AIR TRAFFIC AND NAVIGATION SERVICES CO. LTD

REPUBLIC OF SOUTH AFRICA

REQUEST FOR PROPOSALS:

ATNS/TPQ/RFP28/2025/2026/3D Aerodrome Simulator

3D AERODROME – TOWER SIMULATORS AND 3D DESKTOP (MINI) SIMULATORS PROJECT

The supply, delivery, commissioning, and support of a 3D aerodrome simulator and 3D mini simulators

VOLUME 2

TECHNICAL SPECIFICATION

JANUARY 2025

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1 Response to this document

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

To assist Bidders only, each paragraph or article has been appended throughout with the letters “(M)”, “(D)”, “(O)” or “(I)”, to indicate whether the requirement is **M**andatory, **D**esirable, **O**ptional or for **I**nformation only.

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

BIDDERS 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 THE EVALUATION AND ASSESSMENT**.

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

Bidders shall declare compliance to every paragraph of this document in the column labelled “Compliance” as follows:

C:	fully compliant	= 2 points
PC:	partly compliant	= 1 point
NC:	not compliant	= 0 points

For paragraphs marked “PC” or “NC”, Bidder’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.

2 Glossary

2.1 **Definitions**

The following are definitions of all words and expressions/ terms used in the specification document, for which reliance on a dictionary meaning will not be appropriate:

a) **Shall** expresses a characteristic which is to be present in the item, which is the subject of the specification, i.e. "shall" expresses a binding requirement.
b) **Should** expresses a target or goal to be pursued but not necessarily achieved.
c) **May** expresses permissive guidance.
d) **Will** expresses a declaration of intent on the part of a party, usually the sponsoring or acquiring organization. "Will" does not express a binding requirement. "Will" may also be used in cases where the simple future tense is required, for example, "The operating system will be supplied by the Company". Any statement that employs the term "will", if used in the specifications, should be present as a note to be clearly distinguishable from requirements.

3 Introduction

3.1 Scope of work

The scope of the project is to supply, install, test and commission a 3D Aerodrome Simulator (360° Simulator) for the ATA, and eleven (11) 3D Mini Simulators (180° simulator)- four (4) of which are for the ATA, six (6) are for Air Traffic Service Units (ATSUs), and one (1) for the ATA minibus. The sharing model used is outlined in Table **1**.

Table 1. List of Included Sites

Physical location of the 3D Mini Simulators		ATSUs Airspace to be accommodated	Physical Quantity	Airspace Models
New Installation				
1.	Lanseria Airport (FALA)	Kruger Airport (FAKN) Mahikeng Airport (FAMM) Polokwane Airport (FAPP) Pilanesberg Airport (FAPN) Grand Central Airport (FAGC) Wonderboom Airport (FAWB) Rand Airport (FAGM) FALA	1	8
Replacement				
2.	Cape Town International Airport (FACT)	George Airport (FAGG) FACT	1	2
3.	Chief Dawid Stuurman International Airport (FAPE)	King Phalo Airport (FAEL) Mthatha Airport (FAUT) FAPE	1	3
4.	Braam Fischer International Airport (FABL)	Kimberly Airport (FAKM) Upington International Airport (FAUP) FABL	1	3
5.	King Shaka International Airport (FALE)	Pietermaritzburg Airport (FAPM) Virginia Airport (FAVG) Richards Bay Airport (FARB) FALE	1	4
6.	St. Helena Airport (FHSH)	St. Helena	1	1
7.	Aviation Training Academy	All ATSUs and republic airspace (FARP) to train all students including international students/delegates.	4	23
8.	ATA minibus	FARP	1	1
	Total – physical simulators (airspace models)		**11**	**23**

*Note: The 3D Aerodrome Simulator is not included in the table above.

The project scope further includes:

[a] Design, supply, delivery, installation and commissioning of Air Traffic Control (ATC)/Student, Pseudo-pilots, Instructor and Programmer consoles/workstations.
[b] Supply of ATC chairs (as per the required positions).
[c] Supply, delivery, installation and commissioning of a container for FALA simulator (including civil and electrical works).
[d] Decommissioning and disposal of existing equipment in line with ATNS Waste Disposal policies and procedures.
[e] Interfacing of the relevant equipment and auxiliaries' systems.
[f] Backup power supply, e.g., Uninterruptable Power Supplies (UPS) and batteries.
[g] Training of maintenance personnel to maintain the simulators.
[h] Training of the air traffic controllers, instructors, Pseudo-pilots, ATSU OJTI, FAOR and FACT SSS staff to use the simulators.
[i] Training of the ATA instructional designers, Operational Training Specialists and identified ATSU OJTI team to develop training material.
[j] Civil and Electrical works where applicable; and
[k] Maintenance and support agreement for the lifespan of the simulator system.

3.2 **System Description**

The Aerodrome Simulator provides a three-dimensional (3D) view of an Aerodrome, which is a realistic presentation of the actual aerodrome, as well as the movement of aircraft and vehicles around the aerodrome.

The simulation provides a realistic presentation of aircraft and vehicle movements based on their actual performance in the real world.

Meteorological conditions are accurately modelled and presented on the visual presentation. Simulation of air to ground and ground to ground communications are realistically simulated as experienced in the real world.

The system can be broken down into the following architectural components:

[a] The presentation of a realistic presentation of the Aerodrome and all movements in the Aerodrome.
[b] The driving/flying/controlling of aircraft, vehicles, people and wildlife, which are performed from a pseudo-pilot position to simulate movement of objects in the Aerodrome.
[c] The actual controlling position of the Student Air Traffic Controller from where decisions can be made on the movements of aircraft and vehicles.
[d] The centralized database, so that all exercises and airfield layouts could be available on any of the Aerodrome simulators located in one area.
[e] The playback of exercises from assessments.

[f] Evaluation and testing of planned procedures before implementation.

[g] The simulation of voice communications to simulate all verbal communication.

3.3 **3D Aerodrome Simulators**

Figure 1 below shows the current 3D Aerodrome simulator layout.

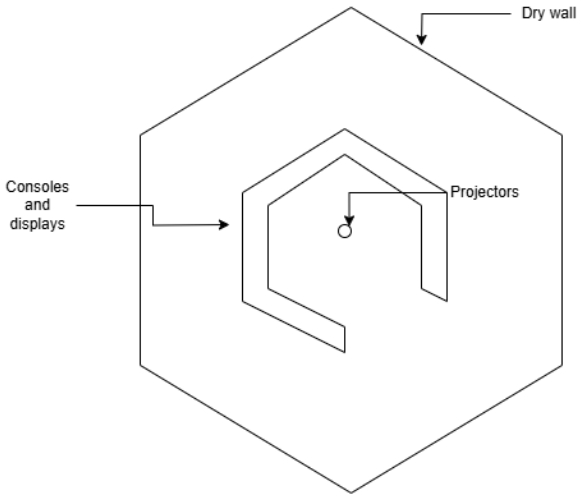

Figure 1: 3D aerodrome simulator

3D aerodrome simulator uses projectors to create a 360-degree image on a circular dry wall.

3.4 **3D Mini Simulator**

Figure 2 below shows the current 3D mini simulator layout.

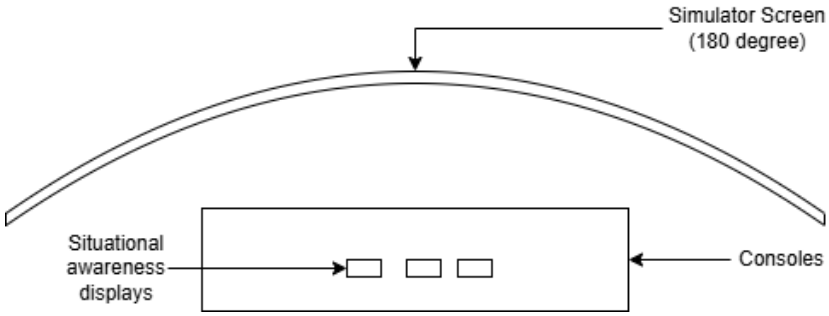

Figure 2: 3D mini simulator

The 3D mini simulator uses screens/monitors to create a 180-degree image.

4 GENERAL REQUIREMENTS

4.1 General

4.1.1 The project shall include the provision and installation of the following simulators:

[a] One (1) x 3D Aerodrome Simulator at the ATA.
[b] Four (4) x 3D Mini Simulators at the ATA.
[c] Six (6) x 3D Mini Simulators for ATSUs (one each at FALA, FACT, FAPE, FABL, FALE and St. Helena)
[d] One (1) x 3D aerodrome simulator at ATA minibus

The bidder shall describe their understanding of the scope of work and ensure that the provision is made for all the simulators in the price schedule. (I)

COMPLIANCE (C/PC/NC/Noted)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.2 The 3D Aerodrome Simulator shall have a 360° horizontal field of view. The bidder shall provide supporting information indicating the horizontal field of view of the proposed simulator. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.3 The 3D Aerodrome Simulator shall have four dedicated pseudo-pilot positions and six positions that can be configured as either student positions or instructor positions depending on the exercise. The configuration of these six positions may vary per exercise, allowing for a combination of students and instructors as needed *(i.e. on one exercise, the six positions can be split into four student positions and two instructor positions, while on the next exercise, the six positions can be split into three student*

positions and three instructor positions). The bidder shall explain how the proposed solution complies with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.4 Each of the 3D Mini Simulators shall have three pseudo-pilot positions, two instructor positions and one student position. The bidder shall provide a technical design for the 3D Mini Simulator which clearly indicates each position and respective position layout. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.5 FACT setup shall have two student positions to simulate management of Tower as well as Ground Movement Control, four pseudo-pilot positions and two instructor positions to ensure the simulation is as close to the real traffic scenarios. The two student positions should be able to interact with the horizontal field of view independently. The bidder shall explain how the proposed solution complies with the requirement and provide a technical design/ drawing for FACT which clearly depicts the positions and the respective position layout. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.6 The 3D Mini Simulator shall have at least 180° horizontal field of view using high-definition (HD) screens/ monitors. The bidder shall provide supporting information indicating the horizontal field of view of the proposed simulator. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.7 The functionality of the two simulators (3D aerodrome simulator and 3D mini simulator) shall be the same, with the only difference being the field of view. The term “system” in this document refers to both the simulator types. (I)

COMPLIANCE (C/PC/NC/Noted)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.8 The system shall comprise commercially off-the-shelf (COTS) hardware as far as possible. The bidder shall provide a list of COTS hardware deployed in the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.1.9 Modular design and construction shall be used to the maximum extent. All hardware modules shall be removable from the system without the requirement for any disassembly other than a simple disconnection of connectors or the release of locking

devices. The bidder shall provide technical designs for the simulator which indicates modular design and construction. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.2 **Operation Environmental Conditions**

4.2.1 The system and its supporting infrastructure shall operate under the environmental conditions specified in Table 2. Bidders shall provide system data sheets/ manufacturer information sheets indicating compliance with the requirements. The bidder shall also state any deviations from the requirements. (D)

Table 2: System Environmental Conditions

Ambient Temperature	0 °C to +40 °C
Relative Humidity	10% to 80% non-condensing
Temperature Variations	0 °C to 20 °C in 24-hour Period

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
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[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3 **Power Requirements**

4.3.1 The system and auxiliary infrastructure shall operate from 230V ± 10% at 50Hz ± 5% AC mains power supply. Bidders shall provide data sheets which indicate compliance with the power supply requirements. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.2 The system shall be protected against electrical surges. Suitable electrical protection devices shall be provided in accordance with SANS 10142-1. The bidder shall provide a datasheet or technical specifications for the proposed devices and specify the applicable international or national standard(s) to which the proposed protection device conforms. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.3 The system and its auxiliaries shall be grounded (earthing) to protect against lightning strikes and electrostatic discharge. The system shall be connected to the building earth bar. Suitable lightning protection devices shall be provided in accordance with SANS 10142-1. The bidder shall provide a datasheet or technical specifications for the proposed device and specify the applicable international or national standard(s) to which the proposed protection device conforms. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.4 The system shall have a dual power feed. Static switches shall be provided for equipment with only one (1) power input. The bidder shall provide datasheets/ drawing designs indicating compliance with the requirement for dual power feed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.5 The system shall be connected to the building's Uninterrupted Power Supply (UPS) that will provide backup power for the system in case the main power supply fails. The bidder shall provide a wiring diagram which shows the system connection to the UPS. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.6 The changeover from main power feed to standby should be seamless to ensure the equipment operations are not disturbed. Bidders shall explain how the requirement is met by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.3.7 The bidder shall confirm that an Electrical Compliance Certificate (COC) as issued by a certified electrical contractor shall be supplied for all electrical work performed

(including on consoles) after system installation. This includes all sites as well as the container installation at FALA. The bidder shall provide proof of eligibility to provide an Electrical Compliance Certificate, in the form of a trade certificate. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.4 **Lifespan**

4.4.1 The system and supporting infrastructure shall be designed to operate within specifications under the stated environmental conditions in Table 2 for a minimum period of ten (10) years. Bidders shall explain how the requirement is met by the proposed system and indicate if the lifespan may be exceeded. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.4.2 The bidder shall specify all interventions required to maintain optimal system performance and lifespan, including maintenance, software, and hardware activities. The bidder shall confirm whether such interventions are required over the 10-year period and provide detailed descriptions in their response, and cost information in Volume 1C. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.5 **System Redundancy**

4.5.1 The system shall have redundant dual servers configured in hot standby to ensure service provision is not compromised and to guarantee maximum availability of the system. Bidders shall provide datasheets/ technical specifications for the proposed servers and a connection diagram indicating the proposed configuration. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

4.6 **Auxiliary**

4.6.1 The project shall provide all necessary auxiliaries for the simulators to be commissioned and deemed fully operational. Bidders shall provide a list of all the auxiliaries provided with the simulator systems. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5 SIMULATOR SYSTEM TECHNICAL SPECIFICATIONS

5.1 General Simulator Functions

5.1.1 The system shall be used to train and assess air traffic controllers in aerodrome control before they can operate in the real environment. The bidder shall explain how the system has been deployed for the purpose of training and assessment of competence of air traffic controllers. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.2 The simulators shall have the capability to provide aerodrome (tower) control, ground movement control, clearance delivery and approach procedural control training. The bidder shall explain how each of the training requirements are met by the proposed system, supported by documentation in the form of technical information, manuals or brochures. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.3 The system shall be operated by:

[a] Student (Air Traffic Controller): for training purposes, issuing instructions to the pseudo-pilot.

[b] Instructor: initiating exercises and observing the operations of the air traffic controller.

[c] Pseudo-pilot: control the movement of the aircraft, people, wildlife and vehicles.

The bidder shall explain how the requirement is met by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.4 The system shall have a database of aircraft types, aerodromes, procedures, airfield layout and exercises. The bidder shall provide supporting documentation indicating all available databases for the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.5 The system shall provide a realistic presentation of the aerodrome. The bidder shall describe how this requirement is fulfilled by the proposed system, supported by images or screenshots illustrating the aerodrome presentation within the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.6 The system shall provide a realistic simulation of aircraft and vehicle movements in the aerodrome including the airspace and manoeuvring area. The bidder shall provide supporting documentation demonstrating compliance with this requirement. Illustrative images or screenshots shall be included. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.7 The system shall provide a simulation of Communication, Navigation and Surveillance (CNS) equipment in the control tower environment. The bidder shall provide a list of CNS equipment supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.8 The system shall provide a tool to develop new aerodromes. The bidder shall provide a detailed description of the tool, indicating all functions performed by the tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.9 The system shall provide a tool to develop new exercises, and playback exercises from assessments. The bidder shall provide a detailed description of the tool, indicating all functions performed by the tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.1.10 The system shall provide a tool to evaluate, and test planned procedures before implementation on the system. The bidder shall provide a description of the tool, indicating all functions performed by the tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.2 **Dictionary**

5.2.1 The system shall have a dictionary that includes all the shortcuts that can be performed on the system. The bidder shall explain how the requirement is fulfilled by the proposed system, and list examples of the shortcuts available on the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.2.2 The dictionary shall be easily accessible from any of the positions. The bidder shall explain how the dictionary is accessed on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3 **Simulated Environment**

5.3.1 The system shall have a database that consists of realistic 3D environment of all the identified aerodromes as stipulated in 4.1.1. 360° Panorama pictures of the aerodromes shall be used to create a realistic image of the environment. The bidder shall describe the proposed method that will be used to achieve the realistic images of the different aerodromes. The bidder shall be responsible for this process and indicate where ATNS personnel may be required. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.2 The simulated environment shall include the following static objects:

[a] Background scenes, including hills and urban development.
[b] Airside and landside buildings, airport facilities such as radar, VHF, VOR, ILS, SMR, MLAT sites, Windsock, etc.
[c] Placement of VHF direction finders (VDF) specific to each aerodrome.
[d] Runways, taxiways, apron areas, aircraft stands, airside access roads.
[e] Runway & taxiway markings and signages.

The bidder shall list all static objects supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.3 Background scenes shall be realistic, in colour, to scale and without distortion, represent topography, accurate modelling of all airfields and associated features and atmosphere. The bidder shall describe how this requirement will be met and provide visual examples of a simulated environment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.4 The simulated environment shall include airport markings for all 23 airspace models. The marking shall include the following at minimum:

[a] Control Zone (CTR)
[b] Terminal Manoeuvring Area (TMA)
[c] RNAV points
[d] Visual Flight Rules (VFR) points including geographic references (e.g., Dams, rivers, etc)
[e] Extended centreline, i.e. 1 nautical mile (NM) to 15NM
[f] A circle illustrating various radii extending from the aerodrome reference point, spaced at 2NM intervals from 2NM to 14NM.

The bidder shall list all airport markings which are supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.5 The user shall be able to add additional markings on the generated airspace models. The bidder shall describe how this functionality is implemented in the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.6 The simulated environment shall be in 3D. The bidder shall provide evidence in the form of images or screenshots demonstrating the 3D simulated environment as presented in the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.7 The system shall have the following dynamic objects:

[a] Aircrafts
[b] Ground vehicles
[c] Weather
[d] Runway & taxiway lights, approach lights, obstruction lights, stop bars and PAPIs.

The bidder shall provide a list of all dynamic objects supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.8 The system shall be capable of representing wildlife and foreign objects as dynamic objects within the simulation. The bidder shall provide a list of all dynamic objects supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.9 The system shall be capable of representing people as dynamic objects within the simulation. The bidder shall list all supported dynamic objects by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.10 The system shall be capable of representing obstructions as dynamic objects within the simulation. The bidder shall provide a list of all dynamic objects supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.11 Transition between day and night, as well as weather effects such as fog and rain shall be realistically represented and reflect typical South African weather conditions. The bidder shall explain in detail how the weather effects are implemented within the proposed system to meet this requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.12 Changes in weather conditions shall be visually represented in the background environment and depicted on the runway surface. At a minimum, the following effects shall be implemented:

[a] In the event of rainfall, the runway surface shall progressively display signs of dampness.

[b] During continued rainfall, localised areas of standing water shall be rendered on portions of the runway.

The bidder shall explain in detail how this requirement is met and provide evidence in the form of images or screenshots demonstrating the required effects as presented in the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.13 Following the adjustments outlined in 5.3.12, the performance characteristics of both aircraft and vehicles shall dynamically reflect the impact of these changes, demonstrating responsiveness to varying weather conditions. The bidder shall explain in detail how this requirement is met. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.14 The system shall enable programmers to include updates/changes to adapt to aerodrome changes or development around the aerodrome. Training in this regard shall be provided to programmers as part of the formal training programme. The bidder shall explain in detail how this requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.15 The simulated environment shall include all the procedures available at each aerodrome including Standard Instrument Departure (SID) procedures and Standard Terminal Arrival Routes (STAR). The bidder shall explain in detail how this requirement is met. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.16 The simulated environment shall include the visual and functional models of Communication, Navigation and Surveillance (CNS) systems; radars, Instrument Landing System, VHF Omnidirectional Ranging (VOR), Automatic Dependent Surveillance-Broadcast (ADS-B), Distance Measuring Equipment (DME), VHF radios around the airport and VHF Direction finders (VDF). The bidder shall list all supported CNS equipment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.17 The system shall display a generic aerodrome movement area having runways, circuit area, departure, and approach airspace up to 60 nautical miles from the airport. The bidder shall explain how the requirement is met and provide evidence in the form of images or screenshots demonstrating the generic aerodrome movement area as presented in the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.18 Simulation of aircraft and vehicles operating in the movement area and aircraft operating in the circuit and approach area shall have performance levels replicating realistic traffic movement (e.g., aircraft shall be impacted by the wind turbulence from thunderclouds, etc.). The bidder shall explain in detail how this requirement is achieved by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.19 The system shall have the capability for parallel and cross runway operations. The bidder shall explain in detail how this requirement is achieved by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.20 In a case where the flight plan is not generated as part of the exercise, the student shall be able to input aircraft information and the system shall have the capability to automatically generate aircraft flight plans, SSR codes, meteorological and aeronautical data as well as exercise scripts and reports. The bidder shall explain in detail how a student will be able to manually input aircraft information, and how automatic generation of the information required above is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.21 The system shall have the capability to automatically generate aircraft targets operating in accordance with standard airspace manoeuvres or pre-defined flight trajectories and populate the air situational display. The bidder shall explain in detail how this requirement is achieved by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.22 The generated targets/objects shall synchronise between all working positions (student, pseudo-pilot and instructor). The bidder shall explain in detail how synchronisation is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.23 The system shall have flexibility in the configuration of the airspace design, aircraft performance and exercise scenarios, to facilitate the precision teaching of ATC concepts. The bidder shall explain in detail how flexibility is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.24 The flexibility of the system shall still be based on realistic performance of the aircraft/vehicles. i.e. a commercial aircraft shall not fly at jet speed. The take-off and

landing speeds shall be realistic. The bidder shall explain in detail how this requirement is achieved by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.25 The system shall be capable of simulating aircraft conducting all essential flight and ground movement profiles applicable for a typical international airport. The bidder shall explain in detail how this requirement is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.3.26 It shall be possible to perform the following functions on the simulators:

[a] Generation/modification and management of aircraft tracks.
[b] Allocation and management of aircraft transponder codes during exercise development and while conducting exercises.
[c] Generation of operational information.
[d] Activation of training scenario “events” and scripts.
[e] Managing simulated airspace parameters (coverage, weather, day/night, wind speed and direction).
[f] Allocation and management of control jurisdiction over aircraft.
[g] Generation of system time.
[h] Operational configuration (default), of training positions and sub-systems.
[i] Allocating and managing functions and data flows.
[j] Processing of position inputs (manual or automatic).
[k] Support for scenario creation and exercise development.
[l] Recording and playback of all voice and display data at positions.

The bidder shall specify all supported functions from the list above and provide a description of their operational mechanisms. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4 **Databases**

5.4.1 The system shall have an aircraft database that consists of different aircraft types, and their performances. The bidder shall provide detailed information on the aircraft database within the proposed system including performance characteristics. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.2 The system aircraft database shall include a default plain white livery option for each aircraft. The bidder shall provide supporting documentation indicating the livery. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.3 The system aircraft database shall support the addition of new airline liveries. The bidder shall explain in detail how this requirement is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.4 The system shall have a vehicle database for generic vehicles used in the airport and their performances. Realistic vehicle colours as per the ATSUs specifications shall be available. The bidder shall provide detailed information on the vehicle database including performance characteristics and physical attributes. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.5 The system shall have a weather database where all types of weather can be selected. The bidder shall provide a comprehensive list of the default weather types available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.6 The system shall have accurate modelling of meteorological (weather) and diurnal lighting effects. The bidder shall explain in detail how this requirement is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.7 The weather database shall include the following with the ability to adjust intensity of each:

[a] Rain/precipitation
[b] Fog
[c] Wind speed
[d] Wind direction
[e] Humidity
[f] Dew point
[g] Clouds
[h] Atmospheric pressure
[i] Visibility
[j] Temperature

The bidder shall list all supported functions from the list above. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.8 The system shall have clouds adjustments. The bidder shall explain in detail the cloud adjustments which are available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.9 The system shall be able to simulate the behaviour of the stratus (stationary or slow moving, associated with drizzle, mist or fog) and cumulus clouds (drift with wind, grow or dissipate with thermal activity). The bidder shall explain in detail how cloud behaviour is simulated on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.10 The system shall allow the user to adjust the following characteristics of the clouds:

[a] Cloud base height
[b] Sky coverage (full or partial sky coverage)
[c] Density or opacity
[d] Horizontal spread
[e] Cloud movement
[f] Visibility reduction
[g] Turbulence or wind gusts (only for cumulus cloud)

The bidder shall identify all cloud characteristics that can be adjusted within the proposed system and specify any limitations associated with such adjustments. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.11 Weather characteristics shall have realistic impact or impressions on the aircraft movements and on the visibility of the aerodrome.

[a] The system shall simulate variations in aircraft speed resulting from wind effects across different phases of flight.

[b] The system shall simulate speed variations during the downwind leg due to prevailing wind conditions.

[c] The system shall simulate speed variations on final approach, including headwind and tailwind effects.

[d] The system shall simulate the influence of wind on the rotation point during take-off.

[e] The system shall simulate the effect of wind on the touchdown point during landing.

The bidder shall identify all functions from the list above that are supported by the proposed system and specify any functions that are excluded. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.4.12 The system shall have a database to store all the exercises developed for the different aerodromes. The bidder shall describe in detail how this requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5 **Exercise Creation**

5.5.1 The system shall be capable of being used as a basic and as an advanced training tool to provide ATCs with the knowledge and skills in aerodrome control, ground movement control, and approach control. The system shall not limit the programmers in terms of time or level of intensity the exercises should be. The bidder shall describe in detail how this requirement is met within the proposed system and identify any associated limitations. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.2 The system shall have a design tool to create new exercises, manage and edit existing exercises. The bidder shall describe in detail the functions that are available on the design tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.3 The design tool shall have an intuitive graphic user interface (GUI) to guide the instructor in creating, managing and editing exercises. The bidder shall describe in

detail the GUI presented on the proposed system and provide images or screenshots to support the response. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.4 The design tool shall allow the selection of a specific airport for the exercise. The bidder shall explain in detail how the requirement is achieved within the proposed system and list any limitations associated with the selection of airports. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.5 The design tool shall allow selection of weather based on time. The bidder shall explain in detail how the requirement is achieved within the proposed system and list any limitations associated with the selection of weather based on time. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.6 The design tool shall allow the user to define traffic for both arrivals and departures. The bidder shall explain in detail how the requirement is achieved on the proposed system and list any limitations associated with the definition of traffic for arrivals and departures. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.7 The system shall allow creation of flight plans. The bidder shall provide a detailed description of how flight plan creation is implemented and applied within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.8 The design tool shall enable the instructor to design exercises which describes:

[a] Aircraft

i. Aircraft type.
ii. Aircraft livery.
iii. Departure time.
iv. Estimated elapsed time.
v. Aerodrome of departure.
vi. Aerodrome of arrival.
vii. Select from published routes.
viii. Select routes based on published navigational waypoints.
ix. Select routes based on geographical locations.
x. Assign a designated route
xi. Cruising level.
xii. Point of descend.
xiii. Approach to be flown.
xiv. Parking bay.
xv. Pushback or turn out function, i.e., single aircraft pushback, tandem pushback and time allocated pushback.

The bidder shall identify all data fields from the list provided above, as well as any additional data fields not listed, that can be defined for aircraft within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] Vehicle

i. Type of vehicle.
ii. Select route.
iii. Point of departure.
iv. Point of arrival.

The bidder shall identify all data fields from the list provided above, as well as any additional data fields not listed, that can be defined for vehicles within the proposed system. . (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] Weather

i. Select time of day.
ii. Select season.
iii. Select visibility.
iv. Select rain, fog, or thunderstorm.
v. Select and set cloud type, cover and height.
vi. Select wind speed and direction.
vii. Select between increase/decrease visibility distance, cloud cover and height to automatically increase/decrease at a specified rate and/or time.

viii. Select change of wind speed and/or direction to automatically change at specified rate and/or time.

The bidder shall identify all data fields from the list provided above, as well as any additional data fields not listed, that can be defined for weather within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.9 The design tool shall allow the user to load aircraft database models (small, medium and large size aircrafts, UAVs, gliders) into the simulator and allow the user to make changes to different aircraft models if required. The bidder shall provide a detailed description of how this is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.10 The system shall be capable of simulating military jet aircraft shoot deployment and recovery. The bidder shall provide a detailed description of how this is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.11 The system shall be able to provide realistic Clearence Delivery (CLD) exercises. The bidder shall provide a detailed description of how this requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.12 The design tool shall have the capability to build traffic sequences. This shall include:

[a] Scheduling flights
[b] Time spacing between aircraft
[c] Set SID/STAR routes
[d] Assign runways
[e] Add taxi routes, holding points and expected departure queues

The bidder shall identify all data fields from the list provided above, as well as any additional data fields not listed, that can be defined for traffic sequencing within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.13 The design tool shall have the capability to define controller roles and assign positions. The bidder shall provide a detailed description of how this requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.14 The design tool shall allow instructors to setup runway closures, construction or private movements. The bidder shall provide a detailed description of how this requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.15 The system shall allow creation of condition-triggered scenarios (if, then statements). The bidder shall provide a detailed description of how the condition-triggered scenarios are applied within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.16 An option of having a system intelligence that will automatically control the vehicles and aircraft without pseudo-pilot intervention shall be provided. The bidder shall provide a detailed description of how the system intelligence is applied within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.17 The design tool shall be able to select which aircraft uses system intelligence and which uses pseudo-pilot, and the combination thereof. The bidder shall provide a detailed description of how the system intelligence is applied within the proposed system to achieve the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.18 The design tool shall have the capability for inserting live dynamic events during an exercise. The bidder shall provide a detailed description of how live dynamic events are handled within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.5.19 The dynamic events shall introduce the following at minimum:

[a] weather changes.
[b] inject abnormal events (go-arounds, equipment failure, other emergencies).
[c] Para jumping, paragliding and similar events.

The bidder shall identify all dynamic events from the list provided above, as well as any additional dynamic events not listed which are available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.6 **Exercise Management**

5.6.1 It shall be possible to monitor, prepare and amend exercises directly from the instructor or programmer workstation. The bidder shall provide a detailed description of how the monitoring, preparation and amendment of exercises is achieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.6.2 The user shall be able to record, save, store, and retrieve the exercise. The bidder shall provide a detailed description of how exercises are recorded, saved, stored and retrieved within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.6.3 The user shall be able to pause and resume the exercise at any time. The bidder shall provide a detailed description of how exercises are paused and resumed within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.6.4 The system shall have a recording function to record and playback a full exercise with audio. The bidder shall provide a detailed description of how exercises are recorded and played back (including audio) within the proposed system (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.6.5 The system shall be capable of simulating VDF exercises. The bidder shall provide a detailed description of how VDF exercises are simulated within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7 **Aircraft Simulation**

5.7.1 Generic aircraft models shall be available on the system. The bidder shall provide detailed information on the generic aircraft models which are available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.2 The aircraft models shall have realistic performances, including climb rates, taxi speed and turning radius. The bidder shall provide the aircraft performance data for the aircraft models available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.3 The landing and take-off speed shall align to the realistic aircraft type. The bidder shall indicate compliance with this requirement. The bidder shall provide the aircraft performance data for the aircraft models available within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.4 The system shall be capable of accurately simulating aircraft conducting the following operational scenarios:

[a] Holding patterns.
[b] Visual approaches.
[c] One aircraft following another nominated aircraft on a visual approach, wake turbulence shall be accounted for. Option to disable or amend the wake turbulence for certain exercises shall be available.
[d] Standard Instrument Departure (SID) procedures.
[e] Standard Terminal Arrival Routes (STAR).

[f] Airport circuit flying.
[g] Helicopter circuits on taxiways.
[h] Precision instrument approaches (ILS and GPS).
[i] Non-precision instrument approaches (e.g., VOR, DME, VDF, GPS).
[j] Pushback and/or turn out, depending on the airfield.
[k] Tandem pushback, i.e., two or more aircraft pushing back at the same time.
[l] Time allocated pushback.
[m] Taxi (and associated manoeuvres).
[n] Take-off and landing.
[o] Programmed missed approach and alternative instruction to change the missed approach shall be possible.
[p] Go around on command or automatically when there is an aircraft on the runway to avoid runway incursions.
[q] Towing of aircraft.
[r] Auto rotations.
[s] Aircraft emergencies, e.g., engine fire, instrument malfunction, request to land in a nearest airfield, etc.
[t] Airport/airfield emergencies, e.g., fire, birds in the vicinity of the runway or airfield, etc.
[u] Parking/docking.
[v] The go around and missed approach shall follow the specific aerodrome procedures.

The bidder shall identify all operational scenarios from the list provided above, as well as any additional operational scenarios not listed which are available within the proposed system. The response shall be accompanied by documentation (e.g. manuals, datasheets, test reports) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.5 The system shall recreate traffic scenarios. The following shall be provided at minimum

[a] Pre-programmed traffic that follows assigned paths, speeds and taxiways.
[b] Dynamic traffic that is controlled by the pseudo-pilots.
[c] Dynamic traffic that is simulated and controlled by the system intelligence.

[d] The combination of the pseudo-pilots-controlled traffic, the system-controlled traffic and pre-programmed traffic.

The bidder shall identify all traffic scenarios from the list provided above, as well as any additional traffic scenarios not listed which are available within the proposed system. The response shall be accompanied by documentation (e.g. manuals, datasheets, test reports) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.6 The system intelligence-controlled aircraft shall be able to interpret and follow ATC/student instructions. The bidder shall describe how the requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.7 The intelligence-controlled aircraft shall be able to make requests such as:

[a] Requesting pushback

[b] Reporting ready for departure

The bidder shall identify all requests available to intelligence-controlled aircraft from the list provided above, as well as any additional requests available to intelligence-controlled aircraft within the proposed system. The response shall be accompanied by documentation (e.g. manuals, datasheets, test reports) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.8 The system shall enable the pseudo-pilot to intervene in the operation of aircraft controlled by system intelligence when necessary. The bidder shall describe how the proposed system enables intervention in the operation of aircraft. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.7.9 The system shall monitor commands issued in line with the aircraft's performance scope. If a student issues any command that is outside of the aircraft's performance scope, such commands shall be recorded for learning and debriefing purposes. The bidder shall describe how the proposed system records such occurrences within the proposed system for debriefing purposes. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.8 **Air Traffic Control Simulation**

5.8.1 The system shall create an environment that simulates the exact operations of air traffic controlling. The following shall be possible:

[a] Ground control
[b] Tower control
[c] Clearance delivery

The bidder shall identify all sectors available on the proposed system from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.8.2 The system shall use the station-based procedures for air traffic control. The contractor shall integrate the stationed-based procedures on the simulated environment. The bidder shall describe how the station-based procedures for air traffic control are integrated on the simulated environment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9 **Feedback and Assessment Requirements**

5.9.1 The system shall provide a real-time monitoring tool for the instructor position which allows the instructor to observe every action taken by the student/ATC. The bidder shall provide detailed information on the functionality of the real-time monitoring tool and explain in detail how the real-time monitoring tool supports the requirement for observation of the student/ ATC. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.2 The monitoring tool shall allow logging of all the actions taken by the student. The bidder shall explain in detail how the logging of actions is performed by the monitoring tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.3 The monitoring tool shall assess and log of correctness of the actions taken by the student. The bidder shall explain in detail how correctness of actions is assessed and logged by the monitoring tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.4 The monitoring tool shall log all safety incidents (e.g., runway incursions, loss of separations). The bidder shall explain in detail how safety incidents are logged by the monitoring tool. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.5 The system shall have a post-exercise debriefing function for the student and pseudo-pilot. The bidder shall explain how post-exercise debriefing is facilitated on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.6 The debriefing function shall allow replaying of the exercise with audio and visual, including AI generated training reports with focus on specific training objectives. The bidder shall explain how replaying of exercises is facilitated on the system and confirm whether the generation and downloading of training reports is possible. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.9.7 The debriefing function shall allow the instructor to evaluate the timing, efficiency, phraseology usage and situational awareness of the student. The bidder shall explain how evaluation of timing, efficiency, phraseology and situational awareness can be facilitated using the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10 **The simulated systems**

5.10.1 The system shall have a voice control and communication system window

[a] The voice control and communication system shall be used to communicate between the pseudo-pilot, student and instructor.

[b] The voice control and communication system shall be programmable with the units' relevant radio frequencies, telephone numbers and inter-unit communication channels.

[c] The voice communication system shall allow headset to be used for communication and be activated through Push-to-talk (PTT) switch.

The bidder shall identify all functions available on the proposed voice control and communication system from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.2 The system shall have an air situational display window that will display the aircraft and vehicles movement for the student position. The bidder shall describe in detail the air situational display window that is presented on the system and provide images or screenshots to support the response. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.3 The system shall have a recording and playback system window

[a] The system shall have a recording function to record all the activities and exercises in the simulation.

[b] The system shall record the voice audio between the student, pseudo-pilot and instructor.

[c] The system shall record the student position display.
[d] The system shall record the simulator display unit (simulator screen).
[e] The system shall be able to playback all the recorded data.
[f] There shall be options to pause, stop, play, rewind and fast-forward the recording.
[g] The system shall allow annotations on the recorded data.

The bidder shall identify all functions available on the recording and playback system window from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.4 The system shall have a lighting panel window.

[a] An airfield lighting panel shall be included to control runway lights (e.g., switching on/off, lighting intensity)
[b] The lighting panel shall control the stop bar operation.
[c] The lighting panel shall be located at the student's position.

The bidder shall identify all functions available on the lighting panel window from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.5 The system shall have a weather window.

[a] The system shall have a weather display where all the weather information can be observed by the student.
[b] The weather window shall display the following weather parameters:

i. Current weather, which include wind direction in knots, outdoor air temperature in degrees Celsius, Dew point temperature
ii. Runway Visual Range (RVR),
iii. cloud base height above ground in meters, (specific clouds Cb-thunderclouds).
iv. barometric pressure (QNH),
v. Automatic Terminal Information Service (ATIS) current number, and
vi. an hourly Meteorological Aerodrome Report (METAR).

The bidder shall identify all functions available on the weather window from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.6 The system shall have a simulator control window (with pan, zoom, tilt functions)

[a] The simulator control window shall be used to control the simulator screen to pan left, right, top, down and zoom functions.
[b] The simulator control window shall be at the student's position.

The bidder shall identify all functions available on the simulator control window from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

5.10.7 The system shall have a Digital Airfield Information Display (DAID) window. The DAID shall provide the student with all the CNS equipment status around the aerodrome. The bidder shall confirm how the CNS equipment status is presented on the DAID

window, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6 POSITION REQUIREMENTS

6.1 Programmer Position

6.1.1 There shall be two programmer positions at the ATNS Aviation Training Academy. The programmer position shall be used for the development and management of exercises and aerodromes as described in Section 5. The bidder shall confirm that the programmer position is available on the proposed system for the development and management of exercises and all aerodromes. The bidder shall list all functions and features available on the position and clearly state any limitations associated with the requirements. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.2 There shall be two programmer positions at the FACT mini-3D, which shall be used for the development and management of exercises and aerodromes in the Southern region. The bidder shall confirm that the programmer position is available on the proposed system for the development and management of exercises and aerodromes in the Southern region. The bidder shall list all functions and features available on the position and clearly state any limitations associated with the requirements. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.3 The programmer position shall be able to modify the aerodrome dynamic and static objects described in section 5.3. The bidder shall explain in detail how modification of dynamic and static objects is facilitated on the system, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.4 The programmer position shall be able to manage all the aircraft and aerodrome model databases. The bidder shall explain in detail how management of aircraft and aerodrome model databases is facilitated on the system and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.5 The programmer position shall enable the user to create new exercises, edit and manage existing exercises. The bidder shall explain in detail how creation, editing and management of exercises is facilitated on the system and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.6 The programmer position shall enable the user to develop and manage aerodrome models including the environment around the airfield. The bidder shall explain in detail how development and management of aerodrome models and the environment is facilitated on the system and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.7 The programmer position shall have a screen where the created exercises and environments can be visualised and tested. The bidder shall provide detailed information in the form of technical specifications, manuals or datasheets for the proposed screen and ensure that provision is made in the pricing schedules. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.8 The programmer position shall allow previewing of exercises during development. The bidder shall explain how previewing of exercises is facilitated on the proposed system, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.9 The programmer position shall allow the manipulation of the exercise time (forward in time or backward in time) during preview as the exercise is being developed. There shall be pause/ play and fast forward and rewind buttons available on the preview screen. The bidder shall explain in detail how manipulation of exercise time is facilitated on the proposed system, supported by images or screenshots which demonstrate compliance with this requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.10 The programmer position shall enable the user to load the created exercises to the selected simulator remotely for testing purposes. The bidder shall explain in detail how exercises are loaded to the simulator for testing purposes, and clearly state any limitations associated with the requirements. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.11 From the programmer position, the user shall be able to load a new exercise to a remote simulator. (e.g., Load an exercise to a simulator at FABL while the programmer is at the ATA). The bidder shall explain how loading of exercises remotely is achieved by the proposed solution. The bidder must describe in detail how networking of the

simulators is proposed to achieve the requirement, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.1.12 The system shall have an option to allow pseudo-pilots to participate in exercises remotely from a different simulator i.e. a pseudo-pilot located at the Cape Town International Airport simulator can participate in an exercise being executed at the OR Tambo International Airport simulator. The bidder shall explain in detail how remote participation of pseudo-pilots is facilitated on the proposed system, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2 **Instructor Position**

6.2.1 The system shall have an instructor position that will be used by the instructor to train and evaluate students. The bidder shall confirm that the instructor position is available on the proposed system for instructors to train and evaluate students. The bidder shall list all functions and features available on the position and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.2 It shall be possible to monitor, prepare and amend exercises directly from the instructor position. The bidder shall explain in detail how monitoring, preparation and amendment of exercises is facilitated from the instructor position. The bidder shall clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.3 The instructor position will be used to startup the entire system (startup the simulator, student position/s and pseudo-pilot position/s). The bidder shall explain how startup of the positions is facilitated on the system, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.4 A situational awareness display is a visual interface that which provides operators a real-time, integrated picture of what is happening in their environment so they can understand, anticipate, and respond to events effectively.

The instructor position shall have a situational awareness display to display all the features and functions necessary to control the simulator. The bidder shall explain how features and functions necessary to control the simulator are presented on the instructor position, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.5 The instructor position shall have the weather control function as described in section 5.4.7 to control weather (e.g., wind direction, wind speed, visibility, cloud cover and cloud height). The bidder shall explain how weather control is facilitated on the instructor position supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.6 The instructor position shall have voice control and communication system to communicate with the student position and the pseudo-pilot positions. The pseudo-pilot and instructor position shall have a whisper feature where the two positions can communicate without the student position hearing what is communicated, this feature shall preferably use an intercom to reduce frequency use between the instructor and pseudo-pilot. The bidder shall confirm that the required voice control and communication system is available on the instructor position and explain in detail how the whisper feature is implemented. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.7 The instructor position shall have a Push-To-Talk (PTT) switch to activate the voice control and communication system. The bidder shall explain in detail how the voice control and communication system is activated on the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.8 The instructor position shall be able to hear all the students' (ATC) communication. The bidder shall confirm that the requirement is met by the proposed system and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.9 The instructor position shall display a 2D top-down view of the aerospace and manoeuvring area of the aerodrome. The bidder shall provide supporting information in the form of images or screenshots which demonstrate the 2D top-down view of the aerospace and manoeuvring area. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.10 The top-down view shall include all the active aircraft in the airspace and active vehicles on the ground. The bidder shall provide supporting information in the form of images

or screenshots which demonstrate active aircraft and vehicles in the top-down view. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.11 The top-down view shall have a zoom and pan function to allow the instructor to manipulate the displayed map. The bidder shall provide supporting information in the form of images or screenshots which demonstrate availability of the zoom and pan function in the top-down view. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.12 The instructor position shall allow the user to start, pause and stop an exercise. The bidder shall provide supporting information in the form of images or screenshots which demonstrate the ability to start, pause and stop an exercise. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.13 The instructor position shall have access to the recording files and the debriefing functionalities. The bidder shall explain how recording files and debriefing

functionalities are accessed on the instructor position, supported by images or screenshots. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.2.14 The system shall allow the instructor and student position to have immediate access to playback at least the last five minutes of a recording during the execution of an exercise. The bidder shall explain how the requirement for immediate playback of the last five minutes of a recording is met by the proposed system, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3 **Pseudo-pilot Position**

6.3.1 The system shall have pseudo-pilot positions to control the simulated models (i.e. aircrafts, people, wildlife, obstructions and vehicles) represented by different icons to ensure clear visual differentiation. The bidder shall provide images or screenshots which demonstrate how aircrafts, people, wildlife, obstructions and vehicles are represented by different icons. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.2 The pseudo-pilot position shall have the capability to manually generate and manipulate targets. The bidder shall explain in detail how targets are manually generated and manipulated within the proposed system, supported by images or screenshots. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.3 One pseudo-pilot position shall be able to take control of another pseudo-pilot's object/ target. The bidder shall explain in detail how the control of objects or targets may be assumed or transferred between pseudo-pilots. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.4 Models (i.e. aircrafts, people, wildlife, obstructions and vehicles) shall be manipulated by either direct input (speed, heading, altitude etc.) or by following a designated route per the exercise. The bidder shall explain in detail how the manipulation of models is implemented within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.5 The system shall provide functionality for dynamic route modification during both airborne and ground phases of operation. The user shall be able to modify a selected taxiway route using no more than five discrete inputs. The bidder shall describe the

process for updating or changing routes in both airborne and ground operations, including the number of inputs required to perform such modifications. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.6 The pseudo-pilot position shall have the following key windows to enable controlling of vehicles and aircrafts:

[a] Voice control and communication system
[b] 2D top-down view of the airspace being flown showing all active aircrafts, people, wildlife, obstructions and vehicles.

The bidder shall identify all functions available on the key windows from the list above, accompanied by documentation (e.g. manuals, datasheets, test reports, screenshots) demonstrating compliance. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.7 The pseudo pilot position shall have a voice control system to communicate with the student and instructor. The pilot and instructor position shall have a whisper feature where the two positions can communicate without the student position hearing what is communicated. The bidder shall confirm that the required voice control and communication system is available on the instructor position and explain in detail how the whisper feature is implemented. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.8 The pseudo-pilot position shall have a PTT switch to activate the radios on the voice control and communication system. The bidder shall explain in detail how the radios on the voice control and communication system are activated within the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.9 The pseudo-pilot position shall be able to zoom/focus on a specific area so that the manoeuvring area is clearly visible and that there are no overlapping targets. The bidder shall explain how zoom/ focus on specific areas is facilitated on the pseudo-pilot position supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.10 Aircrafts, wildlife, people, obstructions and/or vehicles under the control of the pseudo-pilot shall be clearly identified. The bidder shall explain how aircrafts, wildlife, people, obstructions and/or vehicles under the control of the pseudo-pilot are

identified, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.11 The system shall include labels that show information on the aircraft speed, heading, altitude/flight level and call sign. The bidder shall list all the information that can be included on labels, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.12 The system shall have call signs in the information label for the different objects/ targets (including people, wildlife, obstructions and vehicles) managed by the pseudo-pilot. The bidder shall list all of the information that can be included on labels, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.13 The system shall include keyboard shortcuts for the following actions:

[a] heading

[b] speed

[c] flight levels
[d] abort take-off
[e] continue
[f] missed approach
[g] function to change RWY
[h] join standard and non-standard circuit
[i] level
[j] stop
[k] report function
[l] hold
[m] orbit
[n] aircraft transfer
[o] line up and back-track
[p] land
[q] zoom function

The bidder shall identify all the available keyboard shortcuts from the list above, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.14 The aircraft speed shall be programmable on the go or during exercise creation. The landing speed shall also be adjustable. The bidder shall explain how the aircraft speed is programmed and adjusted within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.15 The pseudo-pilot position shall allow the pseudo-pilot to hover the mouse over the active Object/target, to display at least the below information, with the ability to update on the go:

[a] Programmed route
[b] Speed
[c] Distance relative to the VOR.
[d] Runway to be used.
[e] Aircraft registration
[f] Flight level
[g] Call sign
[h] Aircraft Type

The bidder shall identify all the available information which can be displayed from the list above, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.16 The pseudo-pilot position shall allow the pseudo-pilot to have a quick zoom in and out of the airspace through shortcuts instead of scrolling using a mouse. The bidder shall explain how quick zoom is implemented within the proposed system. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.3.17 The pseudo-pilot position shall have a function to measure a bearing and range between two selected points and between aircraft/objects. The bidder shall explain

how bearing and range is measured within the proposed system. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4 **Student Position**

6.4.1 The system shall have a student position from which all the air traffic control simulations shall be performed. The position shall be equipped with a 3D display (simulator screen). The bidder shall indicate the student position in a simulator layout design for each type of simulator, and provide technical datasheets for the proposed 3D display/s. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.2 All traffic that forms part of the pre-programmed exercise shall be visible on the 3D display. The bidder shall explain how traffic is displayed on the position, supported by images or screenshots. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.3 The student position shall have the following key windows:

[a] Voice control and communication system

[b] Weather observation

[c] Lighting control panel
[d] Stop bar panel
[e] Simulator control window (with pan, zoom, tilt functions)
[f] Digital Airfield Information Display (DAID)
[g] Air situational display
[h] Crash alarm
[i] Barometer panel
[j] Anemometer panel
[k] Clock

The bidder shall identify all the windows from the list above and any additional windows which are available, supported by images or screenshots. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.4 The student position shall have situational awareness displays that do not obstruct the view of the simulator display for the student. The situational awareness displays will display all the windows required by the student as described herein 6.4.3 to perform exercises. The bidder shall provide a layout design/ diagram of the proposed system which clearly indicates the situational displays and the simulator display for the student position, (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.5 The student position shall have a voice control and communication system to communicate with the pseudo-pilots and instructor through transmissions using radios and dial-up using a phone. The bidder shall confirm that the required voice control and

communication system is available on the student position. The bidder must clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.6 The student position shall have a PTT (Push to talk) switch to activate the radios on the voice control and communication system. The bidder shall explain in detail how the radios on the voice control and communication system are activated within the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.7 The student position shall be able to control the airfield lighting (on/off), airfield lighting intensity including runways, stop bars and taxiways, direction of Precision Approach Path Indicators (PAPIs) based on runway in use,. The bidder shall explain how airfield lighting (on/off), airfield lighting intensity and direction of PAPIs are controlled within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.8 The change airfield lighting (on/off), lighting intensity and PAPIs shall also be visible at the pseudo-pilot's position/s. The bidder shall explain how the change in airfield

lighting (on/off), lighting intensity and PAPIs is displayed to the pseudo-pilot, supported by images or screenshots. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.9 The student position shall be able to control the Instrument Landing System (ILS) depending on the runway being used. The bidder shall explain how the ILS is controlled within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.10 The student position shall have a simulator control window that is used to control the view of the main simulator screen. This shall include features such as adjustment to pan, tilt and zoom to a desired position on the airfield. The bidder shall list all features available to the student on the simulator control window, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.11 The student position shall have a Digital Airfield Information Display (DAID) window to display the status of all the CNS equipment nearby the aerodrome. The bidder shall

provide images or screenshots of the DAID window available on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.12 An option for electronic flight progress strip display shall be proposed. The bidder shall explain how electronic flight progress strips may be incorporated within the proposed system and make provision for the displays in the pricing schedule under sheet “G6 Options”. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

6.4.13 A crash alarm activation button shall be provided at the student position. When activated it shall transmit an audible and visual alert and shall continue to sound for 30 seconds upon which it shall automatically stop. The alerts should also be presented on the instructor and pseudo-pilot position. The bidder shall provide images or screenshots demonstrating the presence of a crash alarm activation button on the student position, and clearly state any limitations associated with the requirement, (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7 SOFTWARE

7.1 General

7.1.1 All system related software required for the operation of the system shall be provided under this bid. The bidder shall provide a list of all the system related software that will be provided under this bid. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.1.2 All software shall be supplied on a Compact Disk (CD) or accessed via a secure link, as well as provided on Universal Serial Bus (USB) disk. The bidder shall explain how software will be provided. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.1.3 All system software must be kept current and updated throughout the entire lifespan of the system and shall be included as part of the maintenance and support contract. The bidder shall explain how system software will be kept current and updated throughout the system lifespan and ensure that this is included in the proposed maintenance and support contract. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.2 **Licenses**

7.2.1 The system shall be provided with a software licence that allows ATNS to deploy or install the software on an unlimited number of simulators at different ATSUs in South Africa and abroad where ATNS operates. The bidder shall explain how the software licenses may be applied as required, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.2.2 All licenses must be in ATNS' name. The bidder shall explicitly state terms and conditions, and any limitations (e.g. number of simulators, country) on licenses provided under this bid. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.3 **Graphical User Interface Requirements**

7.3.1 The system software shall have an intuitive graphical user interface (GUI) that guides the user how to operate the simulator with ease. The bidder shall provide a datasheet, manual or brochure which demonstrates the GUI presented within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.3.2 It shall be possible to adjust the size of the GUI based on the size/s of screens connected within the system, such that the operation of the simulator is not affected. The bidder shall explain how the size of the GUI may be adjusted, and clearly state any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.4 **User Profiles**

7.4.1 The system shall create different profiles for different users (i.e. student, instructor and pseudo-pilots), each with their own unique login details. The different profiles shall have different permission rights. The bidder shall explain how different user profiles are created, and how permission rights are allocated to different user profiles. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.4.2 The system shall provide restrictions and authentication of users based on their profiles. The bidder shall explain how restrictions and authentication of users is implemented within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.4.3 The system shall apply user rights and permissions as below. The bidder shall explain how user rights and permissions are applied within the proposed system and clearly state any limitations associated with the requirement. (D)

Action	Student	Instructor	Pseudo-pilot	Programmer
Operate simulation	✓	✓	✓	✓
Start/stop/pause exercise	✗	✓	✓	✓
Design/edit exercises	✗	✓	✗	✓
Inject dynamic events	✗	✓	✓ (when instructed)	✓
Review debriefs reports	✓ (limited)	✓	✗	✓
Control pseudo-pilot behaviour	✗	✓ (override rights)	✓	✓
Design/edit aerodromes	✗	✗	✗	✓
User profile management	✗	✓	✗	✓
Data management /Technical Support	✗	✓	✗	✓

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.4.4 The system shall allow the edition and updating of the above user profile rights and permissions. The bidder shall explain how updating of the user profile rights and permissions is performed within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.5 Data Management

7.5.1 The system shall allow data sharing between simulators from different locations. The bidder shall describe how data sharing between simulators is facilitated within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.5.2 The instructors and programmers based at the ATA shall have access to all the stations' exercise databases and shall be able to upload new assessments to those databases. The bidder shall explain how the instructors and programmers at the ATA may access all stations' exercise databases and upload new assessments. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

7.5.3 The other stations shall not have access to the ATA's exercises and assessments database. The bidder shall explain how access to the ATA's database will be restricted within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8 HARDWARE

8.1 General

8.1.1 The preference for student situational awareness displays is 15-inch touch screen. The bidder shall provide supporting documentation in the form of datasheets or technical specifications for the proposed student situational awareness display. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.2 The student situational awareness display shall have a minimum resolution of 1024 x 768 pixels. The bidder shall provide a datasheet or technical specification document which provides the resolution of the proposed student situational awareness display. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.3 The student situational awareness displays shall be within arm's reach of a seated student. The bidder shall provide a layout design/ diagram for the student position which indicates the proposed placement of the student situational awareness displays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.4 The preference for pseudo-pilot and instructor situational awareness displays is 27-inch displays. The bidder shall provide supporting documentation in the form of datasheets or technical specifications for the proposed pseudo-pilot and instructor situational awareness display. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.5 The pseudo-pilot and instructor situational awareness displays shall have at least 1920x1080 pixels. The bidder shall provide a datasheet or technical specification document which indicates the resolution of the proposed student situational awareness display. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.6 Foot switches for Push-To-Talk (PTT) must be provided for each position. The bidder shall provide a datasheet or technical specification document for the proposed foot switches. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.7 The student footswitch shall be at least 700mm in length. The bidder shall provide a datasheet or technical specification document which indicates the length of the proposed student foot switch. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.8 The pseudo-pilot and instructor footswitch shall be at least 400mm in length. The bidder shall provide a datasheet or technical specification document which indicates the length of the proposed pseudo-pilot and instructor foot switch. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.9 Headsets that can be used for each of the positions shall be provided with the simulators. The headset details are specified in Section 10.2. The bidder shall provide a datasheet or technical specification document for the proposed headsets and ensure that provision is made for the headsets in the pricing schedule. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.10 The working positions shall have a mouse and keyboard to support interaction with the system. The bidder shall provide a datasheet or technical specifications for the proposed mouse and keyboard. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.11 The working positions shall have one mouse and keyboard to control all the screens in that position. (I)

COMPLIANCE (C/PC/NC/Noted)		
[THE BIDDER MAY INSERT A RESPONSE WHERE APPLICABLE]		

8.1.12 A voice control and communication system shall be available to the pseudo-pilot, the instructor, and the student positions. The bidder shall provide detailed information on the proposed voice control and communication system, supported by datasheets or technical specifications. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.13 The interface between screens and the machines which are driving them shall be HDMI to HDMI without the use of any adapter. This means that ports and cables which connect screens and machines must all be HDMI to HDMI. The bidder shall provide datasheets or technical specifications which indicate compliance with this requirement. (D)

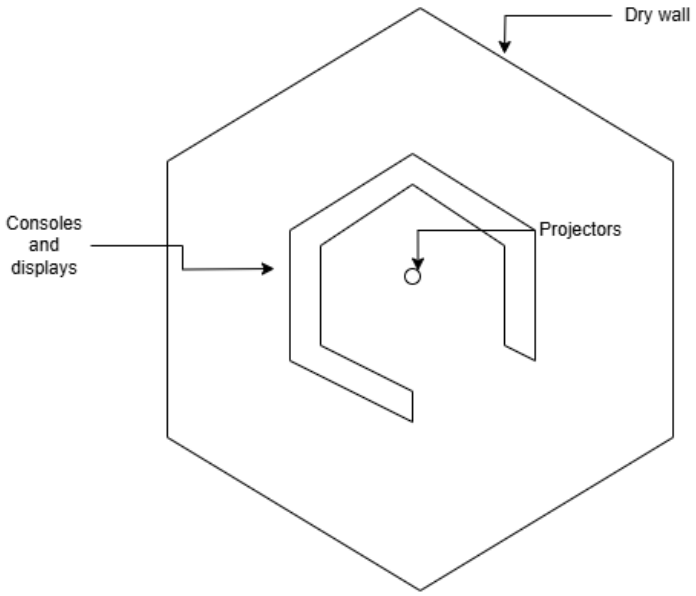
COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.1.14 All computers/ servers required to deem the system fully operational shall be provided with the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2 **3D Aerodrome Simulator**

The following is a schematic drawing of the top view of the 3D aerodrome simulator configuration.



8.2.1 The 3D aerodrome simulator shall make use of a technology to create a 360-degree horizontal realistic aerodrome presentation. The bidder shall describe in detail how the 360-degree horizontal realistic aerodrome will be created and presented on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.2 All screens and projectors shall have a resolution of at least 1920x1080 pixels. The bidder shall provide datasheets or technical specifications which indicate the resolution for all proposed screens and projectors. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.3 Each exercise lasts one hour, and 6 exercises are performed a day, five days a week. Spare bulbs shall be provided with the projectors to support optimum performance for the required 10-year lifespan of the system. The bidder shall provide datasheets or technical specifications for the proposed spare bulbs. The bidder shall also ensure that provision is made for the spare bulbs in the pricing schedule, proposed spares plan and support and maintenance contract. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.4 The 3D Aerodrome Simulator shall have four pseudo-pilot positions and six positions that can be used as student and instructor positions depending on the exercise. The bidder shall provide a proposed simulator layout diagram which indicates the placement of the required positions, as well as the hardware layout for each position. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.5 The student position and instructor position in the 3D aerodrome simulator configuration shall be similar in setup such that the position may be used either by an instructor or a student depending on the exercise. The bidder shall provide supporting information indicating compliance with this requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.6 All situational awareness displays shall be provided for the instructor, pseudo-pilot and student positions. The bidder shall provide datasheets or technical specifications for the proposed situational awareness displays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.7 The student and instructor position shall have three 15-inch touch-screen situational awareness displays and one 27-inch screen for each position. These screens shall not interfere with the field of view of the student and instructor from a seated position. The bidder shall provide datasheets or technical specifications for the proposed situational awareness displays and indicate their placement in a proposed layout diagram for the positions. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.8 The pseudo-pilot position situational awareness displays will be deployed outside the simulator room, within the *"pilots and programmers"* room. See Figure 13 below for reference. The pseudo-pilot situational awareness displays shall have a minimum screen resolution of 1920x1080 pixels. The bidder shall provide datasheets or technical specifications which indicate the resolution of the proposed situational awareness displays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.2.9 The 3D aerodrome simulator shall be provided with the following equipment per position at minimum:

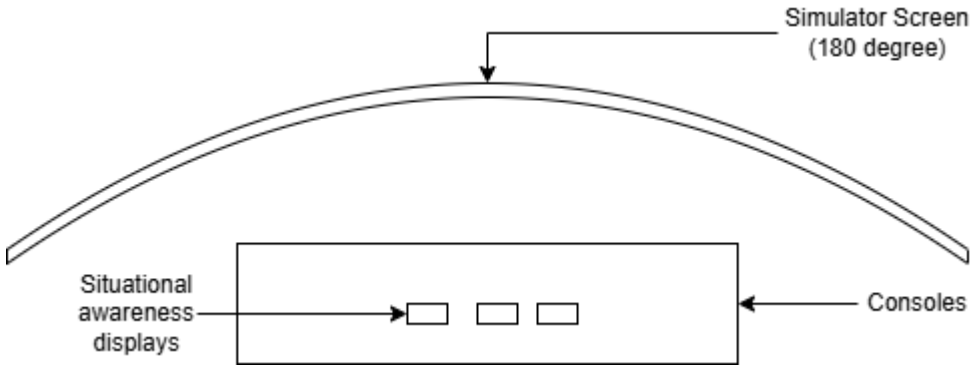
Instructor/ Student	Pseudo-pilot	Programmer
1* 27-inch screens 3* 15-inch touch screens	2* 27-inch screens	1* 27-inch screen 3* 32-inch screen (shared by both programmer positions)
Footswitch	Footswitch	Footswitch
2* audio boxes	2* audio boxes	2* audio boxes
Keyboard, mouse set	Keyboard, mouse set	Keyboard, mouse set
Headsets	Headsets	Headsets
Flight progress strip board		
Flight progress strip Printer		

The bidder shall provide datasheets, technical specifications or technical drawings (where applicable) for all proposed equipment listed in the table above and ensure that provision is made for the costing in the pricing schedule. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3 **3D Mini Simulator**

The following is a schematic drawing of the top view of the 3D mini simulator configuration for a student position.



8.3.1 The 3D mini simulator shall make use of screens to create a curved simulator screen of 180-degree horizontal field of view. The bidder shall provide a proposed design layout for the 3D mini simulator that demonstrate compliance with the minimum requirement of 180-degree horizontal field of view. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.2 A mounting solution shall be used to mount individual screens in an array such that a simulator screen of 180-degree horizontal field of view is created. The mounting solution shall be steel construction and designed to hold the combined weight of all the simulator screens once mounted. The mounting solution shall be sturdy and firm in its construction and installation such that it cannot be moved without intention. The mounting solution shall incorporate cable management mechanisms. The bidder shall provide a technical drawing for the proposed mounting solution, including information relating to the materials. The drawing shall clearly indicate dimensions and the cable management mechanisms. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.3 The screens used to create the simulator screen shall have minimum 4K resolution. The bidder shall provide datasheets or technical specifications which indicate resolution for the proposed screens. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.4 The screens used to create the simulator screen shall have at least 55-inch (55”) display size. The bidder shall provide datasheets or technical specifications which indicate the size of the proposed screens. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.5 The 3D mini simulator shall have three pseudo-pilot positions, two instructor positions and one student position. The FACT 3D mini simulator shall have four pseudo-pilot positions, two instructor positions and two student positions. The bidder shall provide a simulator layout diagram for the 3D mini simulator, and a separate layout diagram for

the FACT 3D mini simulator which show all of the required positions in the proposed setup. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.6 The student position at all stations shall have four 15-inch touch-screen situational awareness displays to allow the student to perform exercises as described in 6.4. These screens shall not interfere with the field of view of the student from a seated position. The bidder shall indicate the proposed placement of the touchscreens in the layout diagram for the student position. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.6.1 One of the 15-inch touch-screen situational awareness displays shall be dedicated to displaying the voice communication system. The bidder shall indicate the proposed placement of the screen in the layout diagram for the student position. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.6.2 One of the 15-inch touch-screen situational awareness displays shall be dedicated to the air situational display that can be switched on and off depending on the exercise being performed. The bidder shall indicate the proposed placement of the screen in the layout diagram for the student position. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.6.3 The other functions/windows as described herein 6.4.3 can be split into the two remaining 15-inch touch-screen situational awareness displays. The bidder shall indicate the proposed placement of the screens in the layout diagram for the student position. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.3.7 Each 3D mini simulator shall be provided with the following equipment per position at minimum:

Student	Instructor	Pseudo-pilot
4* 15-inch touch screens	1* 32-inch screen	2* 27-inch screens
Footswitch	Footswitch	Footswitch
2* audio boxes	2* audio boxes	2* audio boxes
Computer (to drive the screens)	Computer (to drive the screen)	Computer (to drive the screens)
Keyboard, mouse set	Keyboard, mouse set	Keyboard, mouse set
Headsets	Headsets	Headsets
Flight progress strip board		
Flight progress strip printer		

The bidder shall provide datasheets, technical specifications or technical drawings (where applicable) for all proposed equipment listed in the table above and ensure that provision is made for the costing in the pricing schedule. (D).

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4 Minibus Simulator

The following image shows the current 3D mini simulator configuration at the ATA minibus. The minibus manufacturer and model is Iveco 50 -150.

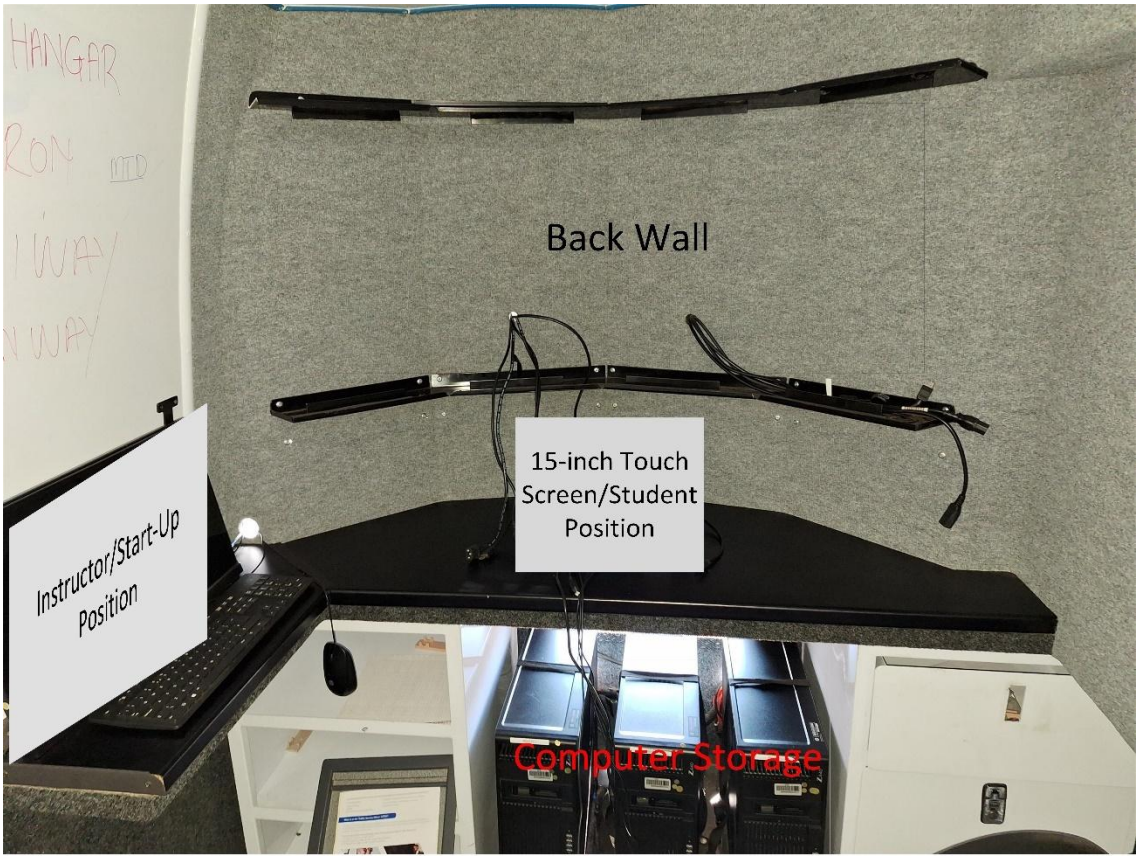


Figure 3: Mini-Bus

8.4.1 The minibus simulator shall operate similarly to the 3D mini simulator. The mini-bus simulator shall make use of 4 x 25-inch screens to create a curved simulator screen. The bidder shall provide datasheets or technical specifications for the proposed displays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.2 The 4 x 25-inch screens shall be mounted on the back wall of the mini-bus as indicated on Figure 3. The mounting brackets/ rails required to mount the screens shall be provided by the Contractor. The mounting brackets/ rails shall be steel construction, designed to withstand the weight of the screens, and must be firm and sturdy in its design and installation. The mounting brackets/ rails shall be equipped with a cable management mechanism. The bidder shall provide technical specifications or drawings for the proposed mounting brackets/ rails clearly indicating how cable management is addressed and provide a layout diagram for the minibus simulator which shows the proposed mounting position of the screens. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.3 The 3D mini simulator in the minibus shall have an instructor position that is used to start-up the simulator. The instructor position shall have a desk mount 25-inch screen. The bidder shall provide a layout diagram for the minibus simulator which shows the proposed mounting position of the screen and provide a datasheet or technical specifications for the proposed screen. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.4 The 3D mini simulator shall have a student position, with a desk-mount 15-inch touchscreen. The bidder shall provide a datasheet or technical specifications for the proposed screen and indicate the screen in the layout diagram. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.5 A 40- inch LED screen shall be supplied and mounted within the roller-door compartment on the outside of the minibus. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.6 All screens shall be easily mounted and dismounted from position in/ on the minibus to prevent damages and breakage of the screens during commute. The screens will be stored inside of the minibus during commute and when not in use. The bidder shall describe how the screens will be easily mounted/ dismounted and stored during commute. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.7 The computer equipment shall be stored under the workspace as indicated on Figure 3. The computer equipment shall be secured such that it does not move or shift during transportation. The bidder shall describe in detail how the computer equipment will be secured and provide a technical drawing for the proposed placement of computer equipment in the storage section. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.4.8 Figure 4 illustrates the top view of the current console in the minibus. The 3D mini simulator shall be installed in this existing console. The bidder shall provide a technical drawing/ layout diagram indicating the proposed placement of equipment and screens which demonstrates that the proposed solution is compatible with and will fit within the existing console. (D)

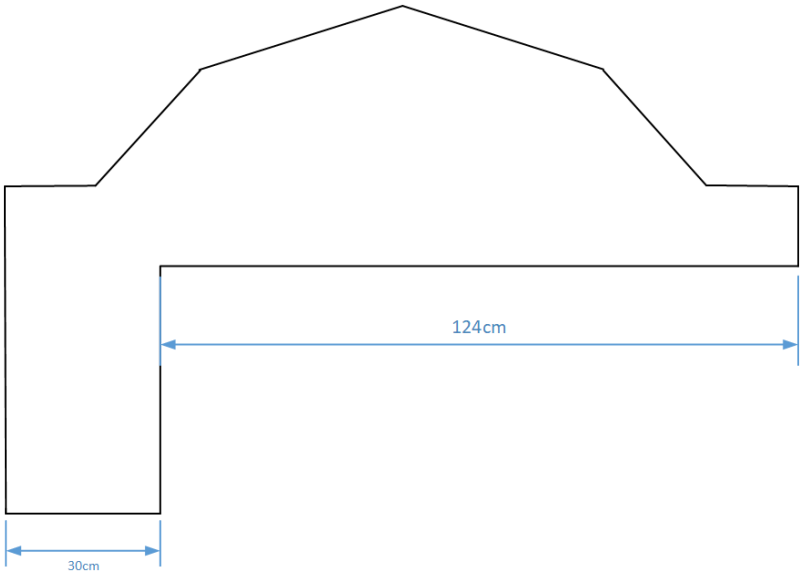


Figure 4: Console Top view

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

Additionally, there is space to house more computing storage at the back of the minibus as highlighted on Figure 5 below.

Figure 5: Minibus back storage

8.5 **Programmers Hardware**

8.5.1 There shall be two programmer positions at the ATA within the *"pilots and programmers"* room. (see Figure 13 for reference) and two programmer positions at FACT. Each position shall be provided with one 27-inch screen to be used as the programming monitor. The bidder shall provide a datasheets or technical specifications for the proposed screen and provide layout diagram for the pilot and programmers room which indicates the programmer positions. In addition, the bidder shall also provide a layout diagram for the programmer positions at FACT. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

8.5.2 The system shall provide programmers with one set of 3 x 32-inch screens to test the developed maps and aerodromes. Both programmer positions shall be able to use the 3 x 32-inch screens for testing of new developments. The bidder shall provide datasheets or technical specifications for the proposed screens. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9 CONSOLES AND WORKING DESKS

9.1 General consoles requirements

9.1.1 The console shall be used for routing of communication and power cables particularly from the raised floor, where applicable, to the equipment within the console and on the console working surface. Cable trays running throughout the consoles shall be installed. The bidder shall provide technical designs/ drawings with dimensions for the consoles which clearly indicates the cable trays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.2 The console shall incorporate some means to cater for cooling, natural heat dissipation and noise suppression. The bidder shall explain how cooling, natural heat dissipation and noise suppression are catered for in the design of the consoles. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.3 The console shall be water-resistant to withstand damage from spilt liquids. The bidder shall explain how the proposed materials cater for water-resistance and indicate if there are any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.4 The consoles shall be designed to accommodate power distribution units (PDUs) to reduce cabling.

[a] The PDU installation shall support a cable run without coiling, rolling or slack between the power strip and end-user equipment.

[b] The PDUs may be mounted only inside equipment storage sections or underneath the working surface of the consoles where the student/ instructor/ pseudo-pilot will not be seated. The mounting of the PDU shall be such that no plugs protrude beyond the console once connected to the PDU.

[c] The PDUs shall make use of C13 sockets only. See Figure 6 below.

The bidder shall provide datasheets or technical specification for the PDUs and indicate the PDUs in the console technical designs/ drawings. (D)

Figure 6: Example of an IEC power distribution unit with C13 sockets

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.5 The consoles shall accommodate and house the console equipment such as servers, network switches and machines/ computers as required per console. The equipment shall be arranged and placed logically such that minimal cabling is required to interconnect the equipment at the respective positions. Where applicable, separate equipment cabinet/s shall be provided for this purpose. The bidder shall provide technical designs/ drawings with dimensions for the consoles and equipment cabinets indicating proposed layout of equipment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.6 The console shall be appropriately grounded/ earthed (refer to section 4.3.3) such that electrostatic damage to equipment is prevented especially where the console installation is placed on top of carpet. The bidder shall provide details of the proposed method to ensure that the console construction is grounded/ earthed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.7 The console shall be stable after it has been assembled, and all equipment has been installed on it. The console shall also provide stability for the screens and all other equipment such that screens and equipment shall not shake if the console is pushed or pulled. The bidder shall explain how stability is achieved in the construction and installation of the consoles, mounting of screens and housing of equipment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.8 The bidder shall indicate on the technical designs/ drawings point loads for the console that will be in contact with the floor. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.9 The console and all its supporting equipment and auxiliaries shall withstand and operate within specifications under the environmental conditions as stated in section 4.2. The bidder shall indicate if there are any limitations or deviations related to the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.10 The console shall minimise room light reflections and glare taking into consideration the following:

[a] The rooms in which the consoles are installed are well illuminated by electrical lighting.

[b] The light emitted from multiple screens simultaneously.

The bidder shall explain how light reflections and glare are minimised in the console design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.11 The working surface material shall support the operation of an optical mouse. The bidder shall provide information on the proposed working surface materials. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.12 The student/ instructor and pseudo-pilot consoles shall be equipped with two audio boxes, one mounted on either side of each position at the console (refer to Figure 7). The mounting of the audio boxes shall be optimised such that the mobility of the seated person is not hindered or obstructed, and connection of the headsets to the audio boxes is easily performed. The bidder shall indicate the audio boxes on the technical designs/ drawings for the console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.13 The audio boxes shall be installed onto the console while taking the following factors into consideration:

[a] The cable management system of the console.
[b] The audio boxes shall remain fixed in position until the end of life of the console.
[c] The audio boxes shall be mounted such that the headset connector Figure 19 does not protrude beyond the front edge of the worksurface.
[d] Drilling into the console on-site will not be acceptable.
[e] Alignment dots for headset connectors.

The bidder shall explain how the mounting of the audio boxes considers the factors listed above. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.14 All console positions shall be provided with a footswitch (refer to section 8.1.7 and 8.1.8) to activate the voice communication and control system. Footswitches shall fit comfortably underneath the console in front of the seated student, instructor or pseudo-pilot. The bidder shall provide datasheets or technical specifications for the proposed footswitches and indicate their placement in the console technical designs/ drawings. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.15 Cable entry for the footswitch cable in the console shall be placed such that the footswitch does not damage the cable if pushed backwards against the console. The bidder shall indicate the cable entry point for the footswitch on the proposed console technical designs/ drawings. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.1.16 The footswitches shall be installed such that removal and replacement may be performed easily from the front end of the console. The bidder shall explain how

removal and replacement of the footswitches is supported by the proposed consoles design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.2 **Console lifespan**

9.2.1 The console and all auxiliary modules, components and equipment cabinets shall have a design life of at least 10 years. The bidder shall clearly state any deviations from the requirement, and indicate to what extent the lifespan may be exceeded. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.2.2 The console shall not incorporate any cut-outs or slots that will weaken its durability and longevity. The bidder shall provide technical designs/ drawings for the consoles which indicate that there are no cut-outs or slots which weaken durability. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.2.3 The console shall not require any drilling on site for the installation of components; all features shall be fully designed and integrated prior to delivery. The bidder shall

provide technical designs/ drawings for the consoles which indicate integration of all features without drilling on site during installation. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.2.4 The design of the consoles shall minimize the potential for damage including chipping or flaking and compromised structural stability over the lifespan of the console. The bidder shall explain how the design of the consoles minimizes potential for damage over the lifespan.. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.3 **3D Mini Simulator Consoles**

9.3.1 The preferred layout of the console where the student and instructors are positioned is provided in Figure 7 and Figure 8 below (the dimensions of the console and the curved simulator screen are not accurately represented). The consoles shall accommodate two instructors- one on either side of the student position. This setup is recommended for all stations except FABL, where the student console will be separate from the instructor consoles due to space limitations. The FABL instructor consoles will be the same as the pseudo-pilot consoles in Figure 12 below. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the student/ instructor console. (D)

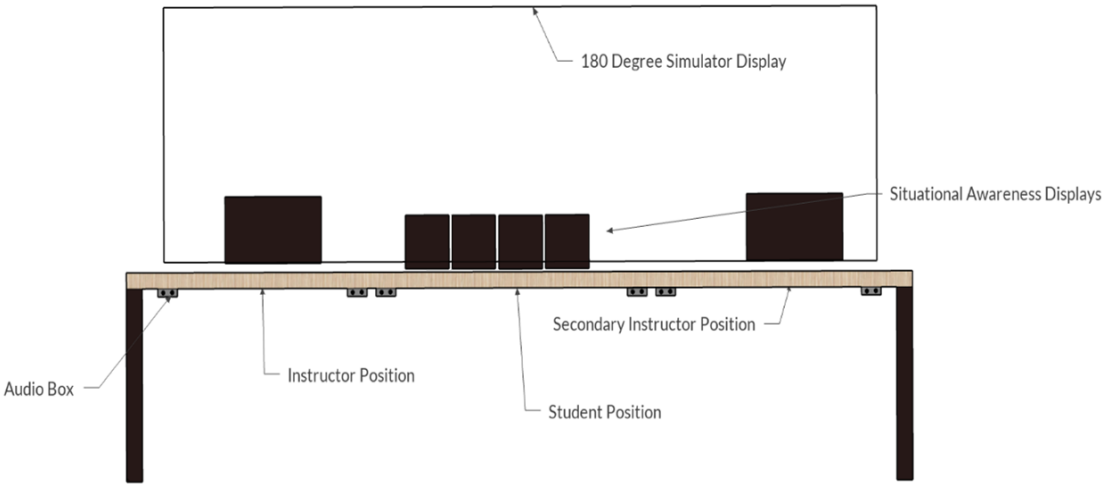


Figure 7: Front View

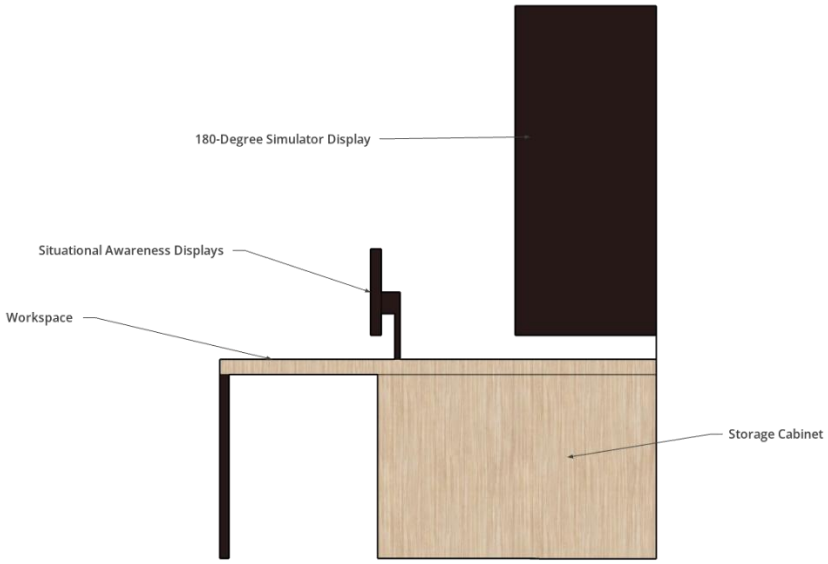


Figure 8: Side View

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[a] The worksurface of the console where the student and instructors are positioned shall be at least 1800mm long and at least 640mm deep, to provide adequate working space for the student, that will accommodate reference manuals, flight progress strip board and other books used in operations, in addition to controls and equipment. The bidder shall provide technical designs/ drawings including dimensions for the length and depth of the worksurface for the student and instructors at all stations. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The equipment used by students shall be placed within arm's reach and facing the seated student to support interaction with the displays. The bidder shall indicate the placement of student equipment in the console technical designs/ drawings. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The console shall be designed with a curved setup to allow the student to have a full view of the simulator screen. The bidder shall indicate the curved setup of the consoles and simulator screen in the console technical designs/ drawings. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The student shall be seated at a distance from the simulator screen that is appropriate for viewing without any eye strain or neck strain. The bidder shall explain how eye strain and neck strain are considered in the console design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[e] The student console shall be provided with two moveable flight progress strip boards which may be joined side by side (to form one large board, see Figure 10) and separated as needed during exercises. An example of the board may be found in Figure 9. The flight progress strip board shall be 470mm x 640mm in dimensions. The bidder shall provide a technical design/ drawing including dimensions for the flight progress strip board and describe the method that will be used to join the two boards as needed. (D)

Figure 9. Example of flight progress strip board

Figure 10 Flight progress strip boards joined to form one large board

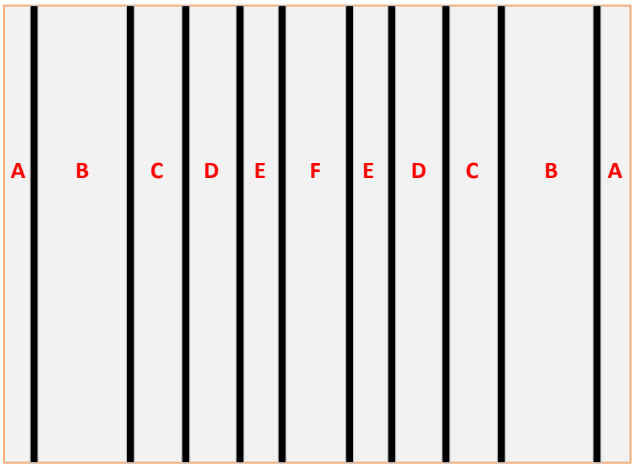


Figure 11. Dimensions for flight strip board

Table 3 Flight strip board dimensions

Representation on Figure 11	Space size
Solid Black Bar	Cylindrical rod 8mm in diameter
A	29mm
B	89.6mm
C	48.2mm
D	46.9mm
E	34.7mm
F	60.4mm

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[f] The flight progress strip board shall accommodate four flight strip holders' side by side (eight flight strip holders when two boards are joined) (horizontally), and fifteen flight strip holders placed one above the other (vertically). The dimensions on the flight strip holder are provided on Figure 21 below. The bidder shall provide a technical design/ drawing for the proposed flight progress strip board which shows that the required number of flight strip holders can be accommodated vertically and horizontally. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[g] The console must include an integrated equipment storage section with shelves to accommodate the storage of the simulator equipment. The equipment storage section shall be well-ventilated for cooling and promote heat dissipation in a room that is cooled by air-conditioning. Extraction flow from the equipment storage section shall not blow into the leg space of the seated student/ instructor. The storage section can be closed with perforated doors/ panels which may be entirely removed for equipment maintenance purposes. The storage section shall be equipped with power distribution units to support the power requirements of the proposed system. The storage section shall have cable management mechanisms. If the simulator screen mounting solution (refer to section 8.3.2) is floor-standing, then the equipment storage shall be integrated with the mounting solution for easy access to equipment. The bidder shall provide a technical design/ drawing with dimensions which shows the equipment storage section, including the proposed placement of the equipment and clear indication of the cable management mechanisms and power distribution units. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[h] The storage cabinet shall be easily accessible from the rear for maintenance purposes. It shall be possible to remove and replace equipment from the rear. The bidder shall provide a technical design/ drawing with dimensions which shows how the equipment can be removed and replaced from the rear. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[i] The equipment storage section shall not impinge on the legroom of persons seated at the console in accordance with the ergonomics specifications. The bidder shall indicate the leg room dimensions on the consoles technical design/ drawing. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[j] The equipment storage section shall cater for 19-inch rack mountable equipment by complying with the Electronic Industries Association (EIA) standard EIA-310 for a standard rack. The bidder shall provide a technical design/ drawing with dimensions which shows that the equipment storage section complies with standard EIA-310. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[k] The equipment storage section shall incorporate heavy-duty 19-inch rack mountable sliding mechanisms and shelves that will allow technicians to slide/draw out equipment from the console beyond the edge of the console for maintenance activities. The cable management mechanisms shall consider the sliding in and out of equipment. The bidder shall provide information on the proposed sliding mechanisms and describe how the cable management will be addressed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.3.2 The preferred pseudo-pilot console layout is depicted below in Figure 12.

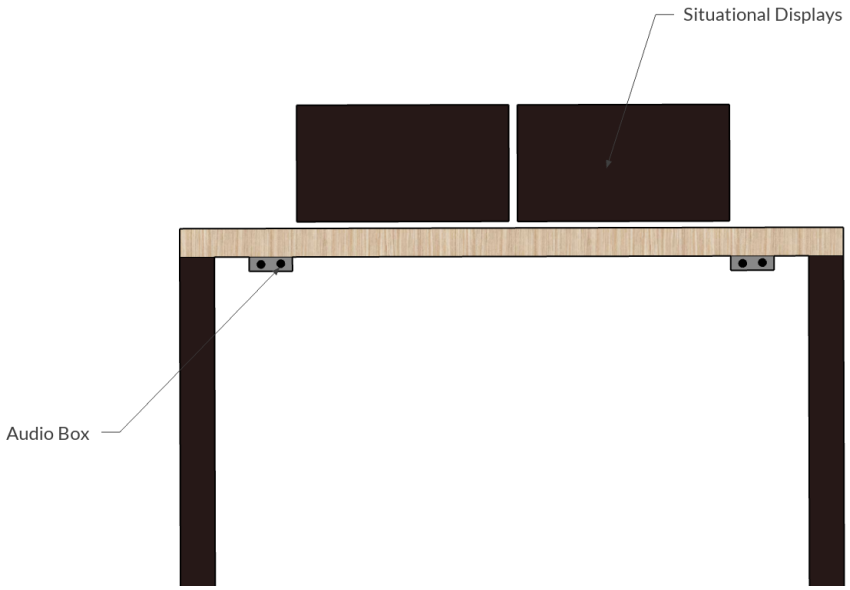


Figure 12: Pseudo-pilot Console

[a] The pseudo-pilot consoles shall be able to accommodate 2 x 27-inch screens at minimum. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the pseudo-pilot console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The pseudo-pilot consoles shall be able to accommodate the computer equipment that drives the screens, within the console without impinging on the pseudo-pilot leg room. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the pseudo-pilot console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The pseudo-pilot consoles shall be at least 1200mm long and at least 640mm deep, to provide adequate working space for the pseudo-pilot. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the pseudo-pilot console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.3.3 Programmer consoles shall be provided at the ATA 3D aerodrome simulator and at FACT for the programmer positions.

[a] The programmer consoles shall be able to accommodate two programmer positions including two 27-inch screens (one per position) and three x 32-inch screens (to be shared between the two positions) at minimum. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the programmer console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The programmer console shall be able to accommodate the computer equipment that drives the screens, within the console without impinging on the programmer leg room. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the programmer console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The programmer console shall be at least 3600mm long and at least 1000mm deep, to provide adequate working space for the programmers. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the programmer console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.4 3D Aerodrome Simulator Consoles

9.4.1 The room to accommodate the 3D aerodrome simulator is depicted on Figure 13 below. The red dodecagon is a dry wall that was previously used for projecting the simulator image.

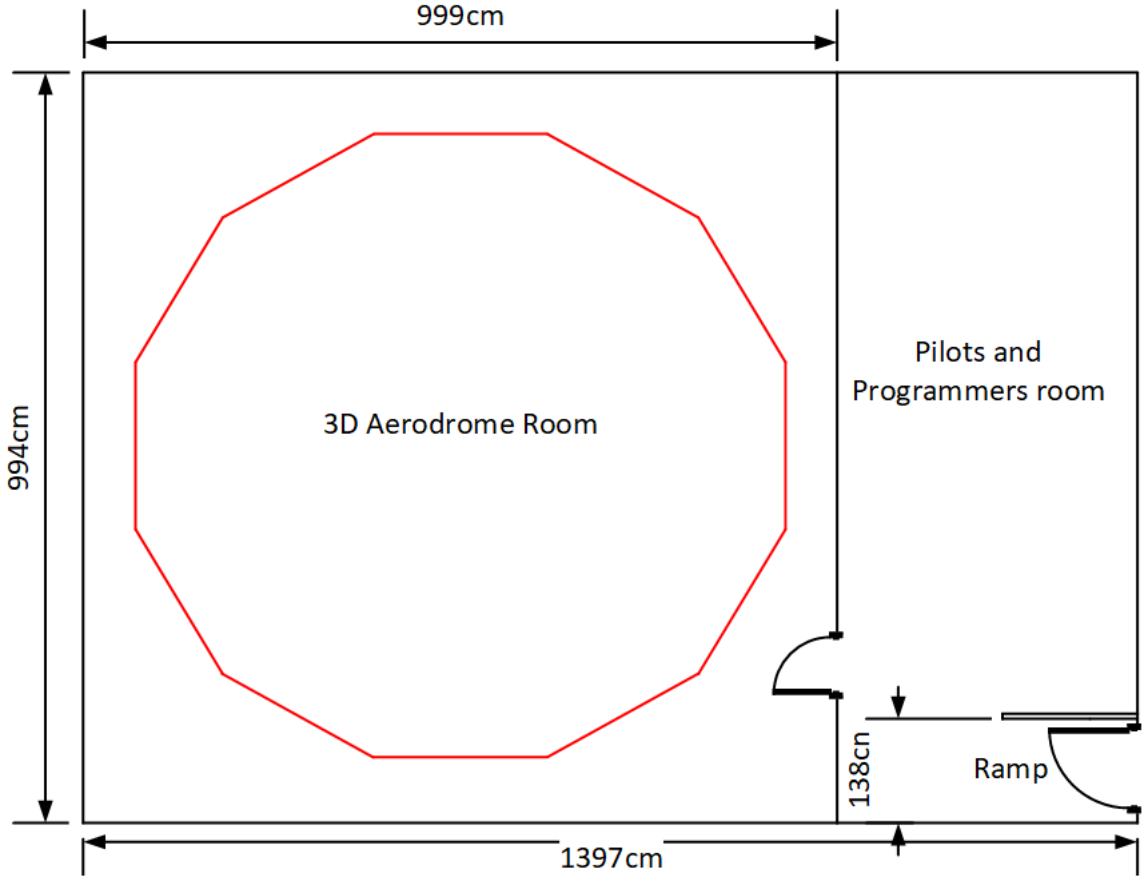


Figure 13: 3D aerodrome simulator room

The preferred layout of the student console is provided in Figure 14 below (the dimensions of the console are not accurately represented). In the 3D Aerodrome simulator, the student and instructor consoles are identical as they are used interchangeably (refer to section 3.4).

[a] The worksurface of the student/ instructor console shall be at least 1800mm long and at least 640mm deep, to provide adequate working space for the student, that will accommodate reference manuals, flight progress strip board and other books used in operations, besides just controls and equipment. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the student/ instructor console. (D)

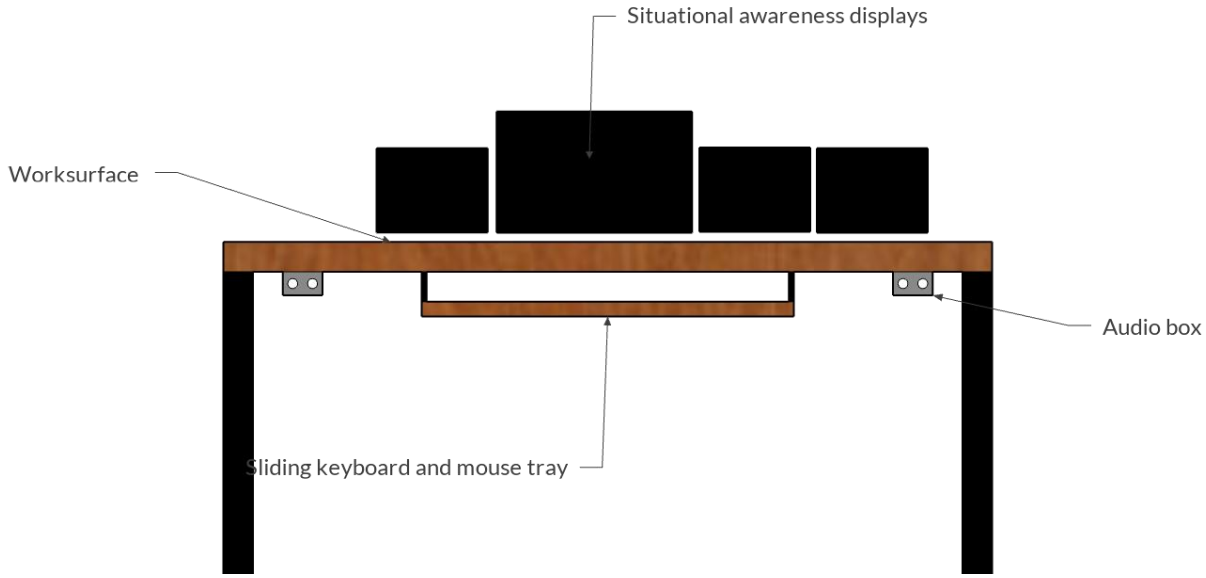


Figure 14: Front view of the student/ instructor console

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The student/ instructor console shall accommodate four situational awareness displays at minimum. The bidder shall provide technical designs/ drawings including dimensions and proposed equipment placement for the student/ instructor console. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The student/ instructor console shall have a sliding tray under the worksurface to accommodate a keyboard and a mouse. The bidder shall provide technical designs/ drawings including dimensions and which indicate the sliding tray. (D)

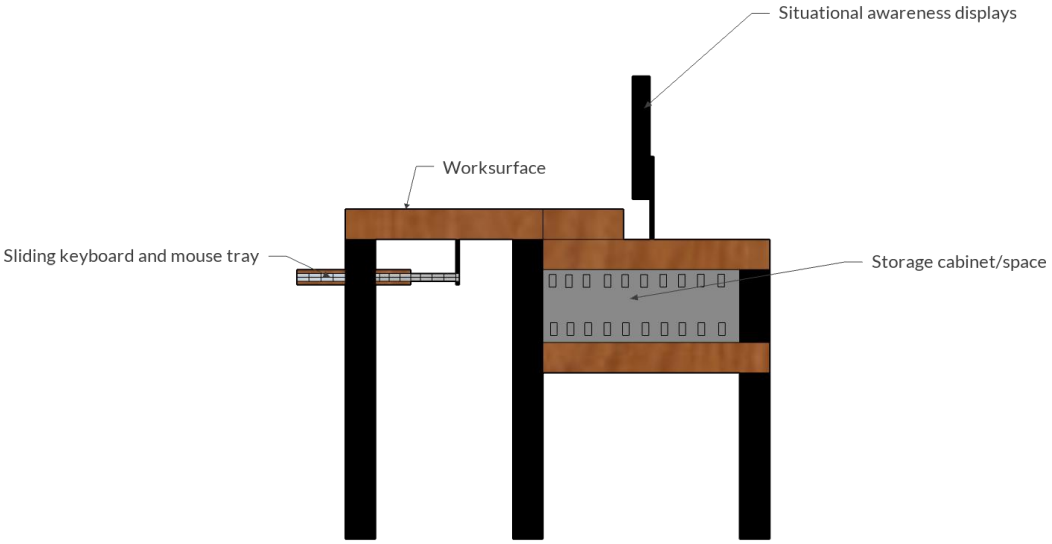


Figure 15: Side view of the student/instructor console

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The student /instructor console shall have a 300 x 470mm flight strip board embedded on the worksurface of the console. The bidder shall provide a technical design/ drawing for the proposed flight progress strip board. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[e] The flight progress strip board shall hold three flight strip holders side by side (horizontally), and ten flight strip holders placed one above the other (vertically). The dimensions on the flight strip holder are provided on Figure 21 below. The bidder shall provide a technical design/ drawing for the proposed flight progress strip board which shows that the required number of flight strip holders can be accommodated vertically and horizontally. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[f] The student/ instructor console shall have an integrated storage section, to house the computing equipment that supports the simulator. The storage section shall be well-ventilated for cooling and promote heat dissipation in a room that is cooled through an underfloor air distribution system. Extraction flow from the equipment storage section shall not blow into the leg space of the seated student/ instructor. The storage section can be closed with perforated doors/ panels which may be entirely removed for equipment maintenance purposes. The storage section shall be equipped with power distribution units to support the power requirements of the proposed system. The storage section shall have cable management mechanisms. The bidder shall provide a technical design/ drawing with dimensions which shows the equipment

storage section, including the proposed placement of the equipment and clear indication of the cable management mechanisms and power distribution units. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[g] The storage cabinet shall be easily accessible from the rear for maintenance purposes. It shall be possible to remove and replace equipment from the rear. The bidder shall provide a technical design/ drawing with dimensions which shows how the equipment can be removed and replaced from the rear. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[h] The equipment storage section shall not impinge on the legroom of persons seated at the console in accordance with the ergonomics specifications. The bidder shall indicate the leg room dimensions on the consoles technical design/ drawing. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[i] The equipment storage section shall cater for 19-inch rack mountable equipment by complying with the Electronic Industries Association (EIA) standard EIA-310 for a

standard rack. The bidder shall provide a technical design/ drawing with dimensions which shows that the equipment storage section complies with standard EIA-310. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[j] The equipment storage section shall incorporate heavy-duty 19-inch rack mountable sliding mechanisms and shelves that will allow technicians to slide/draw out equipment from the console beyond the edge of the console for maintenance activities. The cable management mechanisms shall consider the sliding in and out of equipment. The bidder shall provide information on the proposed sliding mechanisms and describe how the cable management will be addressed. (D)

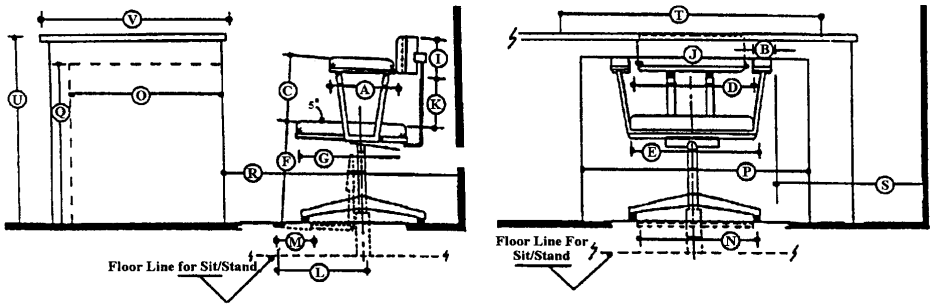
COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[k] The pseudo-pilot positions and programmer positions shall receive the same consoles as described in section 9.3.2 and 9.3.3 respectively. These positions shall be located in the pilots and programmers' room. The bidder shall ensure that provision for the costing is made in the pricing schedules.

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.5 **Ergonomics**

9.5.1 The final console designs shall be approved by the ATNS Human Factors department. Figure 16 and Figure 17 are provided from the ATNS Ergonomic Specification Manual for console design reference.

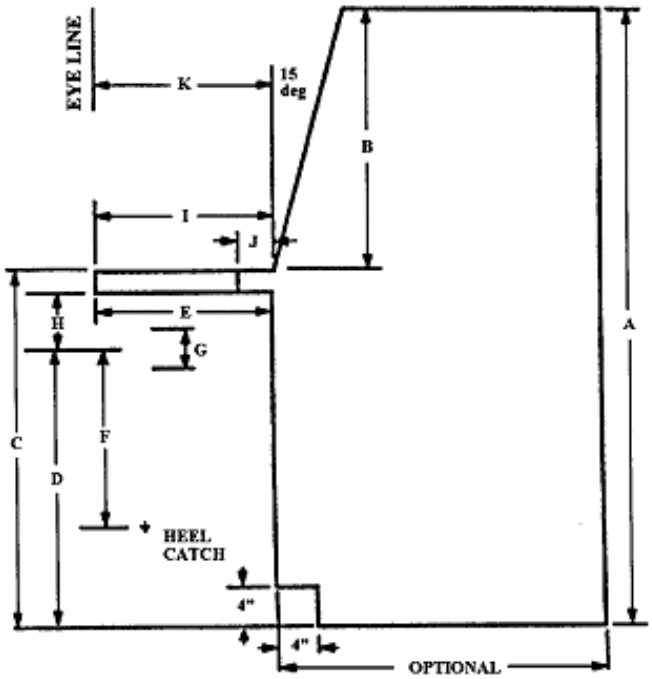


Chair	Fixed (mm)	Fixed (in)	Adjustment * (mm)	Adjustment * (in)
Fixed armrests				
	200-255	(8-10)	-	-
B. Width	50	(2)	-	-
C. Height	215	(8)	-	-
D. Separation	460	(18)	-	-
Adjustable armrest from compressed seat				
E. Width	405	(16)	-	
F. Height	460	(18)	± 50	(2)
G. Depth	405	(16)	-	-
Backrest				
H. Space	150	(6)	± 50	(2)
I. Height	380	(15)	-	-
J. Width	405	(16)	-	-
Footrests				
L. From center	180	(7)	-	-
M. Width	150	(6)	-	-
N. Length	255	(10)	-	-

Workspace	Minimum (mm)	Minimum (in)	Preferred (mm)	Preferred (in)
O. Kneehole depth without footrests	460	(18)	-	-
P. Kneehole width	510	(20)	-	-
Q. Kneehole height (standard office)	635	(25)	640	(25)
R. Desk to wall	810	(32)	-	-
S. Armrest to wall	610	(24)	-	-
T. Lateral work clearance				
(1) Shoulders	585	(23)	-	-
(2) Elbows	635	(25)	-	-
(3) Best overall	1000	(39)	-	-
U. Height of work surface	735	(29)	760	(30)
V. Width of work surface				
(1) Elbow rest alone	100	(4)	200	(8)
(2) Writing surface	305	(12)	405	(16)
(3) Desk work area	-	-	910	(36)

* Adjustment range. Adjustability is preferred for these dimensions.

Figure 16. Seated workspace dimensions and illustrations



Key	Dimensions	mm	in
A.	Maximum total console height from standing surface	-	-
B.	Suggested vertical dimension of panel, including sills	-	-
C.	Writing surface: shelf height from standing surface	-	-
D.	Seat height from standing surface at midpoint of "G"	-	-
E.*	Minimum knee clearance	460	18.0
F.*	Foot support to sitting surface**	460	18.0
G.*	Seat adjustability	150	6.0
H.*	Mimimum thigh clearance at midpoint of "G"	190	7.5
I.	Writing surface depth including shelf	400	16.0
J.	Mimimum shelf depth	100	4.0
K.	Eye line-to-console front distance	400	16.0

* Not applicable to console types 4 and 5
** Since this dimension must not be exceeded, a heel catch must be added to the chair if "D" exceeds 460 mm (18.0 in).

Note: A shelf thickness of 25 mm (1 in) is assumed. For other shelf thicknesses, suitable adjustments should be made.

Figure 17. Standard Console Illustration and Dimension Key

The console shall have smooth surfaces and edges. The bidder shall explain how smooth surfaces and edges are incorporated in the proposed console designs. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

9.5.2 The console shall have sufficient space available for leg room and essential equipment beneath the working surface. The minimum leg room dimensions are 460mm x 510mm x 740 mm (depth x width x height). The bidder shall indicate the leg room dimensions on all console technical designs/ drawings. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10 AUXILIARY EQUIPMENT

10.1 Audio Box

10.1.1 Two audio boxes shall be provided for each position. Each audio box shall have two ports. Figure 18 illustrates the audio box. The bidder shall provide a technical design/ drawing including dimensions for the proposed audio box and ensure that provision is made in the pricing schedule for two audio boxes per position. (D)

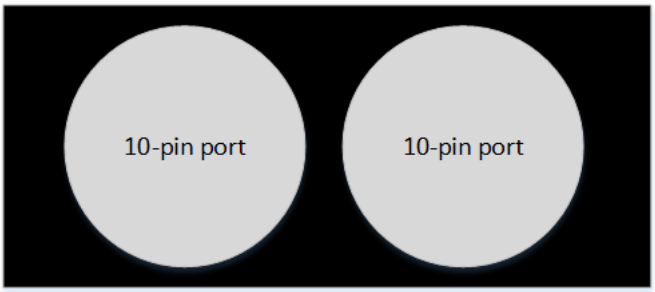


Figure 18: Audio box with 2 ports

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.1.2 The voice control and communication system shall be connected to audio boxes via easily removable connectors. Headsets are plugged into the audio boxes such that communication may be performed via the voice control and communication system. The bidder shall provide a wiring diagram indicating how the voice control and communication system connects with the audio boxes. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.1.3 The audio box shall be provided with a 10-pin female LEMO port (Figure 19) for headsets. The port shall be the following type: EGG.2B.310.CLL. The bidder shall provide datasheets or technical specifications for the proposed LEMO port. (D)

Figure 19: 10-Pin LEMO Port

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.1.4 The output of all voice or audio communications from the audio box must be recordable. The bidder shall describe how this requirement will be met. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.1.5 The audio box shall support the following:

[a] Two headset ports with LEMO connectors (10-pin)

[b] The orientation of the ports shall be such that any alignment indicators on the ports or headsets are placed at the 12 o'clock position.

[c] The chassis connector shall be fixed within the audio box such that it does not rotate.
[d] The left-side port supports monitoring and microphone use.
[e] The right-side port supports monitoring of incoming and outgoing communication.
[f] The ports shall be clearly labelled according to their functionality.
[g] Mounting underneath the console worksurface.
[h] Grounding to eliminate static.

The bidder shall demonstrate compliance by providing the technical design of the audio box incorporating the above requirements and indicating the placement of audio boxes on the console technical designs. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2 **Headsets**

10.2.1 The project shall provide the following quantities of headsets:

Station	Quantities
FACT	14
FAPE	10
FALE	10
FABL	10
FALA	10
ATA	70
St. Helena Airport	15

The bidder shall ensure that provision is made in the pricing schedules for all headsets. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.2 Headsets shall be designed for intended for use in the air traffic control environment by design. The bidder shall provide a datasheet for the proposed headset, which explicitly states that it is designed for intended use in the air traffic control (ATC) environment. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.3 Both the instructor and student headsets supplied shall have an in-line push to talk (PTT) button. The bidder shall provide a datasheet or technical specifications which shows the required in-line PTT button. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.4 The length of the cable for the headsets shall be at least two meters to enable an Instructor to stand up from the instructor console and position themselves behind the student at the student position console without the cable disconnecting or breaking. The bidder shall provide a datasheet or technical specifications which indicates the length of the headset cable. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.5 Headsets shall be lightweight and ergonomic in design. The bidder shall provide a datasheet or technical specifications which indicates the weight of the headset, and ergonomic design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.6 Headsets shall have stereo/ dual channel configuration for dual communications. The bidder shall provide a datasheet or technical specifications which indicates stereo/ dual channel configuration. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.7 Headsets shall have noise cancellation/ compensation on the microphone. The bidder shall provide a datasheet or technical specifications which indicates noise cancellation/ compensation on the microphone. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.8 Headsets shall have an impedance of 300Ω on the headphones and 150 - 2200Ω on the microphone. The bidder shall provide a datasheet or technical specifications which indicates the impedance of the headphones and the microphone. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.9 Headsets shall have an adjustable headband. The bidder shall provide a datasheet or technical specifications which indicates an adjustable headband. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.10 Headsets shall have a flexible microphone boom, which may be worn on either the left or right side. The bidder shall provide a datasheet or technical specifications which indicates the flexible microphone boom and its ability to be worn on either the left or right side. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.11 Headsets shall be equipped with a LEMO connector to be connected to the ports (Figure 19) on the audio boxes. The connectors shall be the following type: FGG2B310CLAD42Z (for 10 Pin) and GMA.2B.040.DN (LEMO strain relief). The bidder shall provide a datasheet or technical specifications which indicates the LEMO connector with the LEMO strain relief. (D)

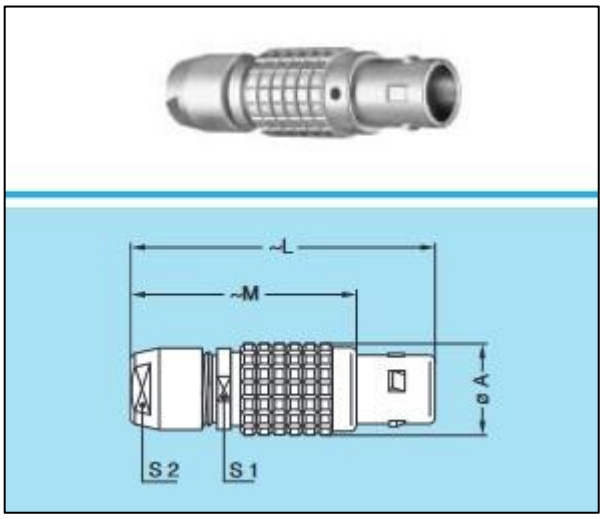


Figure 20. Headset Connector with Strain Relief

Table 4. Headset Connector Dimensions

Reference		**Dimensions (mm)**				
Model	Series	A	L	M	S1	S2
FGG	2B	15.0	50.0	38.0	13.0	12.0

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.12 Headsets shall be supplied with a storage bag. The bidder shall provide a datasheet or technical specifications which indicates provision of a storage bag. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.13 Earpads and microphone pads on the headsets shall be replaceable. 100 pairs of earpads and 100 microphone pads shall be supplied with each simulator system except for the ATA where 1000 pairs shall be provided for each simulator. The bidder shall ensure that provision is made in the pricing schedule for the microphone pads and earpads at each station. The bidder shall also include costing for 10 000 pairs of earpads and 10 000 microphone pads under sheet *"G6 Options"* in the pricing schedule. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.2.14 Headsets shall have a warranty of at least two years. The bidder shall provide a datasheet or technical specifications which indicates the warranty of the proposed headsets. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3 **Flight Strip Printer**

10.3.1 A flight strip printer shall be provided with each simulator. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer and ensure that provision is made in the pricing schedule for the flight strip printers. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.2 The flight strip printer shall be small and compact in design with maximum dimensions 206mm x 278mm x 191mm (w x d x h). The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer which indicates the dimensions. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.3 The flight strip printer shall be able to perform batch printing. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer which indicates the batch printing functionality. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.4 The flight strip printer shall perform thermal printing on thermal flight strip paper rolls. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer which indicates thermal printing. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.5 The flight strip printer shall perform automatic paper feed. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer indicating automatic paper feed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.6 The flight strip printer shall have a built-in cutting device. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating the built-in cutting device. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.7 The flight strip printer shall have a resolution of at least 300 dpi. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating the resolution. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.8 The flight strip printer shall have adjustable printing speed and printing intensity. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating adjustable printing speed and intensity. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.9 The flight strip printer shall be capable of printing the following flight strips:

- Flight Strip Type 1: ±25mm x ±145mm (width x length)
- Flight Strip Type 2: ±25mm x ±200mm (width x length)

The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating compatibility with the flight strip size. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.10 The flight strip printers shall support the ability to be connected directly into a network such that the printers are not physically bound to a position. Printers shall be able to accept print jobs from any position (Instructor or student). The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating the ability to be configured in a network. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.11 The flight strip printer shall be able to automatically print multiple print jobs in a queue. The bidder shall provide a datasheet or technical specifications for the proposed flight strip printer, indicating the ability to print multiple jobs in a queue. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.12 A tray or holder shall be provided with the printer to hold the flight strips that have been printed. The bidder shall provide details on the proposed tray or holder. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.13 Replacement of flight strip paper rolls shall be performed easily and without having to remove the printer from its position. The bidder shall describe how the paper rolls are replaced. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.3.14 The following flight strip paper rolls shall be provided for each flight strip printer:

- 2000 rolls of Flight Strip Type 1: ±25mm x ±145mm (width x length)

The following flight strip paper rolls shall be supplied for each flight strip printer at the ATA only:

- 2000 rolls of Flight Strip Type 2: ±25mm x ±200mm (width x length)

The bidder shall provide datasheets or technical specifications for the proposed flight strip paper rolls and ensure that provision for the costing is made in the pricing schedules. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.4 Flight progress strip holder

10.4.1 The project shall provide the following quantities of "type 1 flight progress strip holders" per station. The dimensions for "type 1 flight progress strip holder" are provided in Figure 21. The bidder shall provide technical specifications for the proposed flight progress strip holder including dimensions and ensure that provision for the costing is made in the pricing schedule. (D)

Station	Quantities
FACT	White = 150, Blue = 150, Pink = 150
FAPE	White = 100 Blue = 100 Pink = 100
FALE	White = 100 Blue = 100 Pink = 100
FABL	White = 100 Blue = 100 Pink = 100
FALA	White = 100 Blue = 100 Pink = 100
ATA	White = 200 Blue = 200 Pink = 200
St. Helena Airport	White = 100 Blue = 100 Pink = 100

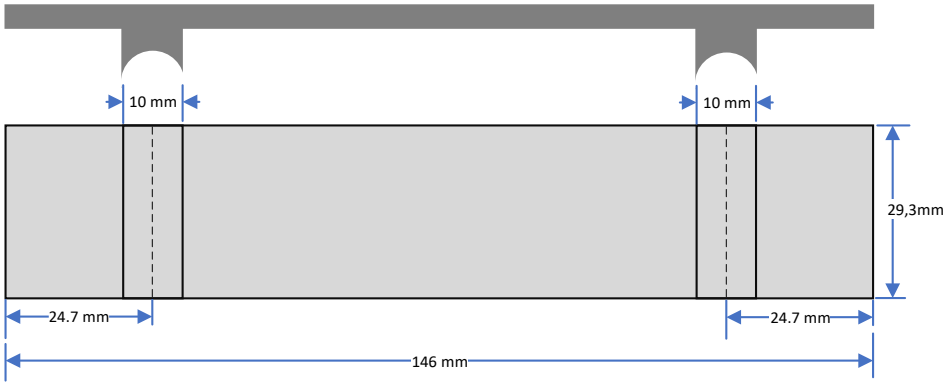


Figure 21: Type 1 Flight Progress Strip Holder

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.4.2 The project shall provide the following quantities of "type 2 flight progress strip holders" for the ATA. The dimensions are provided in Figure 22. The bidder shall provide technical specifications for the proposed flight progress strip holder including dimensions and ensure that provision for the costing is made in the pricing schedule. (D)

Station	Quantities
ATA	White = 100 Blue = 100 Pink = 100

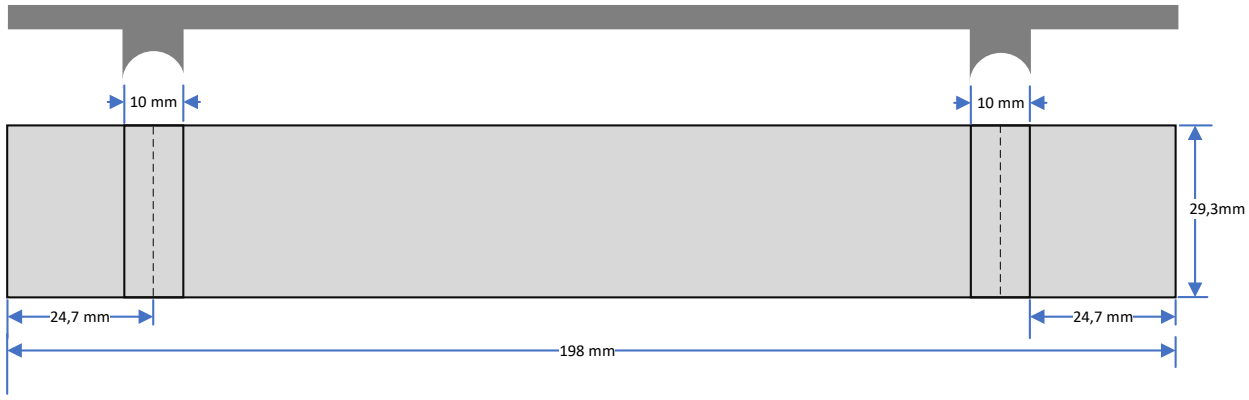


Figure 22: Flight Progress Strip Holder Type 2

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.5 **Electronic Flight Strip**

10.5.1 Electronic flight strip (EFS) functionality shall be available on the proposed system. The bidder shall provide full details on the EFS functionality, which is available on the system, and make provision for costing of any hardware which may be required for EFS, in the pricing schedules. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.5.2 The system shall allow modifications of electronic flight strip design and layout such that the design may be aligned to the EFS system deployed in the operational environment, throughout the system lifespan. The bidder shall explain how the electronic flight strip design and layout can be modified within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.5.3 The EFS functionality shall incorporate a graphical user interface (GUI) to enable user interaction with the system. The bidder shall explain how a user may interact with the EFS functionality, supported by screenshots or images. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.6 **Cables and Connectors**

10.6.1 All cables and connectors needed for the system shall be provided with the system. Connectors must be selected and installed in a manner which allows for easy removal and replacement to facilitate operation and maintenance of the equipment. The bidder shall ensure that provision is made in the pricing schedules for all cables and connectors. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.6.2 Interface cables and connectors shall be replaceable in a field workshop by a qualified technician. The bidder shall indicate if there are any limitations associated with the requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.6.3 Electrical plugs and plug points shall be selected and installed/ mounted such that it is impossible to insert a plug into the wrong receptacle, or into the correct receptacle the wrong way. Alignment aids shall ensure that correct alignment is achieved before electrical contact is made. The bidder shall explain how the requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.6.4 Cables shall be long enough especially on units that have drawers or slide out racks, to allow maintenance activities without disconnecting the connectors. The bidder shall explain how the requirement is met within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.6.5 Hand operated connectors shall be used. The bidder shall provide details on the connectors which will be used. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

10.7 **Chairs**

10.7.1 The following quantities of chairs shall be provided under this bid, at the respective stations:

Station	**Quantity**
FACT	9
FAPE	8
FALE	8
FABL	8
FALA	8
ATA	36
St. Helena Airport	8
Total	**85**

The chairs shall meet the following requirements at minimum:

a) Ergonomic office chair design.
b) The chair shall have swivel wheels.
c) The height of the chair shall be gas adjustable.

d) The chair colour is preferably black.

The bidder shall provide datasheets or technical specifications for the proposed chairs which indicates compliance with the minimum requirements and ensure that provision for the costing is made in the pricing schedules. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11 SITE SPECIFIC REQUIREMENTS

11.1 ATA

11.1.1 3D Mini Simulators

11.1.1.1 The four 3D mini simulators that will be installed at the ATNS ATA will be located in the area indicated in Figure 23 below. The coloured blocks indicate the required positions for the four 3D mini simulators. The room has raised floor to run the system cables. The system is supplied from the building power with a 60kVA UPS. The bidder shall provide a technical drawing for the ATNS ATA which indicates the placement of the four 3D mini simulators. (D)

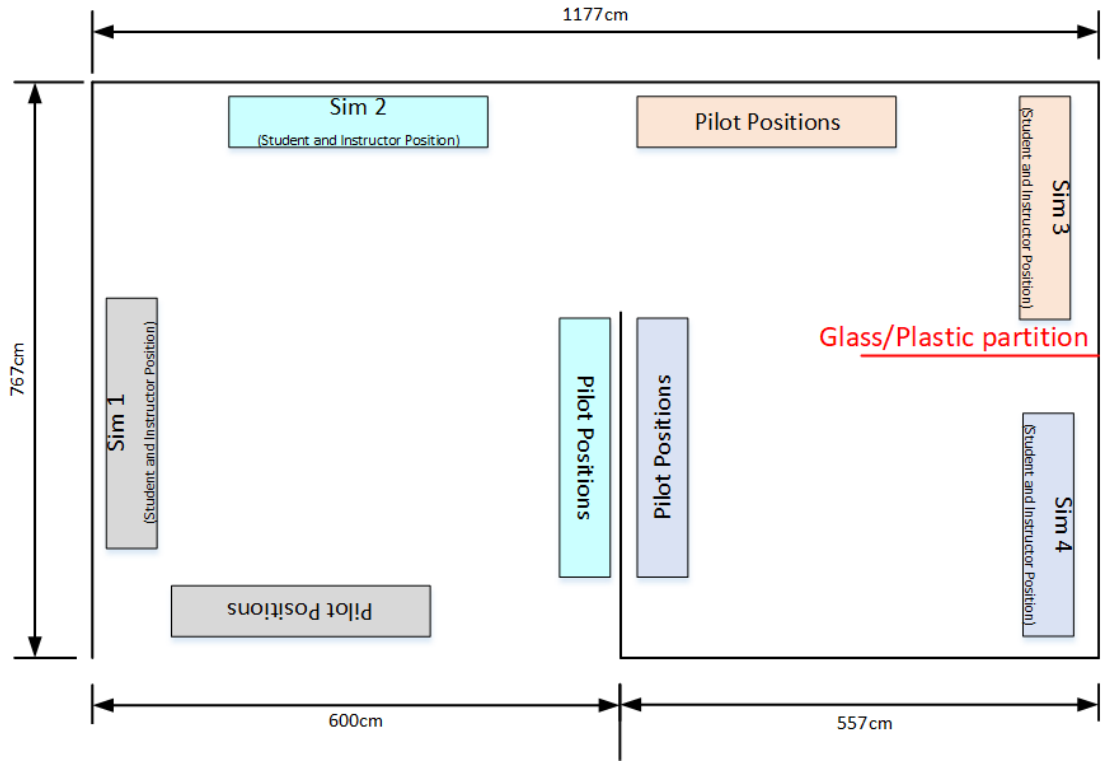


Figure 23: 3D Mini Simulator Room

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.1.1.2 A new partition shall be installed as indicated in red in Figure 23, to separate the 3D mini simulators and dampen noise between the two simulators. The bidder shall indicate the partition in their technical drawing and provide details of the proposed partition. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.1.1.3 The system cables shall be accommodated within the raised floor. The project shall provide the cable trays for the system cables. The bidder shall provide details on the proposed cable trays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.1.2 3D Aerodrome Simulator

11.1.2.1 In the case where the proposed 3D aerodrome simulator necessitates the use of the existing drywall for projection, the drywall shall be repainted in white paint. The bidder shall indicate compliance with this requirement. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.2 **FAPE**

11.2.1 Figure 24 shows the FAPE building layout where the 3D mini simulator will be installed. The blue boxes indicate the required positioning for the 3D mini simulator and pseudo-pilot positions. The room has three windows and one access door with a ramp. The room has a raised floor. The room has a split unit air conditioning to regulate the temperature in the room. The bidder shall provide a technical drawing for FAPE which indicates the placement of the 3D mini simulator including all positions. (D)

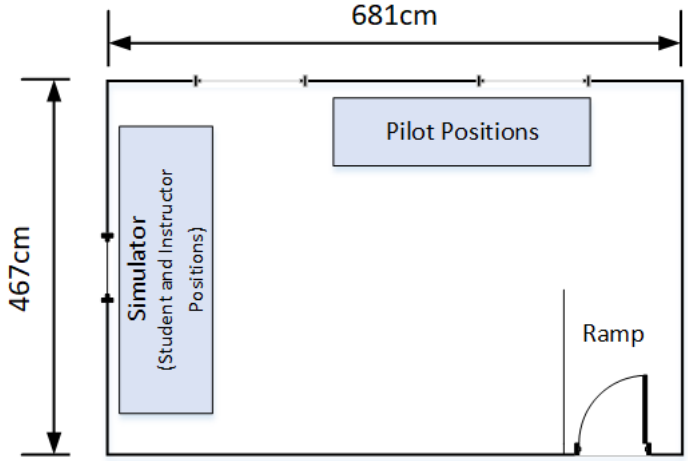


Figure 24: FAPE Building Layout

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.2.2 A partition shall be installed between the 3D mini simulator student position and the pseudo-pilot position to ensure clear separation between the two areas and dampen noise between the two areas. The bidder shall indicate the partition in their technical drawing and provide details of the proposed partition. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.2.3 The system cables shall be accommodated within the raised floor. The project shall provide the cable trays for the system cables. The bidder shall provide details on the proposed cable trays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.3 **FALE**

11.3.1 Figure 25 shows the FALE building layout where the 3D mini simulator will be installed. The blue boxes indicate the required positioning for the 3D mini simulator and pseudo-pilot positions. The room has no windows; it has an HVAC system to regulate the room temperature. The room has two access doors; however, one is permanently locked while the other one is accessible. The room is equipped with a dual trunking that accommodates both electrical and network cabling. The room is powered by an 80kVA UPS. The bidder shall provide a technical drawing for FALE which indicates the placement of the 3D mini simulator including all positions. (D)

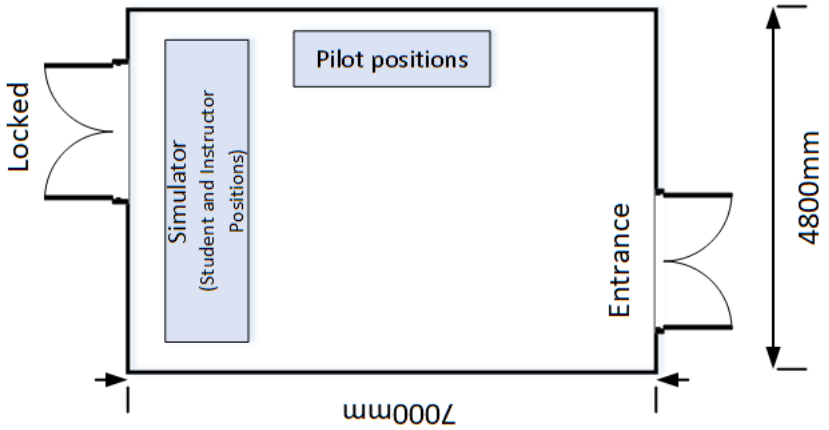


Figure 25: FALE Building Layout

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.3.2 The system cables shall be accommodated within existing dual trunking that caters for separation of electrical and network cabling. The bidder shall indicate compliance with this requirement. (I)

COMPLIANCE (C/PC/NC/Noted)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.4 **FABL**

11.4.1 Figure 26 shows the FABL building layout where the 3D mini simulator will be installed. The blue boxes indicate the required positioning for the 3D mini simulator and pseudo-pilot positions. The room has no windows; it has an air conditioning system to regulate the room temperature. The room has two access doors. The room is equipped with a dual trunking that accommodates both electrical and network cabling. The room is powered by a 40kVA UPS. The bidder shall provide a technical drawing for FABL which indicates the placement of the 3D mini simulator including all positions. (D)

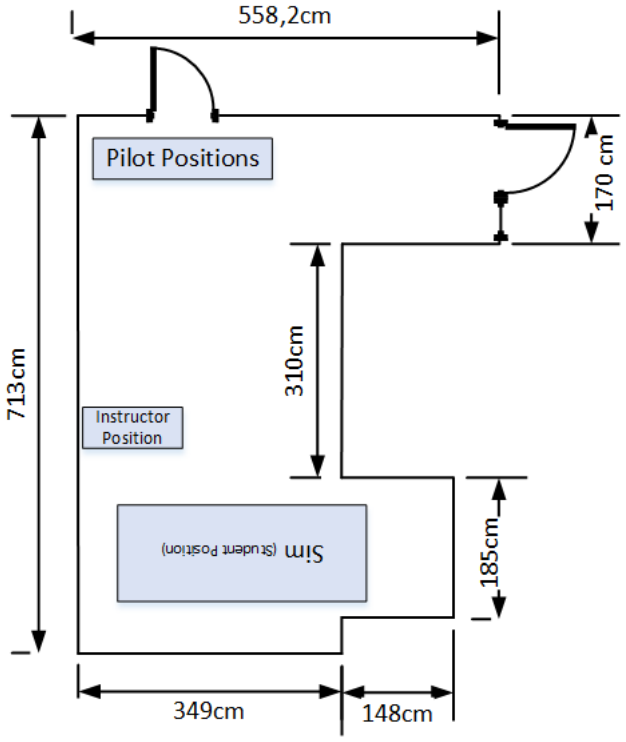


Figure 26: FABL Building Layout

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.4.2 The system cables shall be accommodated within existing dual trunking that caters for separation of electrical and network cabling. The bidder shall indicate compliance with this requirement. (I)

COMPLIANCE (C/PC/NC/Noted)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.5 **FACT**

11.5.1 Figure 27 shows the FACT building layout where the 3D mini simulator will be installed. The blue boxes indicate the required positioning for the 3D mini simulator and pseudo-pilot positions. The simulator will be powered from the building UPS. The cabling is routed through the raised floor. The room has a split unit air conditioning system to regulate the temperature in the room. The bidder shall provide a technical drawing for FACT which indicates the placement of the 3D mini simulator including all positions. (D)

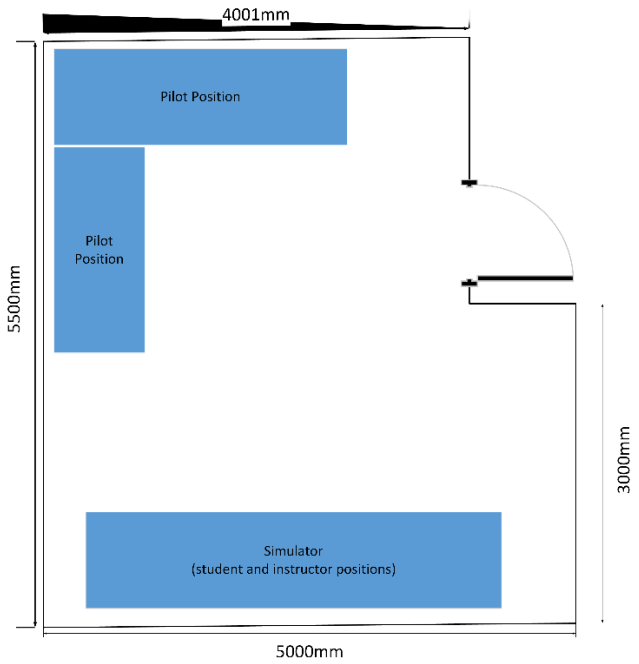


Figure 27: FACT Building Layout

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.5.2 A partition shall be installed between the 3D simulator student position and the pseudo-pilot positions to ensure clear separation between the two areas and dampen

noise between the positions. The bidder shall indicate the partition in their technical drawing and provide details of the proposed partition. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.5.3 The system cables shall be accommodated within the raised floor. The project shall provide the cable trays for the system cables. The bidder shall provide details on the proposed cable trays. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.6 **FALA**

11.6.1 The Lanseria Airport (FALA) shall be provided with a container to house the new 3D mini simulator. The proposed container layout is depicted below in Figure 28. There is a 10m x 10m dedicated land to install the container. The container shall house the 3D mini simulator including the student, instructors and pseudo-pilot positions. The bidder shall provide a technical drawing for the proposed container including all dimensions, layout of the simulator, wiring and features/ supporting systems outlined in section 11.7. (D)

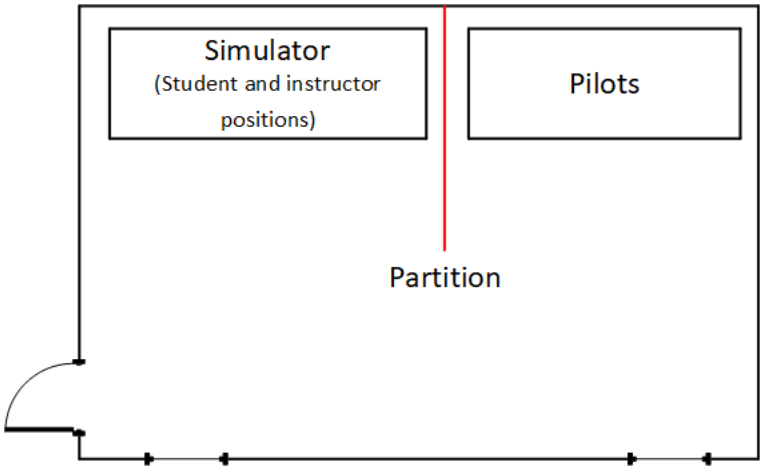


Figure 28: FALA, Proposed Container Layout

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.6.2 The size of the proposed container shall be based on the simulator size. The container shall fit on the 10m x 10m land which has been reserved for this installation. The bidder shall provide a technical drawing for the proposed container including all dimensions of the container and a dimensioned layout of the simulator to demonstrate that the container size is based on the simulator size. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.6.3 The width and the height of the container shall allow transportation without needing special approvals. The bidder shall describe how the container will be transported. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.6.4 A partition shall be installed between the 3D simulator student position and the pseudo-pilot positions to ensure clear separation between the two areas and dampen noise between the positions. The bidder shall indicate the partition in their technical drawing and provide details of the proposed partition. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.6.5 The container shall be powered from the airport power supply of 15kVA. The electrical works shall be connected to this power supply. The bidder shall indicate the estimated total power consumption of the container including the simulator and all supporting/ auxiliary systems to prove that the proposed solution can be powered from the specified power supply. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7 **Container requirements**

11.7.1 Container installation

[a] A reinforced concrete slab shall be constructed to serve as the foundation for the container on the dedicated land. There shall be a minimum of 8cm and a maximum of 12cm clearance between the concrete slab and the bottom of the container. The bidder shall provide detailed information on the concrete slab construction process which will be followed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The concrete slab shall be a minimum of 300mm larger than the container footprint on all sides. The bidder shall provide a technical drawing with dimensions which indicate the container footprint and the concrete slab footprint. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The concrete slab shall have a minimum strength of 25 MPa. The bidder shall indicate the strength of the proposed concrete slab. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The concrete slab shall have a slope of at least 1-2-degree to prevent water pooling. The bidder shall indicate the proposed slope of the concrete slab construction. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[e] The Contractor shall provide a complete, low resistance earthing (grounding) system beneath and around the container foundation to ensure personnel safety, equipment protection and compliance with applicable standards. The earth mat shall consist of a buried grid of interconnected conductors installed below the container foundation footprint and extending at least 1m beyond the perimeter of the container. The bidder shall provide detailed information on the proposed earth mat and method of installation. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.2 The container shall meet the following specifications:

[a] The container shall have a minimum of six adjustable feet to be used to level the container. The bidder shall provide a technical drawing of the proposed container indicating the adjustable feet. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The container shall have a height of at least 2600mm to provide adequate headroom inside the container. The bidder shall demonstrate compliance with this requirement. The bidder shall provide a technical drawing for the proposed container including the height dimension. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The container roof shall be pitched and corrugated. The bidder shall provide full details on the container roof construction and materials. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The outer layer of the container shall be manufactured from at least 2mm galvanized material. The container walls shall have a minimum thickness of 55mm. The internal layer shall consist of at least 0.5mm frost white Chromadek. The bidder shall provide detailed information on the construction of the container including materials and material thickness. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[e] The outer layer of the container shall be painted in red and white stripes. Preferably, the container shall be powder coated. The exact colours to be used are signal red and cloud

white. The bidder shall provide detailed information on the outer layer materials and paint. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[f] The container walls shall be strengthened to prevent unauthorized access. The bidder shall explain how unauthorized access is prevented with the design of the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[g] The container shall be waterproof and all components that are exposed to the elements shall be treated to prevent corrosion. All items such, as rivets, hinges, bolts, nuts, cable gland plates, etc. shall be stainless steel. Proof of compatibility between materials used to prevent degradation and corrosion shall be provided. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[h] The container sub-frame shall be hot dip galvanized as a minimum requirement. The bidder shall provide a container design including complete details of the dimensions and galvanized thickness. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[i] The container shall consist of a double floor of which the bottom floor will be completely sealed. The bidder shall indicate the double floor on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[j] The upper floor of the double floor shall contain cable ducts and cable trays, covered by removable tiles equivalent or similar to that of a computer server room. The bidder shall indicate the upper floor of the double floor, the cable ducts and cable trays on the technical design for the container. Detailed information on the removable tiles shall also be provided. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[k] The container shall have one main entrance door and at least two windows. The bidder shall indicate the main entrance door and windows with dimensions on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[l] The windows shall have blinds to prevent glare on the simulator screens. The bidder shall provide detailed information on the proposed blinds. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[m] The main entrance door shall be airtight and fitted with a dust proof and waterproof seal. The bidder shall provide detailed information on the proposed dust proof and waterproof seal. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[n] A door stopper mechanism shall be fitted. When the door is opened, this mechanism should prevent the door blowing shut in windy conditions. The main entrance door shall open at least 150 degrees when the stopper is engaged. The bidder shall provide detailed information on the proposed door stopper mechanism. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[o] The main entrance door shall be equipped with a doorknob that has a locking mechanism. The bidder shall provide detailed information on the proposed doorknob and locking mechanism. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.3 Air Conditioning and Air Intake

[a] The container shall be fitted with two split unit air conditioning systems. The bidder shall provide detailed information on the proposed air conditioning units and indicate their placement on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The air conditioning system shall be able to control humidity. The bidder shall provide datasheets or technical specifications of the proposed air conditioning system which indicates the ability to control humidity. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The bidder shall provide a 3-year maintenance and support plan for the air conditioning system and include provision for the costing in the pricing schedule under sheet “G6 Options”. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The container shall be fixed with a mechanical ventilation system with dust filters for fresh air intake. The bidder shall provide detailed information on the mechanical ventilation system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.4 Cable Entry Point

[a] The container shall have a cable entry point for cables connected to the main building for power and network. The bidder shall indicate the cable entry point on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The cable entry point shall be constructed from corrosive resistant material and shall be dustproof, waterproof and airtight sealed. The bidder shall provide detailed information on the cable entry point which indicates compliance with the requirement.. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The cable entry point shall not be a weak point in the container with regards to security. The bidder shall explain how the cable entry point is secure in its design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.5 Earth Bar

[a] The container shall have a single earth bar that is installed and connected to the site earth. All equipment shall be earthed to the earth bar. The bidder shall provide a datasheet or

technical specifications for the proposed earth bar and explain how the earthing will be addressed for the container installation. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.6 Lightning Protection

[a] The container shall be protected against lightning. The bidder shall demonstrate compliance by providing details of the proposed lightning protection device. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] Lightning protection is required on all AC power cables entering or leaving the container. The bidder shall explain how AC power cables are protected against lightning. (D

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.7 Fire Extinguisher

[a] The container shall be equipped with a 5kg CO2 fire extinguisher and the appropriate signage. The bidder shall provide a datasheet or technical specifications for the proposed fire extinguisher. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The bidder shall provide a 3- year maintenance and servicing plan for the fire extinguisher and include provision for the costing in the pricing schedule under sheet “G6 Options”. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.8 Occupation Health and Safety (OHAS) Requirements

[a] The design and construction of the container shall comply with the South African Occupational Health and Safety Act (85 of 1993). The bidder shall state all the standards with which the design and construction of the container comply. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] All relevant OHAS signage shall be supplied and installed with the container. The bidder shall list all the OHAS signages which will be supplied and installed with the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.9 Lighting

[a] Lighting inside the container shall support operation of the simulator without glare or shadows on the displays. The bidder shall provide detailed information on the proposed lighting for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] All lighting installed shall be Light Emitting Diode (LED) type. The bidder shall provide datasheets or technical specifications for the proposed lighting. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] The container shall have an emergency Direct Current (DC) light that can be switched on manually in the event of an Alternating Current (AC) failure. The bidder shall provide a datasheet or technical specifications for the proposed emergency light. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.10 Networking

[a] Routers and network cables shall be supplied with and installed in the container to connect to the ATNS WAN network. The bidder shall provide datasheets or technical specifications for the proposed routers and indicate the placement of the router and network points on the technical design. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.11 Cabling

[a] All cabling shall be installed in trunking, ducting or cable trays. Cable trays shall be installed inside the consoles and in the false floor. The bidder shall indicate the trunking, ducting and cable trays in the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

11.7.12 Mains Power Box

[a] The container shall be powered from the airport power line. An AC power distribution box shall be installed in a suitable location to receive the power and distribute within the container. The bidder shall provide a datasheet or technical specifications for the power distribution box and indicate the placement on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[b] The container shall be fitted with standard South African two and three pin plug points. The C13 sockets shall be provided in the consoles. The bidder shall indicate the plug points in the technical design for the container, and provide a datasheet for the C13 sockets. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[c] A mains power box shall be provided as an integral part of the container accessible from the inside and fitted with a lockable door. The bidder shall provide a datasheet or technical specifications for the mains power box and indicate the placement on the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[d] The size and design of the mains power box should cater for all the equipment needed in the container. The bidder shall provide a datasheet or technical specifications for the mains power box. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

[e] Provision shall be made for cable access from this box to the mains distribution board. All cable entries and exits from this box shall be sealed. The bidder shall indicate the mains power box and mains distribution board in the technical design for the container. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

12 SYSTEM INTERFACE REQUIREMENTS

12.1 Ethernet Interfaces

12.1.1 The system shall be able to connect to the LAN and WAN using the Ethernet port. The bidder shall provide a technical drawing which indicates how the system will connect to a LAN or WAN. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

12.1.2 The system shall have a dual Ethernet port for redundancy. The bidder shall provide a datasheet or technical specifications which indicates dual ethernet port. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

12.1.3 The Ethernet port shall have a minimum transfer speed of 100\1000 Mbps. The bidder shall provide a datasheet or technical specifications which indicates the transfer speed. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

12.2 **Protocols**

12.2.1 The system shall use the following communication interfaces at a minimum:

a. Transmission Control Protocol/Internet Protocol (TCP/IP)
b. User Datagram Protocol (UDP)
c. Simple Network Management Protocol (SNMP)

The bidder shall indicate which protocols are supported by the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13 SUPPORTING SYSTEMS

13.1 **Cabinet and Cabling**

13.1.1 All auxiliaries required (i.e. cables, KVM, etc.) to install the system shall be provided with the system. All cabling shall be neatly routed and clearly labelled. The bidder shall provide an example of the labelling convention that will be used. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.2 An equipment cabinet shall be provided for the 3D aerodrome system at the ATA. The preference for the 3D mini simulators is that the computing equipment is accommodated inside the console. The bidder shall provide a datasheet or technical specifications for the proposed equipment cabinet. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.3 The equipment cabinet shall be fitted with an anti-static strap to reduce the risk of equipment being damaged by electrostatic. The bidder shall provide details of the proposed anti-static strap. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.4 The equipment cabinet shall be accessible from the front and back for maintenance. The bidder shall provide a datasheet or technical specifications which indicates that the cabinet is accessible from the front and back. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.5 The equipment cabinet shall be designed to allow natural heat dissipation and cable management. The bidder shall explain how the equipment cabinet caters for natural heat dissipation. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.6 The equipment cabinet shall be fitted with adjustable mounting rails and sliding shelves. The bidder shall provide a datasheet or technical specifications for the proposed equipment cabinet which indicates adjustable mounting rails and sliding shelves. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.7 The equipment cabinet shall have lockable doors which can be entirely removed for equipment maintenance purposes. The lock shall have a master key. Padlock locking mechanisms are not acceptable. The bidder shall provide a datasheet or technical specifications which indicate removable doors and the locking mechanism. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.1.8 The equipment cabinet size shall be 42U. The bidder shall provide a datasheet or technical specifications which indicates the size of the equipment cabinet. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.2 **Server**

13.2.1 The system servers shall automatically re-establish all services upon recovery from a failure or after power restoration, without requiring manual intervention. The bidder shall explain how the proposed system servers will re-establish services after a failure or power restoration. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.2.2 The system servers shall be rack mounted. The bidder shall provide a datasheet or technical specifications for the servers which indicates that they are rack mountable. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.2.3 The screen for the management and configuration of server computers shall be a rackmount, retractable option on a sliding console/drawer with keyboard and mouse. A KVM switch shall also be included. The bidder shall provide a datasheet or technical specifications which indicates the screen for the management and configuration of server computers. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.3 **Network Time Server**

13.3.1 The system shall synchronise to the local time server clock. The bidder shall explain how the system is synchronised to the local time server clock. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4 **Security Measures**

13.4.1 The system shall operate as a standalone system, independent of the ATNS IT network, with controlled access to the internet. The bidder shall explain how the system operates as a standalone system with controlled access to the internet. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.2 The manufacturers shall provide updates to address any identified vulnerabilities within the system as defined within the Support and Maintenance contract. The date and time of implementation of the update shall be coordinated with ATNS. The system shall have an option to roll-back to the previous software version. The bidder shall explain how updates will be implemented on the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.3 The assessments shall be password protected and only released on the day of assessment by the programmer. The bidder shall explain how assessments are protected and released within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.4 The system shall implement access control to control permissions to files, directories, and registry keys and restrict user activities. The bidder shall explain how access control is managed within the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.5 The system shall implement Secure Audit settings, including capturing key events such as failures, logins, permission changes, unsuccessful file access, creation of users and objects, deletion and modification of system files, registry key and kernel changes. The bidder shall explain how Secure Audit settings are implemented within the proposed system.. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.6 The system shall implement safeguards through software to protect end-user machines against attacks, including antivirus, antispyware, anti-adware, personal firewalls, host-based intrusion detection systems. The bidder shall explain the safeguards that are implemented on the system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

13.4.7 The system shall use the latest secure IP network connectivity. The bidder shall describe how IP network connectivity is secured on the proposed system. (D)

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

14 VIDEO SUBMISSION

14.1 Video Requirements

14.1.1 The bidder shall submit with their bid response a 30-minute video showcasing the features**,** capabilities and operational roles (including the student, instructor, pseudo-pilot and programmer positions) of the proposed system in operation. The video shall be submitted in MP4 format on USB for hardcopy submissions, and as an MP4 file for online submissions. The video shall clearly demonstrate at least the following: (D)

a) Simulator Overview
- System architecture and hardware components
- Visual rendering and aerodrome environment engines
- Core software modules and scenario engines
- Performance, scalability, networking and multi-position integration

b) Instructor Position
- Instructor controls, scenario setup and manipulation tools
- Monitoring capabilities
- Scenario creation, modification, pause/ rewind and event injection features
- Assessment tools, logging and debriefing interfaces

c) Pseudo-Pilot Position
- Layout and functionality
- Controls for ground movement, aircraft handling and communication interfaces
- Situational awareness tools
- Interaction with the instructor and aerodrome environment
- Capability to model fixed-wing, rotary or UAV operations

d) Student Position
- Student workstation layout, interfaces and task environments
- Real-time feedback tools and evaluation indicators
- Ergonomics and workspace layout
- Interaction with simulated aerodrome environments and traffic

e) Programmer Position
- Tools and capabilities available to programmers including:
  - Scenario and environment development
  - System configuration and customisation
  - Testing and Debugging

- This section must illustrate how a programmer can tailor the aerodrome simulator to specific operational or training needs.

f) Operational Capability
- The video must include clear examples of:
  - Air traffic control tower simulation scenarios
  - Ground operations and vehicle movement simulation
  - Weather and environmental modelling, time-of-day changes and visibility conditions
  - Emergency and abnormal scenarios
  - Multi-position interaction between instructor, student and pseudo-pilots

g) Training and Assessment Capabilities
- Assessment tools, performance scoring and report generation
- Scenario libraries and customisation features
- Recording, playback and after-action review systems

COMPLIANCE (C/PC/NC)	*Only responding C/PC/NC/Noted will not be accepted without proof.*	
[THE BIDDER SHALL INSERT FULL RESPONSE FOR EVALUATION HERE]		
[THE BIDDER SHALL INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]		

---------- END OF VOLUME 2 ----------