SHEQ Compliance		
		Project Manager		
		Project Engineering		
		Car Hire (Project Manager & Engineer)		
		Travelling _Flights (Project Manager & Engineer)		
		Accommodation & Meals (Project Manager & Engineer)		
		Installation		
		Civil Works		
Enhancement of voice and data recorders at FAOR, FACT, FABL, FALA, FALE,		<p>The project scope is the enhancement of voice and data recording systems at the nine (9) identified stations to have both analogue and digital recording capabilities. The enhancement will require both software and hardware intervention. The following are the identified stations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> OR Tambo International (FAOR); <input type="checkbox"/> Cape Town International (FACT); <input type="checkbox"/> Bloemfontein (FABL); <input type="checkbox"/> Port Elizabeth (FAPE); <input type="checkbox"/> East London (FAEL); <input type="checkbox"/> George (FAGG); <input type="checkbox"/> Lanseria International (FALA); <input type="checkbox"/> King Shaka International (FALE) airports; and <input type="checkbox"/> Aviation Training Academy (ATA). 		

The system shall recorder, PABX, PCUG, Radios, PTSN lines, VCCS position and ambient audio.

The system shall have the following recording channels per stations.

Station	IP/Digital/ISDN channels	Video grabber
FAOR	256	-
FAOR SSS	64	-
FACT	192	-
FACT SSS	64	-
FABL	64	-
FALE	100	-
FALA	32	-
FAGG	32	-
FAPE	64	-
FAEL	32	-
ATA	8	8

Furthermore, the ATA system shall include a video grabber, this system shall record every activity that is happening in the selected screen.

		<p>The system shall be operational for a minimum of 10 years.</p> <p>The system shall include FAT and SAT.</p> <p>The system shall be delivered and installed at the four stations mentioned above.</p>															
<p>General: Electrical and Mechanical Systems (Diesel Generators, UPSs and HVACs) Project</p>	<p>The standby diesel generator system provides backup power to the Communication Navigation and Surveillance (CNS) systems during the main grid electrical failure or load shedding. The UPS ensures that there is continuous power supply to the CNS loads during the generator start up period, and further ensures that there is always quality power supplied to the load.</p> <p>The identified systems were installed within the 2000/2001 and 2001/2002 financial years and have since reached their end of design life. As a result, some of the components of these systems have become obsolete, the reliability is reduced, the maintenance has become expensive and burdensome to technical services.</p> <p>The areas identified for replacement include the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> OR. Tambo International Airport <input type="checkbox"/> Cape Town International Airport <input type="checkbox"/> Bram Fischer International Airport <input type="checkbox"/> Upington Airport 	<p>The scope of the project is to replace the Diesel generator systems, Uninterruptible Power Supply (UPS) systems and the Split unit air conditioner systems as listed on Table 1 below. The scope further includes the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The decommissioning and disposal of the current systems; <input type="checkbox"/> The Procurement, Supply, Delivery, and the Installation of new replacement systems with all associated system auxiliaries; <input type="checkbox"/> The commissioning of all newly installed systems; <input type="checkbox"/> The training of technical personnel; and <input type="checkbox"/> The support and maintenance of installed systems. <p>Table 1: List of equipment identified for replacement</p> <table border="1"> <thead> <tr> <th>Equipment</th><th>Description</th><th>Quantity</th></tr> </thead> <tbody> <tr> <td>Online Uninterruptible Power Supply (UPS)</td><td>03 kVA UPS supplied complete with back up batteries and all required auxiliaries.</td><td>10</td></tr> <tr> <td>Online UPS</td><td>20 kVA UPS supplied complete with back up batteries and all required auxiliaries.</td><td>5</td></tr> <tr> <td>Online UPS</td><td>40 kVA UPS supplied complete with back up batteries and all required accessories.</td><td>4</td></tr> <tr> <td>Online UPS</td><td>60 kVA UPS supplied complete with back up batteries and all required accessories.</td><td>6</td></tr> </tbody> </table>	Equipment	Description	Quantity	Online Uninterruptible Power Supply (UPS)	03 kVA UPS supplied complete with back up batteries and all required auxiliaries.	10	Online UPS	20 kVA UPS supplied complete with back up batteries and all required auxiliaries.	5	Online UPS	40 kVA UPS supplied complete with back up batteries and all required accessories.	4	Online UPS	60 kVA UPS supplied complete with back up batteries and all required accessories.	6
Equipment	Description	Quantity															
Online Uninterruptible Power Supply (UPS)	03 kVA UPS supplied complete with back up batteries and all required auxiliaries.	10															
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Online UPS	60 kVA UPS supplied complete with back up batteries and all required accessories.	6															

	<input type="checkbox"/> George Airport <input type="checkbox"/> Kimberly Airport <input type="checkbox"/> Kruger Mpumalanga International Airport <input type="checkbox"/> Lanseria International Airport <input type="checkbox"/> East London International Airport <input type="checkbox"/> King Shaka International Airport <input type="checkbox"/> Mafikeng Airport <input type="checkbox"/> Pilanesberg Airport <input type="checkbox"/> Port Elizabeth International Airport <input type="checkbox"/> Pietermaritzburg Airport <input type="checkbox"/> Virginia Airport		Online UPS	80 kVA UPS supplied complete with back up batteries and all required accessories.	10
			Emergency Standby Diesel Generator	400kVA Diesel Generator system Supplied with day-fuel tank, starting batteries, control panel and the source changeover breakers.	2
			Emergency Standby Diesel Generator	100kVA Diesel Generator system Supplied with day-fuel tank, starting batteries, control panel and the source changeover breakers.	2
			Emergency Standby Diesel Generator	125kVA Diesel Generator system Supplied with day-fuel tank, starting batteries, control panel and the source changeover breakers.	2
			Trailer-Mounted Diesel Generator System	125kVA Diesel Generator system Supplied complete with the container and trailer for ease of operation and towing	1
			Standby Diesel Generator System	22kVA Diesel Generator system Supplied with day-fuel tank, starting batteries, control panel and the source changeover breakers.	2
			Split unit Air conditioner System	Smart Inverter 18,000 BTU Heating & Cooling Split Air conditioner.	8
Security Enhancemen	The is requirements is for the enhancement of security at the identified seven Air Traffic Service	The scope of the project is to enhance the security systems as listed on Table 1 below. The scope further includes the following:			

<p>t Project (ATSUs and CNS Remote Sites)</p>	<p>Units (ATSUs) located at the Airports Company South Africa (ACSA) operated airports (King Shaka, Cape Town, Bram Fischer, George, East London, Port Elizabeth and Upington), and the nine non-ACSA operated Airport ATSUs (Lanseria, Wonderboom, Rand, Pilanesberg, Mafikeng, Polokwane, Kruger Mpumalanga, Pietermaritzburg, Virginia and Mthatha). The requirement also includes all the ATNS CNS remote sites.</p> <p>The security systems may consist of all or some of the controls outlined below:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Electronic access control system; <input type="checkbox"/> CCTV surveillance system; <input type="checkbox"/> Intercom system; <input type="checkbox"/> Burglar bars on all ground windows; <input type="checkbox"/> Security alarm systems; <input type="checkbox"/> Scanning facilities (metal detection);and <input type="checkbox"/> Securing of cat ladder and emergency doors. <input type="checkbox"/> Lighting enhancement and control. 	<ul style="list-style-type: none"> <input type="checkbox"/> The decommissioning and disposal of the current systems; <input type="checkbox"/> The Procurement, Supply, Delivery, and the Installation of new replacement systems with all associated system auxiliaries; <input type="checkbox"/> The commissioning of all newly installed systems; <input type="checkbox"/> The training of technical personnel; and <input type="checkbox"/> The support and maintenance of installed systems. <p>Table 1: List of equipment identified for replacement</p> <table border="1"> <thead> <tr> <th>Equipment</th><th>Description</th><th>Quantity</th></tr> </thead> <tbody> <tr> <td>Electronic access control system</td><td>The access control system shall be contactless i.e. face recognition system. The access control system shall make provision for a back-up system for redundancy i.e. access card – card reader <i>The quantities reflect the number of access points.</i></td><td>30</td></tr> <tr> <td>CCTV surveillance system</td><td>An Internet Protocol (IP) based CCTV surveillance system shall be installed complete with all the required auxiliaries to enable complete system functionality. <i>The quantities reflect the number of cameras</i></td><td>45</td></tr> <tr> <td>Intercom system</td><td>The intercom system shall be contactless and be suitable for a two-way voice</td><td>20</td></tr> </tbody> </table>	Equipment	Description	Quantity	Electronic access control system	The access control system shall be contactless i.e. face recognition system. The access control system shall make provision for a back-up system for redundancy i.e. access card – card reader <i>The quantities reflect the number of access points.</i>	30	CCTV surveillance system	An Internet Protocol (IP) based CCTV surveillance system shall be installed complete with all the required auxiliaries to enable complete system functionality. <i>The quantities reflect the number of cameras</i>	45	Intercom system	The intercom system shall be contactless and be suitable for a two-way voice	20
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Intercom system	The intercom system shall be contactless and be suitable for a two-way voice	20												

			communication system between the different apartments and the main entrance panel <i>The quantities reflect the number of points</i>	
		Intruder Detection Alarm System	An intruder alarm system shall be installed and enabled to alert the local security guards on-site, and armed response security personnel in case of a break-in. The quantities indicated the number of zones.	40
		Burglar bars on all ground doors	Standard door burglar bars shall be installed. <i>The quantities reflect the number of standard security doors.</i>	30
		Scanning facilities (metal detection)	Walkthrough metal detectors with body temperature scanning functionality	3
		Emergency door closures	Installation of door closure	60
		Lighting enhancement and control	Outdoor lighting with Motion detection.	30
VCS Replacement at the	The existing VCS equipment was installed during the 2013/2014 financial year at the identified Air Traffic Services Units as listed in the following table below. The existing VCS systems will reach	The scope of this project is to procure, supply, install and commission the new VCS system and decommission the old system that is reaching its end-of design life in the 2023/2024 financial year. Furthermore the system will be handed to Technical Services for maintenance throughout it's entire lifespan.		

identified airports:	<p>the end of its ten years design life span during the 2023/2024 financial year. The asset information is also shown in the company asset register as shown below. The VCS system is used for air traffic control applications and the system provides benefits of ensuring efficiency of service from the Air Traffic Controllers. The current VCS systems are located in the identified ATSU's control towers as shown in the table below. The system provides support to the following services:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ground- to- Air voice communications, or radio communications, between air traffic controllers and aircraft pilots. <input type="checkbox"/> Ground- to- Ground voice communications, or telephone communications between different traffic controllers located at different control centres. <table border="1" data-bbox="495 1046 940 1377"> <thead> <tr> <th>No .</th><th>AIRPORT NAME</th><th>CONTROL POSITIONS</th></tr> </thead> <tbody> <tr> <td>1)</td><td>Pietermaritzburg, (FAPM)</td><td>2</td></tr> <tr> <td>2)</td><td>Virginia, (FAVG)</td><td>2</td></tr> </tbody> </table>	No .	AIRPORT NAME	CONTROL POSITIONS	1)	Pietermaritzburg, (FAPM)	2	2)	Virginia, (FAVG)	2	
No .	AIRPORT NAME	CONTROL POSITIONS									
1)	Pietermaritzburg, (FAPM)	2									
2)	Virginia, (FAVG)	2									

	3)	Wonderboom, (FAWB)	3
	4)	Polokwane (FAPP)	2
	5)	Rand (FAGM)	2
	6)	Upington, (FAUP)	2
	7)	Kimberely (FAKM)	2
	8)	Pilansberg, (FAPN)	2
	9)	Mafikeng (FAMM)	2
	10)	Kruger Mpumalanga (FAKN)	3
	11)	Umtata (FAUT)	2
	12)	Bisho (FABE)	2
	13)	Aviation Training Academy (ATA)	1

<p>Tower Consoles Replacement at the identified airports. FALE approach consoles, FAPM Tower consoles, FAVG Tower consoles,</p>	<p>The existing Tower Consoles and Approach Consoles were installed during 2013/2014 financial year at the following identified Air Traffic Service Units (ATSU):</p> <ol style="list-style-type: none"> 1) Pietermaritzburg,(FAPM) 2) Virginia, (FAVG) 3) Polokwane (FAPP) 4) Pilansberg, (FAPN) 5) Mafikeng (FAMM) 6) Kruger Mpumalanga (FAKN) 7) Umtata (FAUT) 8) Bisho (FABE) 9) Port Elizabeth (FAPE) 10) Capetown (FACT) 11) Upington (FAUP) 12) Kimberley (FAKM) 13) Wonderboom (FAWB) 14) King Shaka (FALE) <p>The Tower Consoles and Approach Consoles will reach the end of ten years design life span during 2023/2024 financial year. The tower console is used for organising the equipment and display screens used by the Air Traffic Controllers. The tower console has benefits of ensuring comfort</p>	<p>The scope of this project is to procure, supply and install new Tower Consoles and Approach Consoles that are reaching end-of design life in 2023/2024.at the ifollowing identified airports:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Pietermaritzburg,(FAPM) <input type="checkbox"/> Virginia, (FAVG) <input type="checkbox"/> Polokwane (FAPP) <input type="checkbox"/> Pilansberg, (FAPN) <input type="checkbox"/> Mafikeng (FAMM) <input type="checkbox"/> Kruger Mpumalanga (FAKN) <input type="checkbox"/> Umtata (FAUT) <input type="checkbox"/> Bisho (FABE) <input type="checkbox"/> Port Elizabeth (FAPE) <input type="checkbox"/> Capetown (FACT) <input type="checkbox"/> Upington (FAUP) <input type="checkbox"/> Kimberley (FAKM) <input type="checkbox"/> Wonderboom (FAWB) <input type="checkbox"/> King Shaka (FALE) <p><i>NB:</i></p> <p><i>Bisho airport has been identified for the Remote Tower Service pilot project. The RTS project is currently in the feasibility phase until 2026/2027 and thereafter a decision will be taken by the business. This Tower Consoles replacement project will still include Bisho airport in the scope and the replacement will take place in 2023 to accommodate the breakage and cater for safety. Since the consoles have a lifespan of six to eight years, it is crucial to have them replaced while the decision is being made by the business for the full implementation of Remote Tower Service. The timelines will align for both projects.</i></p>
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	and ergonomics for the ATC's in the operating position.	
RADSIM Replacement	<p>The decommissioned RADSIM was installed and commissioned in around 1990 and underwent a hardware and software upgrade during 1999 to ensure Y2K compliance. Despite this upgrade it had already significantly exceeded its life-expectancy and planned operational utilisation of ±15 years but continued to form an integral part of the equipment that supported ATS training until late 2018. The equipment became completely obsolete and could no longer be utilised as a training system. Subsequently, the system broke down in December 2018, and it became impossible to restore to operations, therefore, the process to dispose the system was initiated early 2019.</p> <p>In the absence of the RADSIM, the ATA cannot continue to provide procedural Air Traffic Services (ATS) training to its internal clients.</p>	<p>ATNS Seeks Radar Simulator at the Aviation Training Academy to provide Air Traffic Services Training at the aviation academy.</p> <p>The identified scope of works for this project is the supply, delivery, installation, commissioning, maintenance and support of the RADAR SIMULATOR (RADSIM).</p>
Radar Replacement Program.	The radar replacement program is a program which consists of the replacement of 9 radars at ATNS (FALE, FABL, ATA, DeAar, FAPE, FAEL,	The scope of work for the RADAR Replacement Program is to decommission existing radar, supply of new acquired radar, installation, commissioning, maintenance and support.

	<p>Sutherland, FAKN, FAGG). The radars are made up of 5 PSR and SSR co-located and 4 pure SSR.</p> <ul style="list-style-type: none">❑ The FALE radar was installed in December 2010 and will reach end of design life in 2025. (co-located)❑ The FAEL radar was installed in July 2007 and will reach its end of design life in 2022. (co-located)❑ The FAPE radar was installed in November 2007 and will reach its end of design life in 2022. (co-located)❑ The FABL radar was installed in December 2008 and will reach its end of design life in 2023.❑ The DeAar radar was installed in December 2007 and will reach its end of design life in 2022.❑ The Sutherland Radar was installed in July 2006 and will reach its end of design life in 2021.❑ The FAGG Radar was installed in 2009 and will reach its end of design life in 2024. (co-located)❑ The FAKN Radar was installed in 2010 as part of the FIFA world cup	<p>Additionally, the scope for the FAKN and FAEL Radar Replacement is to move the current radar tower to a more secure location as its currently prone to vandalism now.</p> <p>Below is a table which gives an outline of the expected line items from the RFI. Please note that this list is not definitive and more items which may be deemed necessary to the project can still be added.</p> <table><tr><th>Action</th><th>Number of sites</th></tr><tr><td>PSR Equipment</td><td>4</td></tr><tr><td>SSR Equipment</td><td>9</td></tr><tr><td>Antenna Assembly</td><td>9</td></tr><tr><td>Radar Maintenance Display - IBIS</td><td>9</td></tr><tr><td>Remote Control Monitoring System - RCMS</td><td>9</td></tr><tr><td>Remote Field Monitor Beacon</td><td>9</td></tr><tr><td>Radomme Equipment</td><td>6</td></tr><tr><td>Miscalleanous & Common Equipment.</td><td>9</td></tr><tr><td>Factory Acceptance Testing</td><td>9</td></tr><tr><td>Shipment Transportation and Delivery</td><td>9</td></tr><tr><td>Installation</td><td>9</td></tr></table>	Action	Number of sites	PSR Equipment	4	SSR Equipment	9	Antenna Assembly	9	Radar Maintenance Display - IBIS	9	Remote Control Monitoring System - RCMS	9	Remote Field Monitor Beacon	9	Radomme Equipment	6	Miscalleanous & Common Equipment.	9	Factory Acceptance Testing	9	Shipment Transportation and Delivery	9	Installation	9
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	<p>preparations. The radar was taken from FAPE after reaching its end of life and then erected at FAKN.</p> <p>❑ The ATA disaster recovery Radar was installed in 2007 and will reach its end of design life 2022. (co-located)</p>	Civil Works	9	
		Integration & Commissioning	9	
		ILS Documentation	9	
		Preliminary and General	9	
		Other Costs	9	
		Project Management		

Upgrade of Voice and Data Recorders at FAOR, FACT, FABL, FAPE, FAEL, FAGG, FALE	The project aims to upgrade voice and data recorders from analogue to digital, the upgrade will include both hardware and software, furthermore licensing and staff training will be required.
VCCS Replacement at Pietermaritzburg, Virginia, Upington, Wonderboom, Pilansberg and ATA.	<p>The project scope is the replacement of existing Voice Communication System equipment that was installed in 2009/2010 financial year at the following smaller Air Traffic Services Units:</p> <ul style="list-style-type: none"> a. Pietermaritzburg, b. Virginia,

	<ul style="list-style-type: none"> c. Upington, d. Wonderboom, e. Pilansberg f. and ATA g. The system has now reached its end of life span of fifteen years and is due for replacement.
4Wire E&M to IP Communication model.	The project scope is the establishment of a communication model that will migrate the legacy 4Wire Ear & Mouth to IP communication network.
OTN Replacement – FAGG, FAPE, FALE and FAEL	<p>Complete replacement of OTN system at George (FAGG), Port Elizabeth (FAPE), FAEL, FALE:</p> <ul style="list-style-type: none"> a. FAGG = 6 OTN Nodes b. FAPE = 6 OTN Nodes c. FALE = 5 OTN Nodes d. FAEL = 4 OTN Nodes
Fibre Replacement - FABL, FAUP and FAKM	Full replacement of fiber optic cables at Bloemfontein (FABL), Upington (FAUP) and Kimberly (FAKM).
OTN Replacement - FAOR and FACT	<p>Complete replacement of OTN system at Johannesburg (FAOR) & Cape Town (FACT)</p> <ul style="list-style-type: none"> a. FAOR = 18 OTN Nodes b. FACT = 14 OTN Nodes

DATIS FOR (FAOR, FACT, FALE)	<p>DATIS system at Johannesburg (FAOR), Cape-town (FACT), and King-Shaka (FALE) international airports has reached its mid-life upgrade. The upgrade of this system will improve and enhance the services provided by ATNS to its customers. The project aims to upgrade DL360 Dual redundancy servers, Dell client and maintenance computers at all three sites.</p>
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Aircraft Emission Monitoring Tool	<p>Acquire an Aircraft Emission Reporting Tool or system to serve the following functions:</p> <ul style="list-style-type: none"> a. Measure the efficiency of published procedures with regards to implementation of Continuous Climb Operations and Continuous Descend Operations from upper airspace and terminal areas. b. Enable ATNS together with the aviation stakeholders to improve flight efficiency, capacity as well as to reduce the environmental impact in the terminal area. c. Automatically extract surveillance data from all surveillance systems to provide micro and macro flight efficiency analysis. <p>The scope of the project shall also address the following Key Performance Indicators (KPIs).</p> <ul style="list-style-type: none"> a. Percentage (%) of flights with CCO per terminal areas (TMAs) and overall b. Percentage (%) of flights with CDO per TMAs and overall c. Excess track miles for flights operating in the TMAs and overall d. Excess flight time for flights operating in the TMAs and overall e. Excess en-route track miles per city pair and overall f. Excess flight time per city per and overall g. Taxi holding times per airport (from entering taxiways to entering runway) and ATNS combined average using A-SMGCS data. h. Excess apron times per airport (from leaving the gate to entering the taxiways) and combined national averages using A-SMGCS data. i. Excess Fuel burn/ Fuel burn savings in kg per aircraft flown based on actual engine types of such flights
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	Excess CO2 emission / CO2 emission savings in kg per aircraft flown based on actual engine types of such flights
Time Synchronization	The project scope is the implement standard time synchronization systems at all airports at which ATNS provide air traffic control services (20 Airports). The scope further includes: decommissioning of current system at 6 airports and staff training,
Tower Console Replacement at Pilansberg, Mafikeng, Polokwane and Kruger Mpumalanga.	The project scope is the replacement of the ATC tower consoles at the following airports: <ul style="list-style-type: none"> a. Mafikeng, b. Pilansberg, c. Polokwane, d. Kruger Mpumalanga.
Procurement of 3D simulator hardware	The project aims at procuring hardware for ATNS ATA 3D simulator as follows: <ul style="list-style-type: none"> a. Large venue projectors (15m source cable, Short Throw lens, 4:3 ratio, 1280 x 1024 resolution) b. Workstations (Windows 7 64-bit professional, graphics card, c. 30" Monitors d. 15" touch screen monitors e. 24" Monitors f. ATC USB headsets g. ATC chairs h. Tower console
Air Traffic Control Mobile Tower	The scope of the project is to establish a mobile ATC Tower equipped with the necessary Air Traffic control systems in order to provide continuous safe Air Traffic services during ATC tower refurbishments and ATC tower replacements. The Tower will be transported to the

	aerodrome where it is needed and will be connected to the current infrastructure that is available in that aerodrome.
FALE Park homes	The scope of the project is to obtain three park homes to address space requirements at FALE. The park homes should be 10 x 5 m ² each, with electrical wiring, plugs, electrical lighting, cable trays, sufficient aircons, sufficient windows and 2 doors for each park home for safety purposes. The park homes must be raised at least 30 cm from the ground.
Radar Replacement Program	<p>The scope of the project is the replacement of the following RADARS</p> <p>SSR Sutherland</p> <p>SSR FAGG</p> <p>SSR FABL</p> <p>APPROACH RADAR ATA, FAPE AND FAPE</p> <p>SSR De Aar and KMIA (FAKN)</p> <p>The radars have now reached their end of life span of fifteen years and is due for replacement. The replacement entails supply, delivery, installation and commission.</p>

4 TERMS

Whilst ATNS have taken every reasonable step to ensure the accuracy of this brief, the Company accepts no liability in relation to the accuracy of any representation made. ATNS reserves the right to vary the scope and terms as described in this document although variation is not anticipated at this time.

All information in this document and associated responses is Confidential.
All designs and documentation will be the property of ATNS.

5 DISCLAIMER

The participant shall bear all costs incurred by him in connection with the preparation and submission of his response. ATNS will in no case be responsible for payment to the consultant for these costs.