AIR TRAFFIC AND NAVIGATION SERVICES CO. LTD
REPUBLIC OF SOUTH AFRICA

REQUEST FOR PROPOSALS:

ATNS/RFP02/02/2025/26/RADSIM

RADSIM REPLACEMENT PROJECT

The supply, delivery, commissioning, and support of a new surveillance simulator for the ATA

[Project Reference: Sim_2020_319]

VOLUME 2

Version 1.0

TECHNICAL SPECIFICATIONS

March 2026

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1   GENERAL INSTRUCTIONS TO BIDDERS

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 (CHAPTER, SECTION, PAGE NUMBER, PARAGRAPH NUMBER) TO DOCUMENTS AND RELEVANT INFORMATION SUPPORTING THE RESPONSES SHALL BE INDICATED IN THE SPACE PROVIDED. THIS INFORMATION WILL BE THE **ONLY RESPONSE USED FOR THE EVALUATION AND ASSESSMENT**.

Responses, provided in the space allowed, that are not clear or inadequate or the lack thereof shall be interpreted as **"Not Compliant"** even though the compliance column is declared as "Comply" and/or the 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 each and every paragraph of this document in the column labelled "Compliance" as follows:

> C: fully compliant   =   2 points:
>
> PC: partly compliant   =   1 point;
>
> NC: not compliant   =   0 points.
>
> Noted: Noted and accepted (applicable to paragraphs marked as "I", not containing requirements)

Bidders shall, for paragraphs declared "PC" or "NC", include a statement as to the nature of the variation and may additionally supply supporting information in the space provided to demonstrate how the proposal meets the needs of ATNS.

Paragraphs marked "(M)", indicates that the requirement is mandatory and proposals not compliant with the requirement shall be disqualified for further evaluation.

Paragraphs marked "(D)", indicates that the requirement is desirable, and the Bidder is expected to declare their level of compliance, formal response and reference supporting documents.

Paragraphs marked "(I)", indicates that the requirement is for information, however the Bidder is still expected to respond and provide information if requested. Any information gathered herein may form part of the contractual terms.

Paragraphs marked "(O)", indicates that the requirement is optional, and the Bidder may decide how to respond.

2   INTRODUCTION

The document contains the consolidated technical specifications for the Radar Simulator Replacement Project. The document is broken down into the following chapters:

[a]   Chapter 1 – General Information.

[b]   Chapter 2 – Simulator Technical Specifications

[c]   Chapter 3 – Consoles Technical Specifications

[d]   Chapter 4 – Project Management Specifications

[e]   Chapter 5 – Logistics Support Specifications

GLOSSARY

2.1   Definitions

The following are definitions of all words and expressions/terms used in this 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. As a guide, the following can be looked at:

- terms which are not likely to be in the vocabulary of the intended users of the requirements specification,

- terms which have multiple dictionary meanings but only a single requirements specification meaning,

- technical terms and terms which are used with special meanings should be defined in this section.

2.2   Abbreviations & Acronyms

Abbreviation	Description
ACC	Area Control
ADS	Automatic Dependent Surveillance
AFTN	Aeronautical Fixed Telecommunication Network
AIDC	ATS Interfacility Data Communication
AMAN	Arrival Manager
AMHS	Aeronautical Message Handling System
APP	Approach Control
ASD	Air Situational Display
ATA	Aviation Training Academy
ATA*	Actual Time of Arrival
ATD	Actual Time of Departure
ATM	Air Traffic Management
ATNS	Air Traffic and Navigation Services
ATS	Air Traffic Services
ATSU	Air Traffic Services Unit
BRL	Bearing and Range Lines
CD	Compact Disk
CDRL	Contract Data Requirements List
CMP	Configuration Management Plan
CPDLC	Controller Pilot Data Link Communications
CTOT	Calculated Take-off-Time
DB	Distribution Board
DME	Distance Measuring Equipment
EIA	Electronic Industries Association
ETA	Estimated Time of Arrival
FAT	Factory Acceptance Test
FDP	Flight Data Processor
FIS	Flight Information Services
FPL	Flight Plans
HMI	Human Machine Interface
HTTP	Hypertext Transfer Protocol
IC	Integrated Circuit
ICAO	International Civil Aviation Authority

IEC	International Electrotechnical Commission
ILS	Instrument Landing Systems
ILS*	Integrated Logistics Support
LED	Light Emitting Diode
MLAT	Multilateration
MSP	Multi-Sector Planner
MTBF	Mean Time Before Failure
NDB	Non-Directional Beacon
NOTAM	Notice to Air Missions
OEM	Original Equipment Manufacturer
OJTI	On-the-Job Training Instructor
PBN	Performance Based Navigation
PDU	Power Distribution Unit
POB	People on Board
PSR	Primary Surveillance Radar
PSU	Power Supply Unit
PTT	Push-to-Talk
RAM	Reliability, Availability, Maintainability
RNAV	Area Navigation
RNP	Required Navigation Performance
RPL	Repetitive Flight Plan
RVSM	Reduced Vertical Separation Minima
SAT	Site Acceptance Test
SFPL	Supplementary Flight Plan
SIDs	Standard Instrument Departures
SLA	Service Level Agreement
SSL	Secure Sockets Layer
SSR	Secondary Surveillance Radar
STARs	Standard Terminal Arrival Routes
TLS	Transport Layer Security
USB	Universal Serial Bus
VCCS	Voice Communication Control System
VESA	Video Electronics Standards Association
VOR	Very High Frequency Omni-Directional Range
WAM	Wide Area Multilateration
WBS	Work Breakdown Structure

CHAPTER 1 – GENERAL INFORMATION

3   PRELIMINARY

3.1   Background

The Aviation Training Academy (ATA) contributes to ATNS's air traffic services training pipeline through the scheduling and presentation of Air Traffic Services Assistant Coordination, Approach and Area procedural training, which are regarded as prerequisites for surveillance/ radar training. The ATS training offerings make up about eighty percent (80%) of the available training capacity to ATNS personnel, and the remaining capacity is allocated to external clients.

ATNS Air Traffic Service units (ATSU) are still required to implement or control the air traffic procedurally, particularly the ATSUs not equipped with the radar surveillance human machine interface system. Consequently, it becomes imperative that the ATA is capacitated with a suitable training simulator platform and equipment to deliver training in the procedural ATS training disciplines.

The ATA ATS training department has relied on the following ATM simulators to deliver on its mandate:

> [a] TopSky simulator for primarily surveillance - related ATS rating training.
>
> [b] UFA AT-Coach (radar simulator commonly known as RADSIM) simulator for primarily procedural ATS rating training; (decommissioned and disposed) and
>
> [c] Total Control 3D simulator for Aerodrome Control and related ATS rating training.

The purpose of this project is to replace the radar simulator (RADSIM) with a surveillance simulator. The decommissioned radar simulator was installed and commissioned in around 1990 and underwent a hardware and software upgrade during 1999 to ensure Y2K compliance. Despite this upgrade, the simulator significantly exceeded its life-expectancy and planned operational utilisation of ±15 years; and continued to form an integral part of the training equipment that supported Air Traffic Services (ATS) training until late 2018. The equipment became obsolete, and the training system could no longer be used. Subsequently, the system broke down in December 2018, and as it was impossible to restore to operations, the process to dispose the system was initiated early 2019.

3.2   Scope of work

The scope of work includes the following:

1) Supply, delivery, installation, and commissioning of a complete surveillance simulator for training purposes, and all its auxiliary equipment (consoles, headsets, computer peripherals, etc.).

2) Training of technical and operational personnel on the acquired surveillance simulator.

3) Support and maintenance of the complete surveillance simulator and auxiliary equipment for a period of 10 years.

3.3   System Definition

Throughout this document, the surveillance simulator and all the auxiliary equipment required for its operation is referred to as "the system".

The system is required for the provision of air traffic services training which includes the following:

a) Area Control (ACC) Training- Surveillance and Procedural

b) Approach Control (APP) Training- Surveillance and Procedural

c) Flight Information Service (FIS) Training- Surveillance and Procedural

d) On-the-Job Training Instructor (OJTI) Training- Surveillance and Procedural

e) Multi-sector Planner Training- Surveillance and Procedural

Other functions which the system is required to support include:

a) Recreation of air traffic control scenarios for internal incident investigations.

b) Testing of existing and new operational procedures (Standard Instrument Departures (SIDS) and Standard Terminal Arrival Routes (STARS)) for ATNS.

A high-level system breakdown is provided in Figure 1.
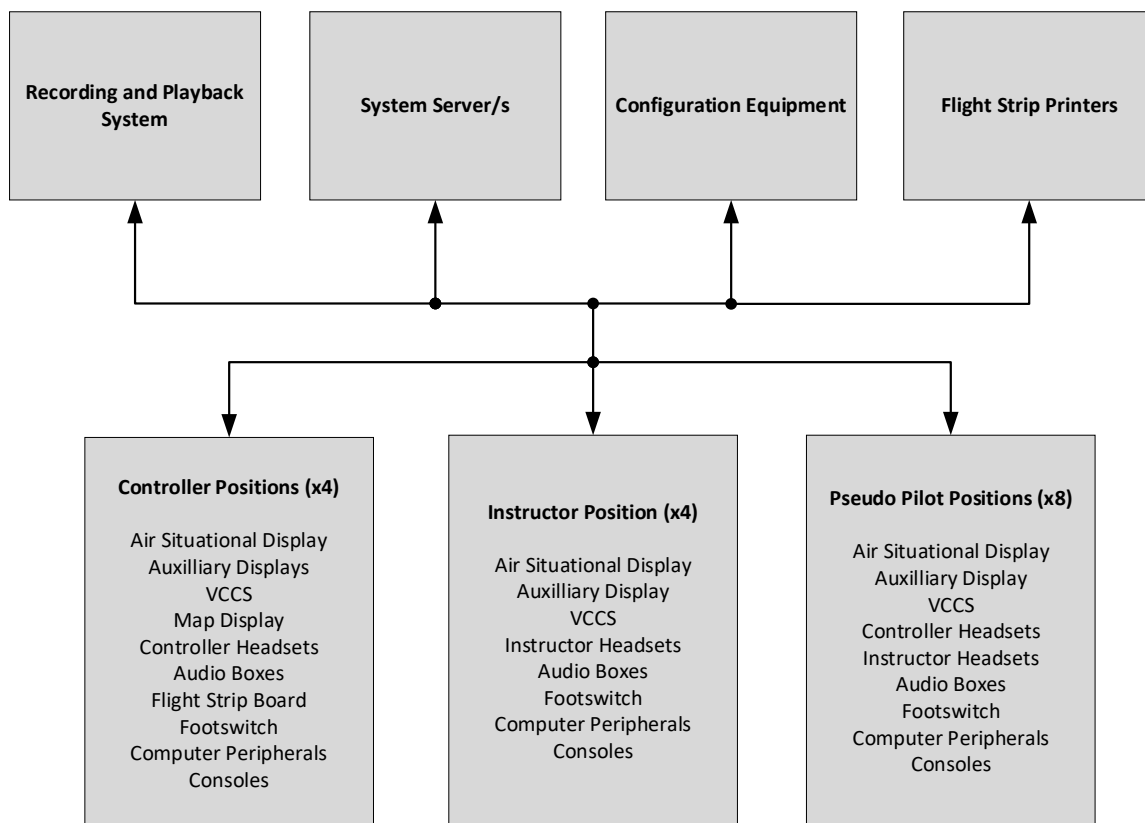
Figure 1. High-Level System Breakdown

CHAPTER 2 – SIMULATOR TECHNICAL SPECIFICATIONS

4   GENERAL REQUIREMENTS

4.1   Environmental Conditions

[A] The Bidder shall provide supporting information showing that the system and all its auxiliary components shall withstand and operate within specifications under the environmental conditions as tabulated below. (D)

Table 1. Environmental Conditions

Ambient Temperature	5 °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/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

4.2   Environmental Sustainability Requirements

[A] The utilisation of resources and disposal of the existing equipment and waste during various stages of the project shall take into consideration and adhere to the ATNS Integrated Waste Management Policy. The Contractor shall submit certificates of disposal to ATNS. The Bidder shall explain how this requirement will be met by their proposed solution. (D)

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

[B] The applicable national regulations (including section 28: Duty of care, of the National Environmental Management Act (NEMA) and environmental by laws shall be adhered to. The Bidder shall explain how this requirement will be met by their proposed solution. (D)

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

[C] The system shall utilise efficient power management measures and utilise energy efficient power supplies. The Bidder shall explain the efficient power management measures which are implemented in the proposed solution. (D)

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

4.3 System Lifespan

[A] The system shall operate within the environmental conditions stated in section 4.1, for a minimum period of 10 years. The Bidder shall provide supporting documentation on all products and materials used to support compliance to this requirement. (D)

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

[B] Any interventions that may be required to achieve the system's lifespan shall be stated. The Bidder shall provide a full detailed proposal including pricing for any interventions which may be required, in their Bid response. (D)

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

4.4 Modularity

[A] 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 release of simple locking devices. The Bidder shall provide modular technical designs for every required position of the simulator and the consoles including placement of all equipment mountings and storage sections. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] All system components shall be readily accessible to the maintenance personnel, easily disassembled and replaced. The Bidder shall explain how this requirement is met by their technical designs. (D)

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

[C] Cabinet and console cooling fans shall require minimal effort to change or replace. The Bidder shall provide full details and supporting information in the form of technical specifications or datasheets on the proposed devices. (D)

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

4.5   Software

[A] The system shall be able to automatically detect the size/s of displays and adjust accordingly such that the operation of the simulator is not affected. The Bidder shall explain how the size/s of displays are adjusted on the proposed system. (D)

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

[B] All system related software required for the operation of the system shall be provided. The Bidder shall list all the software that will be provided for the operation of the system. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[C] The Bidder shall confirm that all software shall be supplied on a Compact Disk (CD) and Universal Serial Bus (USB) flash disk. (D)

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

[D] The Bidder shall confirm that the contents of the disks shall be allowed to be copied for backup purposes and internal distribution. (D)

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

[E] The Bidder shall provide the minimum specification for computers to run the software provided under this project. (D)

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

[F] The Bidder shall confirm that all system software will be kept current and updated throughout the entire lifespan of the system and is included as part of the maintenance and support contract. (D)

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

4.6 Licenses

[A] Any licenses required for the operation of the system for the entire lifespan shall be supplied with the system, with an indication of whether they are renewable or issued once-off. This includes any/ all software licenses as well as licenses for operating systems on machines. The Contractor shall furnish ATNS with copies of the licenses before SAT. The Bidder shall provide a list of all licenses required for the operation of the system. (D)

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

[B] The Bidder shall confirm that all licenses will be in ATNS' name. (D)

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

[C] The Bidder shall explicitly state any Terms and conditions, and any limitations on licenses. (D)

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

[D] The Bidder shall provide any license requirements for the expansion of the number of positions on the simulator. (D)

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

4.7   Power Requirements

[A]   The system shall operate from 230V ± 10% at 50Hz ± 5% AC mains power supply. The Bidder shall include datasheets for the system indicating the design values and tolerances. (D)

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

[B]   The existing building mains feed is configured as per Figure 2 This is the only mains feed which is available for the simulator. The Bidder shall confirm that the proposed system shall operate with the existing building mains feed configuration. (D)
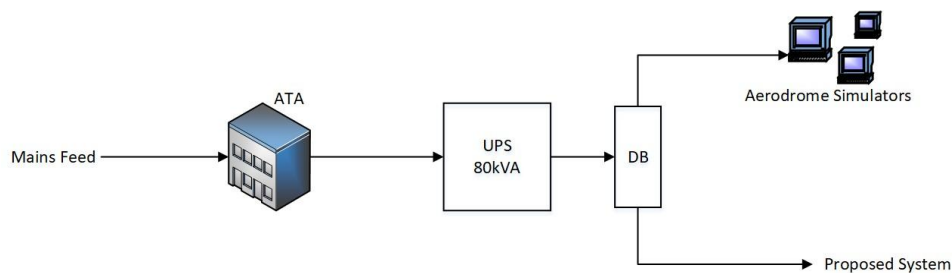
Figure 2. ATA Mains Feed

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

[C]   The system shall have a single-power feed supplied by the existing building mains. The Bidder shall explain how power will be fed to the system from the existing building mains. (D)

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

[D]   The current UPS rating is 80kVA (3-phase) and has 40kVA available load capacity. The Bidder shall provide the power requirements for the proposed system and confirm that the proposed system will operate on the existing UPS. (D)

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

[E]   The load capacity of the UPS may be expanded by adding another 20kVA module. If an additional 20kVA module is required, it shall be provided with the system. The Bidder shall confirm whether an additional module is required and make provision in the costing if necessary. (D)

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

[F]   The system shall have identical main and standby Power Supply Units (PSUs) configured in hot standby for any servers supplied with the system. Both the power supply units shall be connected to the main power feed. The Bidder shall provide a datasheet for the PSU. (D)

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

[G]   The transition from the main PSU to the standby PSU shall be seamless and allow for both manual and automatic changeover without disturbing the operation of the system. The Bidder shall explain how this requirement is met by the proposed system. (D)

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

[H]   The system shall start-up automatically after a power failure in the sequence which is required to configure the simulator. The Bidder shall explain how this requirement is met by the proposed system. (D)

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

[I]   The system shall remain powered 24/7. The Bidder shall explain how this requirement is met by the proposed system. (D)

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

4.8   Electrical Work

[A]   The supply, installation and connecting of power feeds from the existing main DB to the equipment and/ or consoles DB's (section 15.3.8) shall be performed under this project. The power cables shall be labelled and installed neatly in existing cable trays and cable ducts. Bidders shall provide a wiring diagram/s for the system with their proposal. (D)

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

[B]   Each position console shall be connected through an individual circuit breaker to the main DB. The Bidder shall show the connections for each position on the wiring diagram/s, and provide detailed information in the form of technical specifications or datasheets on the proposed circuit breakers. (D)

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

[C] The layout of the DB may be changed if necessary. Any additional circuit breakers which are needed must be provided by the Contractor. The Bidder shall include this in the costing if needed. (D)

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

[D] The Bidder shall confirm that all mains power wiring will be done in accordance with the WIRING OF PREMISES (SANS 10142-1) requirements.

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

[E] The Bidder shall confirm that an Electrical Compliance Certificate as issued by a certified electrical contractor shall be supplied for all electrical work performed (including on consoles) after simulator installation. 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/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[F] The system shall incorporate materials that are good insulators to minimize the occurrence of electrical shock. The Bidder shall provide full details on the materials which are incorporated in the system. (D)

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

4.9 Cabling

4.9.1 General

[A] All the cables and connectors that are needed for the system to be commissioned and deemed fully functional shall be provided with the system. Cable lengths can be calculated using the floor plan in Figure 10 for costing purposes. The Bidder shall include cable costs and associated cable lengths in the pricing schedule. (D)

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

[B] Any network cables required for the system shall be CAT-6 shielded. The Bidder shall provide full details and supporting information in the form of technical specifications or datasheets on the offered network cables. (D)

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

4.9.2 Cable Management

[A] A clear interconnection diagram depicting the system components, system layout, cables, configuration, power and flow of communication shall be provided by the Bidder. (D)

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

[B] The Bidder shall confirm that all power and communication cabling will be clearly and neatly labelled. Labelling of cables shall be colour coded and include a numerical identifier, cable type, source (unit name, port, location) and destination (unit name, port, and location). The Bidder shall provide an example of cable labelling that will be used. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

4.9.3   Cable Routes

Cabling for equipment shall be routed through the existing raised access floor in the simulator room, pilot room and equipment room. Feeder holes will need to be made through the floor at various positions for connections to the consoles and equipment throughout the rooms. The cabling will then be routed to the equipment and console's working surface (to modules, mice and keyboards) or the console's support base (to display/ monitor mounting arms and monitors/ displays) or the equipment storage section (to desktop computer towers). In principle, cables shall be routed to any of the following termination points, through any of the following passage/ midway points and from any of the following entry points:

- Console working surface,
- Console support base,
- Monitor/ display mounting arm/s,
- Equipment storage section,
- The simulator room floor.
- Simulator room mains DB.

[A] The cable management system of the simulator shall account for the cable route defined above. The Bidder shall define and provide the design of the cable management system for the simulator and associated components as required. (D)

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

[B] The cable management system shall ensure that cables are directed through the necessary channels or routing mechanisms, in an organised manner, without congesting the route. The cable routes of the cable management system should allow for flexible routing. The Bidder shall explain how this requirement is met by the proposed cable management solution. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[C] ATNS's preference is for brush panels or similar instead of open cable entry/ exit points. The Bidder shall provide detailed information in the form of technical specifications or datasheets on proposed devices to be used in cable entry/ exit points. (D)

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

4.9.4   Cable Separation

[A] The incorporated cable management system shall separate power cables and communication cables in separate cable routing mechanisms. The Bidder shall explain how the cable management system will ensure separation of power cables from communication cables. (D)

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

4.9.5   Cable Routing Mechanism/s

[A] There shall be a cable routing mechanism/s for the cable management system that allows for easy access to routed cables and for installation of new cables. The Bidder shall provide details of the cable routing mechanism/s. (D)

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

[B] The capacity of the cable routing mechanism/s shall take into consideration the quantity of equipment per position. The Bidder shall provide the limitations on the number of cables which the cable routing mechanism/s can handle. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

4.10 Equipment Installation

[A] The installation, set-up and commissioning of the system, and adjustments during site acceptance tests are included under this project. The Bidder shall ensure that all of these aspects are covered in their Bid. (D)

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

[B] The final configuration and setup including parameters and settings on the system shall be recorded by the Contractor and included in the As-Built document which shall be provided to the Company. The Bidder shall indicate compliance with this requirement. (I)

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

4.11 Room Refurbishment

4.11.1 Lighting

[A] Lighting shall be installed in the simulator room to ensure that the simulator positions are provided with optimal lighting for a Controller in an operational environment for both surveillance and procedural activities. The Bidder shall provide a proposal for lighting in the simulator room and make provision for it in the costing. (D)

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

[B] The lights shall not create any glare, reflections or shadows on the simulator displays. The Bidder shall provide full details and supporting information in the form of technical specifications or datasheets on the proposed lighting devices to demonstrate compliance with the requirement. (D)

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

[C] The lighting in the Simulator room shall be individually dimmable per Controller/ Instructor position. The Bidder shall provide full details and supporting information in the form of technical specifications and datasheets, on the proposed light dimming devices; and explain how this requirement will be met by the proposed solution. (D)

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

[D] The lighting in the Pilot room shall be dimmable and controlled by a single dimming switch. The Bidder shall explain how this requirement is met by the proposed solution. (D)

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

4.11.2 Cooling

[A] There shall be twenty-five (25) 495mm x 148mm (length x width) ventilation grills supplied and installed in the raised access floor tiles to allow force cooled air to circulate into the equipment storage section of the consoles for each position. The Bidder shall provide full details and supporting information in the form of technical specifications and datasheets on the proposed ventilation grills and make provision for the cost in the pricing schedule. (D)

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

4.11.3 Dry Wall

[A] A drywall partition with a standard-sized door shall be erected within the simulator room to separate the aerodrome simulators and the proposed system. The drywall shall be painted white. The dimensions of the drywall shall be as follows:

- Length = 11,77m
- height = 3,48m

The bidder shall provide the design of the drywall as part of the technical specifications and ensure that provision for the cost is included in the pricing schedule.

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

4.12 General Simulator Requirements

[A] The system shall be programmed with standard ICAO requirements for rules of air and air traffic control. The system shall also allow the amendment of existing, or creation of new rules of the air and air traffic control. The Bidder shall explain how this requirement is met by the proposed solution. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The system shall be programmed with standard ICAO requirements for separation and conflict detection. The Bidder shall explain how this requirement is met by the proposed solution. The

Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The system shall provide the following warnings and alerts based on ICAO requirements as a minimum:

Table 2. Warnings and Alerts

Importance	Alert
Level 0	TCAS Resolution Advisory (TCAS-RA)
Level 1	Short Term Conflict Alert (STCA)
	Danger Area Infringement Warning (DAIW)
	Minimum Safe Altitude Warning (MSAW)
	Approach Path Monitoring (APMW)
	Departure Path Monitoring (DPMW)
	ADS-C Danger Area Infringement Warning
	NTZ Alert
	Flight Plan Conflict Alert (FPCF) - Critical
	SAP Alert – Critical
	TCT Alert – Real
	AVC Alert - Critical

The Bidder shall list and explain any deviations from the minimum required warnings and alerts listed above. (D)

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

[D] The system may provide the following additional warning and alerts:

Table 3. Additional Warnings and Alerts

Importance	Alert
Level 2	Predicted Conflict Alert
	Flight Plan Conflict Alert (FPCF) – Elevated
	SSR Emergency
	SAP Alert
	SSR Hijack
	SSR Communications Failure
	ADS-C Emergency
	TCT Alert – Close
	CSTD Alert
Level 3	Route Adherence Monitoring (RAM)
	Cleared Level Adherence Monitoring (CLAM)
	ADS-C Cleared Level Adherence Monitoring (ACLAM)
	ADS-C Route Adherence Monitoring (ARAM)
	RVSM Airspace Infringement Warning (RAIW)
	ADS-C Route Conformance Warning (ARCW)
	Search and Rescue Alert
	ACE Sequence Alert
	ACE FTD Catch Up Alert
	ACE ITD Infringement Alert
Level 4	Estimated Time Overflight Discrepancy Warning
	Missed Position Report Alert
	Flight Plan Conflict Alert (FPCF) – Normal
	SAP Alert – Normal
	8.33 Equipment (833)
	B-RNAV Equipment (BRNAV)
	Duplicate Code Alert (DUPE)
	TCT Alert – Actual
	ACE ITD Catch Up Alert

The Bidder shall list and explain any deviations from the additional warnings and alerts listed above.

(D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[E] Warnings and alerts shall be audibly and visually represented with the functionality to mute them. The Bidder shall explain how these warnings and alerts are represented on the proposed system. (D)

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

[F] The system shall have simulated Controller Pilot Data Link Communications (CPDLC) functionality programmed according to ICAO requirements. The Bidder shall explain how the CPDLC functionality is incorporated in the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] The system shall have simulated Aeronautical Fixed Telecommunication Network (AFTN) functionality programmed according to ICAO format. The Bidder shall explain how the AFTN functionality is incorporated into the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The system shall have simulated Aeronautical Message Handling System (AMHS) functionality programmed according to ICAO requirements. The Bidder shall explain how the AMHS functionality is incorporated into the proposed system. The Bidder shall provide an indication of the percentage

of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

5   EQUIPMENT REQUIREMENTS

5.1   Equipment List

Table 4. Equipment List

Controller Position	Pseudo Pilot Position	Instructor Position	Additional Equipment
Air Situational Display (ASD) x 1	Air Situational Display (ASD) x 1	Air Situational Display (ASD) x 1	
Left- side Auxiliary Display x1			
Right- side Auxiliary Display x1	Right- side Auxiliary Display x1	Right- side Auxiliary Display x1	
Map Display			
Voice Communication Control System (VCCS) (Touchscreen Display and Ambient Mic)	VCCS (Touchscreen Display and Ambient Mic)	VCCS (Touchscreen Display and Ambient Mic)	VCCS (Configuration Equipment)
Audio box x2	Audio box x2	Audio box x2	
Controller Headsets x4	Controller Headsets x4	Controller Headsets x2 Instructor Headsets x2	
Flight strip board			
Keyboard	Keyboard	Keyboard	Keyboard
Mouse	Mouse	Mouse	Mouse
Footswitch	Footswitch	Footswitch	
			Flight Strip Printer x 4

5.2   Machines

[A]   All the machines/ computers, servers and storage which are needed to drive the system shall be provided with the system. The Bidder shall ensure that all machines/ computer, servers and storage

are included in their proposal with datasheets; and provision for the costing is included in the pricing schedule. (D)

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

[B] All machines shall be maintained at the optimal temperature for performance by cooling fans, air circulation and ventilation. The Bidder shall explain how the optimal temperature for performance is maintained by the proposed machines. (D)

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

[C] Any machines which are not housed in the console equipment cabinets shall be installed in a freestanding 19-inch equipment cabinet described in Section 5.3. The Bidder shall list all the machines that will not be housed in the console equipment cabinets. (D)

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

5.3   Freestanding Equipment Cabinet

[A] The equipment cabinet shall cater for 19-inch based rack mountable equipment by complying with the Electronic Industries Association (EIA) standard EIA-310 for a standard rack. The Bidder shall provide a detailed technical drawing including dimensions for the freestanding equipment cabinet. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] Sliding racks/ trays shall be provided for the equipment cabinet. The cabinet shall incorporate heavy-duty 19-inch rack mountable sliding mechanisms that will allow technicians to slide/draw out equipment from the cabinet for maintenance activities. The Bidder shall indicate the proposed sliding rack/ trays and sliding mechanisms on the technical drawings. (D)

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

[C] The equipment within the cabinet shall be easily accessible from the front and back of the cabinet for maintenance activities. The front and back of the cabinet shall be closed with panels that can be removed and placed back into position quickly and easily to allow for maintenance personnel to access the equipment and cables. The Bidder shall indicate the front and back panels on the technical drawings. (D)

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

[D] The equipment cabinet doors shall be perforated to permit sufficient airflow in and out of the equipment cabinets. The Bidder shall indicate the front and back panels on the technical drawings or datasheets. (D)

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

[E]   The equipment cabinet shall be cooled by cooling fans within the cabinet. The Bidder shall provide detailed information supported by technical specifications or datasheets for the proposed cooling fans. (D)

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

[F]   The equipment cabinets' front and back doors shall be lockable. The lock shall cater for a master key. Padlock locking mechanisms are not acceptable. The Bidder shall provide detailed information supported by technical specifications or datasheets for the proposed locking mechanisms. (D)

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

[G]   The equipment cabinet shall have a cable management system. The cable management system shall take into consideration the cable route as defined herein and the sliding in and out of equipment from the equipment cabinets. The Bidder shall explain how cable management is achieved in the proposed equipment cabinet. (D)

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

[H]   The equipment cabinet design shall cater for noise suppression. The Bidder shall explain how noise suppression is achieved by the proposed equipment cabinet design. (D)

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

[I] Each equipment cabinet and all equipment shall be appropriately earthed and connected to site earth. The Bidder shall explain the method and materials that will be used to achieve earth connections. (D)

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

[J] The equipment cabinet shall be fitted with a power distribution board (DB). The DB shall have one mains switch. The main switch shall be a 2 pole, D Curve miniature circuit breaker. The main switch shall be clearly labelled on the DB. The Bidder shall provide supporting information on the proposed DB which proves compliance with the requirement. (D)

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

[K] The cabinet shall be fitted with two (2) Power Distribution Units (PDUs). Each PDU shall have at least eight International Electrotechnical Commission (IEC) C13 sockets. The PDU's shall not obstruct access to equipment. The PDU's shall be connected to the Distribution Board installed inside the cabinet. An example of a PDU with C13 sockets is shown in Figure 3. The Bidder shall provide details of the proposed PDU. (D)

Figure 3. Example of PDU

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

[L]   The look and feel of the cabinet shall match the aesthetic of the consoles described in Chapter 3. The Bidder shall provide a description of the look and feel of the proposed cabinet. (D)

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

5.4   Displays

[A]   Displays shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that all displays are included in the proposal and that provision for the costing has been included in the pricing schedule. (D)

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

[B]   The Controller and Instructor ASD shall be at least 2K x 2K square display. The Bidder shall provide a datasheet for the proposed Controller and Instructor ASD to prove compliance with the requirement. (D)

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

[C]   The Pseudo Pilot ASD shall be at least 24-inch resolution to support the functions of the simulator. The Bidder shall provide a datasheet for the proposed Pseudo Pilot ASD to prove compliance with the requirement. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[D] The auxiliary displays shall be at least 24-inch with resolution to support the functions of the simulator. The Bidder shall provide a datasheet for the proposed auxiliary displays to prove compliance with the requirement. (D)

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

[E] All displays provided for the Instructor and Pseudo Pilot positions shall be supplied with telescopic stands such that they may be desk mounted. The Bidder shall provide detailed information on the telescopic stands. (D)

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

[F] The map display shall be a 46-inch ultra-high-definition LED screen. The Bidder shall provide a datasheet for the proposed map display to prove compliance with the requirement. (D)

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

[G] All displays shall incorporate an anti-glare film. The Bidder shall provide reference to technical specifications or datasheets to prove compliance with the requirement. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[H] Displays shall be able to operate 24/7 without being switched off. The Bidder shall confirm that all displays can operate 24/7 without being switched off, without degradation in performance for the lifespan of the system. (D)

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

[I] Displays shall have internal power supply units and shall not require an external power supply or adapter. The Bidder shall explain how this requirement is met for the proposed displays. (D)

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

[J] Displays shall incorporate a method to eliminate image-burn/ shadow burn. The Bidder shall explain the method used to eliminate image-burn/ shadow burn on the proposed displays. (D)

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

[K] Displays shall have adjustable settings for the following as a minimum:

    I. Brightness and Auto-Brightness

    II. Contrast

    III. Eco-mode

    IV. Human Sensing

    V. Black Level Adjustment

    VI. Picture Position Adjustment

The Bidder shall provide technical specifications or datasheets which provides the adjustable settings for each proposed display. (D)

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

[L] All displays shall accommodate Video Electronics Standards Association (VESA) mount plates (Figure 4) for mounting purposes. The Bidder shall provide technical specifications or datasheets for the proposed displays to prove compliance with the requirement. (D)

Figure 4. VESA Mount Plate

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

5.5   Headsets

[A] Headsets shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that headsets are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] Headsets shall be intended for use in the air traffic control environment by design. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for ATC headsets. (D)

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

[C] Instructor Headsets supplied for Instructors shall have an in-line push to talk (PTT) button. Controller Headsets do not require a PTT button. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for in-line PTT button. (D)

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

[D] The length of the cable for the headsets shall enable an Instructor to stand up from the Instructor console and position themselves behind the Controller at the Controller position console. The Bidder shall indicate the length of the headset cable and confirm that the requirement is met by the proposed headset. (D)

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

[E] Headsets shall be lightweight and ergonomic in design. The Bidder shall provide the weight of the proposed headset and prove that the headset is ergonomic in design with technical specifications or datasheets. (D)

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

[F] Headsets shall have stereo/ dual channel configuration for dual communications. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for stereo/ dual channel configuration. (D)

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

[G] Headsets shall have noise cancellation/ compensation on the microphone. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for noise cancellation/ compensation. (D)
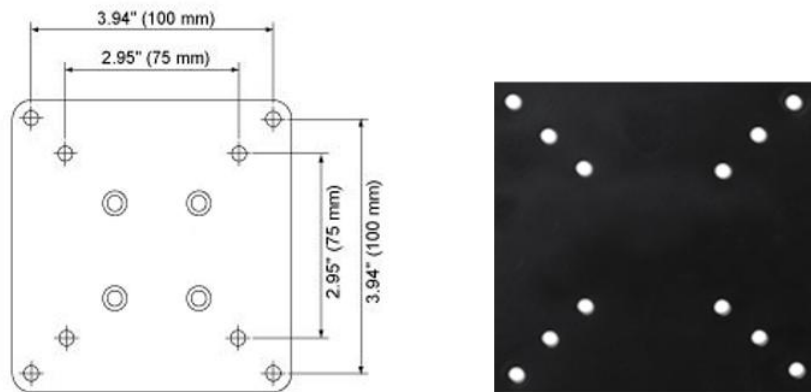
COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[H] Headsets shall have an impedance of 300Ω on the headphones and 150 - 2200Ω on the microphone. The Bidder shall technical specifications or datasheets for the proposed headsets to prove compliance with the requirements for impedance. (D)

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

[I]   Headsets shall have an adjustable headband. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for the adjustable headband. (D)

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

[J]   Headsets shall have a flexible microphone boom, which may be worn on either the left or right side. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for the flexible microphone boom. (D)

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

[K]   Headsets shall be equipped with a LEMO connector to be connected to the ports (Figure 5 and Table 5) on the audio boxes. The connectors shall be the following type: FGG2B310CLAD42Z (for 10 Pin) and GMA.2B.040.DN (LEMO strain relief) (Figure 6 and Table 6).
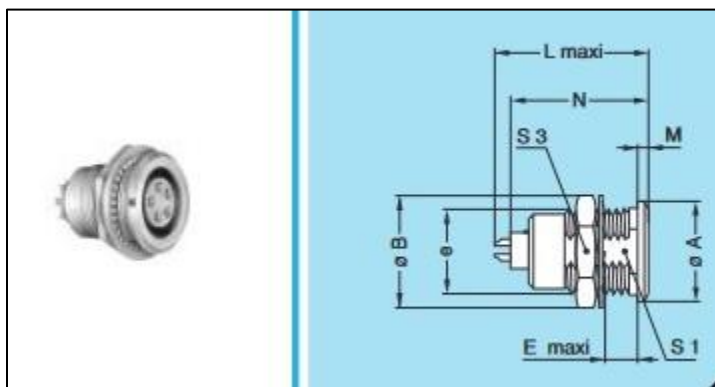
Figure 5. Headset Port

Table 5. Headset Port Dimensions

Reference			Dimensions (mm)							
Model	Series	A	B	e	E	L	M	N*	S1	S3

| EGG | 2B | 18 | 19.2 | M15x1.0 | 8.5 | 26.7 | 1.8 | 24.6 | 13.5 | 17 |

* Maximum length with crimp contacts
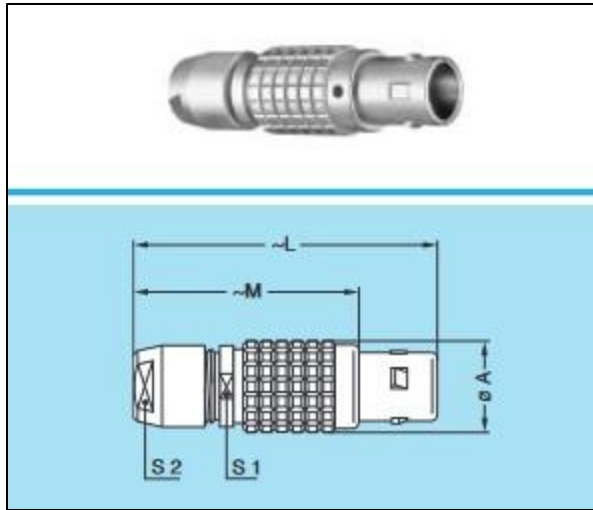
Figure 6. Headset Connector with Strain Relief

Table 6. 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

The Bidder shall provide detailed information in the form of technical specifications or datasheets for the proposed headsets LEMO connector. (D)

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

[L] Headsets shall be supplied with a storage bag. The Bidder shall technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for the storage bag. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[M] Earpads on the headsets shall be replaceable. 500 pairs of earpads shall be supplied with the system. The Bidder shall provide technical specifications or datasheets for the proposed headsets to prove compliance with the requirement for replaceable earpads; and ensure that provision for the cost of the earpads is included in the pricing schedule. (D)

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

[N] Headsets shall have a warranty of at least two years. The Bidder shall indicate the warranty period for the proposed headsets. (D)

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

5.6   Computer Peripherals

5.6.1   Keyboards

[A] Keyboards shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that keyboards are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

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

[B] The keyboard shall be wired with USB Type-A interface. The cable length shall be at least 1.8m. The Bidder shall provide technical specifications or datasheets for the proposed keyboards to prove compliance with the requirement for USB Type-A interface and 1.8m cable length. D)

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

[C] The keyboard shall have a 104-key QWERTY layout and include a number pad. The Bidder shall provide technical specifications or datasheets for the proposed keyboards to prove compliance with the requirement for 104- key QWERTY layout. (D)

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

[D] The keyboard shall have silent keys. The Bidder shall provide technical specifications or datasheets for the proposed keyboards to prove compliance with the requirement for silent keys. (D)

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

[E] The keyboard shall have adjustable feet. The Bidder shall provide technical specifications or datasheets for the proposed keyboards to prove compliance with the requirement for adjustable feet. (D)

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

[F] The keyboard shall be compatible with Windows, Chrome OS, Mac OS, Linux and Android. The Bidder shall provide technical specifications or datasheets for the proposed keyboards to prove compliance with the requirement for operating system compatibility. (D)

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

5.6.2   Computer Mice

[A]   Computer mice shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that computer mice are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

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

[B]   The mouse shall have an optical tracking sensor. The Bidder shall technical specifications or datasheets for the proposed mice to prove compliance with the requirement for optical tracking sensor. (D)

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

[C]   The mouse shall be wired with a USB Type-A interface. The cable length shall be at least 1.8m. The Bidder shall provide technical specifications or datasheets for the proposed mice to prove compliance with the requirement for USB Type-A interface and 1.8m cable length. (D)

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

[D] The mouse shall be suitable for use by both left-handed and right-handed people. The Bidder shall provide technical specifications or datasheets for the proposed mice to prove compliance with the requirement. (D)

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

[E] The movement resolution of the mouse shall be at least 1200dpi. The Bidder shall provide technical specifications or datasheets for the proposed mice to prove compliance with the requirement for movement resolution. (D)

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

[F] The mouse shall have 3 pressed buttons, including a scroll wheel. The Bidder shall provide technical specifications or datasheets for the proposed mice to prove compliance with the requirement for buttons. (D)

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

[G] The mouse shall be compatible with Windows, Chrome OS, Mac OS, Linux and Android. The Bidder shall provide technical specifications or datasheets for the proposed mice to prove compliance with the requirement for operating system compatibility. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

5.7   Network Switches

[A] All network switches required for the system shall be provided. Network switches shall be 19-inch based rack mountable by complying with the Electronic Industries Association (EIA) standard EIA-310 for a standard rack. The Bidder shall provide technical specifications or datasheets for the proposed network switches to prove compliance with the EIA standard requirement. (D)

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

[B] The Bidder shall provide the port requirements for the proposed system. (D)

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

[C] The network switches that are provided shall be identical. The Bidder shall confirm compliance with the requirement and ensure that provision for the costing of all identical network switches including spares is included in the pricing schedule. (D)

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

[D] Network switches shall have a cooling mechanism to maintain optimum operating temperature. The Bidder shall provide technical specifications or datasheets for the proposed network switches to prove compliance with the requirement for a cooling mechanism. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[E] All network switches shall be centrally located in a freestanding 19" equipment cabinet (refer to section 5.3) with fly-leads to positions. The Bidder shall indicate compliance with this requirement and ensure that provision for the costing of the fly-leads is included in the pricing schedule. (D)

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

[F] Patch/ brush panels shall be used within the 19" equipment cabinet for connections to positions. The patch/ brush panel shall be CAT- 6 as a minimum. The Bidder shall provide technical specifications or datasheets for the proposed patch panels to prove compliance with the CAT- 6 requirement. (D)

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

[G] The system shall utilize fibre links to interconnect the backbone between network switches to support maximum bandwidth. The Bidder shall provide technical specifications or datasheets for the proposed fibre links. (D)

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

[H] All network cables required for the system shall be provided with the system. The cables shall be CAT- 6 shielded as a minimum. The Bidder shall indicate compliance with this requirement using datasheets and ensure that provision for the costing is included in the pricing schedule. (D)

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

5.8   VCCS

[A] VCCS units shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that VCCS units are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

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

[B] VCCS configuration equipment shall be provided for the purpose of VCCS configuration. The Bidder shall provide full details and supporting information in the form of technical specifications or datasheets for the proposed VCCS and configuration equipment. (D)

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

[C] A dedicated VCCS shall be provided for each position to perform the following functions:

   I.   Air to Ground Communication (Pseudo Pilot/ Instructor to Controller)
   II. Ground to Ground Communication (Controller to Controller/ Instructor)
   III. Position to Position (Pseudo Pilot/ Instructor to Pseudo Pilot/ Instructor)

The Bidder shall provide a detailed proposal for the VCCS including technical specifications or datasheets, and ensure that provision for the costing is included in the pricing schedule. (D)

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

[D] The VCCS shall support at least 64 individual frequencies for air-to-ground communications. The Bidder shall provide technical specifications or datasheets for the proposed VCCS to prove compliance with the requirement for at least 64 individual frequencies. (D)

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

[E] The VCCS shall support unlimited channels for ground-to-ground communications. The Bidder shall indicate how many channels for ground-to-ground communications are supported by the proposed VCCS. (D)

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

[F] The VCCS shall enable Pseudo Pilots and Instructors to communicate on intercom channels assigned to positions. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[G] The VCCS shall support multiple configurations to address the following:

I. Providing specific intercom channels and radio frequencies required for training of different disciplines.

II. Grouping of intercom channels and radio frequencies for positions associated with an exercise.

The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[H] The VCCS shall be equipped with a touchscreen display which is used to select channels and frequencies. The Bidder shall provide detailed information supported by technical specifications or datasheets for the touchscreen display of the proposed VCCS. (D)

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

[I] A human machine interface (HMI) shall be provided on the display. The HMI shall be configurable such that multiple layouts may be designed and saved to support the functions of various positions involved in exercises.

I. Channels and frequencies shall be represented by buttons on the HMI.

II. The size of buttons shall be configurable.

III. The layout and arrangement of buttons in columns and rows shall be configurable.

IV. The labels of the buttons shall support at least three (3) visible lines and one (1) hidden line of text. (The hidden line is used to separate channels which may have the same information contained in the first 3 lines.)

V. Text size, font and alignment shall be adjustable on the buttons.

VI. Multiple pages for intercom channels shall be presented on the HMI.

The Bidder shall explain the configurable parameters on the HMI of the proposed VCCS. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[J] The VCCS shall have a digital clock. The Bidder shall confirm compliance with this requirement. (D)

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

[K] The VCCS shall have the following features on each position:

   I. Volume adjustments on each audio jack/ port:
      a. Headset left and right independent volume control
      b. Volume control for intercom communication
      c. Volume control for radio communication
   II. Call notification volume adjustment
   III. Touch screen interactions volume adjustment
   IV. Volume balancing between radio and intercom communication
   V. Adjustable noise filters on the microphone

The Bidder shall provide full details on the features available on the proposed VCCS at each position to prove compliance with the requirement. (D)

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

[L] The VCCS shall be configured such that air-to-ground communications are supported on the microphone side of the headset. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[M] The VCCS shall be configured such that ground-to-ground communications are supported on the side of the headset with no microphone. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[N] The VCCS shall be configured such that communication is supported on both sides of the headset if there are no active air-to-ground communications. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[O] The VCCS shall provide call notification on the destination position even if the destination position is engaged in another call. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[P] The VCCS shall provide an engaged notification on the calling position if the destination position is engaged in another call. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[Q] The VCCS shall support priority intercom channel calls. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[R] The VCCS shall have a built-in microphone to record all ambient audio during exercises. The Bidder shall provide full details on the built-in microphone. (D)

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

[S] The VCCS shall provide an output to recording all communication on each individual Controller position. The recording shall contain the following:

    I. All incoming and outgoing air-to-ground communications are independent of the selected frequency.

    II. All incoming and outgoing ground-to-ground communications are independent of the selected intercom channel.

    III. Ambient microphone audio.

The Bidder shall explain how the requirement is met by the proposed VCCS. (D)

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

> [INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[T] The VCCS shall provide colour indication for intercom channels for the following statuses:

    I.   Channel available

    II. Channel in use

    III. Channel not available

    IV. Channel on hold

The Bidder shall provide full details on the colour status indications available for intercom channels on the proposed VCCS. (D)

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

[U] The VCCS shall enable the selection of transmitting, receiving or both on a radio frequency. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[V] The VCCS shall provide a colour indication for radio frequencies for the following statuses:

    I.   Monitoring frequency

    II. Transmission on frequency

    III. Receiving on frequency

The Bidder shall provide full details on the colour status indications available for radio frequencies on the proposed VCCS. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[W] Colour status indications for channels and radio frequencies shall be provided to all the positions involved in an exercise. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[X] The VCCS shall enable Instructors to silently listen in on Controller position communications (air-to-ground and ground-to-ground) on all Controller positions involved in an exercise, without interfering with normal intercom activity. The Bidder shall explain how this requirement is met by the proposed VCCS. (D)

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

[Y] The VCCS shall have the functionality to place intercom calls on hold. The Bidder shall confirm that the required functionality is available on the proposed VCCS. (D)

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

[Z] The VCCS shall have the functionality to transfer intercom calls. The Bidder shall confirm that the required functionality is available on the proposed VCCS. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

5.8.1   Audio Boxes

[A] The VCCS shall be connected to remote audio boxes via easily removable connectors. Headsets are plugged into the audio boxes such that communication may be performed via the VCCS. The Bidder shall provide a conceptual design for the audio boxes with their Bid, and full details on the connectors used in the audio boxes. (D)

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

[B] Audio boxes shall be provided as per the equipment list contained in Table 4. An example of an audio box can be found in Figure 7. The Bidder shall ensure that audio boxes are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

Figure 7. Example of an Audio Box

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

[C] Audio boxes shall be fitted with a protective flap on the faceplate. The Bidder shall indicate the protective flap on the conceptual design. (D)

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

[D] The audio box shall support the following:

    I.   Two headset ports with LEMO connectors (10 pin) (Figure 5 and Figure 6).

    II.   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.

    III.   The chassis connector shall be fixed within the audio box such that it does not rotate.

    IV.   The left-side port supports monitoring and microphone use.

    V.   The right-side port supports monitoring of incoming and outgoing communication.

    VI.   The ports shall be clearly labelled according to their functionality.

    VII.   Mounting underneath the console worksurface.

    VIII.   Grounding to eliminate static.

        The Bidder shall indicate compliance with the requirement; and ensure that the above points are incorporated and indicated on the conceptual design.

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

5.8.2 Footswitches

[A] Footswitches shall be provided as per the equipment list contained in Table 4. The Bidder shall ensure that footswitches are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[B] Footswitches for the Controller positions shall be at least 700mm in length and shall fit comfortably underneath the console in front of the seated Controller. The Bidder shall provide information in the form of technical specifications or datasheets for the proposed footswitch. (D)

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

[C] Footswitches for the Instructor and Pseudo Pilot positions shall be at least 350mm in length and shall fit comfortable underneath the console in front of the seated Instructor/ Pseudo Pilot. The Bidder shall provide information in the form of technical specifications or datasheets for the proposed footswitch. (D)

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

[D] The footswitch cable shall be connected to the side of the footswitch, and not the rear. The Bidder shall provide drawings for the footswitch which show where the cable is connected. (D)

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

[E] 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 compliance with the requirement and ensure that provision is made in the console design. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[F] The footswitches shall be installed such that removal and replacement may be performed easily from the front end of the console. The Bidder shall indicate compliance with the requirement and explain how the requirement is met by the proposed design. (D)

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

5.9 Flight Strip Printer

[A] Flight strip printers shall be provided as per the equipment list contained in Table 4 and installed in the pilot room (Figure 10). The Bidder shall ensure that flight strip printers are included in the proposal and that provision for the costing is included in the pricing schedule. (D)

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

[B] The flight strip printer shall be small and compact in design. The Bidder shall provide information in the form of technical specifications or datasheets for the proposed flight strip printer. (D)

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

[C] The flight strip printer shall be able to do batch printing before the commencement of exercises. The Bidder shall indicate compliance with the requirement and explain how the requirement is met by the proposed flight strip printer. (D)

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

[D]   The flight strip printer shall perform thermal printing on thermal flight strip paper rolls. The Bidder shall provide full details on the flight strip paper rolls which are compatible with the flight strip printer. (D)

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

[E]   The flight strip printer shall perform automatic paper feed. The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for automatic paper feed. (D)

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

[F]   The flight strip printer shall have a built-in cutting device. The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for built-in cutting device. (D)

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

[G] The flight strip printer shall have a resolution of at least 300 dpi. The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for minimum dots per inch. (D)

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

[H] The flight strip printer shall have adjustable printing speed and printing intensity. The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for adjustable printing speed and intensity. (D)

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

[I] The flight strip printer shall be capable of printing the following size strips:

    I.   Flight Strip 1: ±25mm x ±145mm
   II.   Flight Strip 2: ±25mm x ±200mm

The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for both strip sizes. (D)

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

[J] 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. The Bidder shall provide information in the form of technical specifications or datasheets to prove compliance to the requirement for network connectivity. (D)

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

[K] Flight strip printers shall be able to accept print jobs from any position (Instructor or Controller). The Bidder shall explain how the requirement is met by the proposed flight strip printer. (D)

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

[L] The flight strip printer shall be able to print multiple print jobs in a queue without intervention. The Bidder shall explain how the requirement is met by the proposed flight strip printer. (D)

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

[M] A tray or holder shall be provided with the printer to hold the flight strips that have been printed. The Bidder shall explain how the requirement is met by the proposed flight strip printer. (D)

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

[N] Replacement of flight strip paper rolls shall be performed easily and without having to remove the printer from its mounted position. The Bidder shall explain how replacement of flight strip paper rolls can be performed on the proposed printer in its mounted position. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[O] The following flight strip paper rolls shall be provided with the printers:

    I.   2000 rolls of Flight Strip 1: ±25mm x ±145mm

    II. 2000 rolls of Flight Strip 2: ±25mm x ±200mm

The Bidder shall provide full details on the proposed flight strip paper rolls and make provision for the costing in the pricing schedule. (D)

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

5.10 Clock

[A] A clock shall be integrated into the display of the Instructor and Pseudo Pilot positions. The Bidder shall explain how the requirement is met by the proposed system. (D)

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

[B] A clock shall always be displayed as a window on the Controller position. The Bidder shall explain how the requirement is met by the proposed system. (D)

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

[C] The clocks on each exercise group (i.e., controller, pilot and instructor) must be driven by exercise time and not a universal time. The Bidder shall explain how the requirement is met by the proposed system. (D)

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

[D] The clock shall be displayed in digital 24-hour format. The Bidder shall explain how the requirement is met by the proposed system. (D)

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

6   DEVELOPMENT TOOLS REQUIREMENTS

6.1   Airspace Development Tool

[A] The system shall have an airspace development tool. Using the airspace development tool, a Developer shall be able to create multiple airspaces which are saved as separate airspace files. The Bidder shall provide full details on the airspace development tool and explain how the requirement is met by the proposed system. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The airspace development tool shall enable the editing of existing airspace files after creation. The Bidder shall indicate compliance with the requirement and explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The airspace development tool shall allow for the creation of surveillance coverage (Primary Surveillance Radar (PSR, Secondary Surveillance Radar (SSR), Automatic Dependent Surveillance (ADS), Multilateration (MLAT), Wide Area Multilateration (WAM)) and the setting of surveillance parameters (elevation, scan period/ refresh, coverage, noise). The Bidder shall indicate compliance with the requirement and provide full details on the surveillance coverage and surveillance parameters available on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] Each type of surveillance data shall be represented by a different symbol on the airspace development tool. The Bidder shall explain how each of the data listed below in [a] to [h] are represented on the proposed system, and provide images or screenshots to support the response. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. Symbols for the following data shall be included as a minimum:

[a]   PSR (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[b]   SSR mode A/C (D)

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

[c]   SSR mode S (D)

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

[d]   ADS-B (D)

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

[e]   ADS-C (D)

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

 [f]   MLAT/ WAM (D)

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

[g]   Flight Plan Tracks (D)

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

[h]   Transitioning from one surveillance system to another (D)

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

[E] A combined symbol shall be displayed where data is from two or more types of surveillance systems. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] The airspace development tool shall allow for the programming of the below listed [a] to [q] as a minimum in the created airspace. The Bidder shall indicate compliance for each requirement [a] to [q]; and explain how each requirement is met by the proposed system. The Bidder shall indicate

any deviations from the requirements. The Bidder shall also provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

[a]   SIDS and STARS (Conventional and PBN) (D)

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

[b]   creation of routes (D)

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

[c]   definition of airways (D)

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

[d]   holding patterns (D)

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

[e]   reference points in space (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[f]   the configuration of multiple aerodromes with their runways (D)

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

[g]   inclusion of all the types of navigation aids (i.e., VOR, DME, NDB, ILS, etc) and setting their parameters (D)

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

[h]   inclusion of navigation systems which support Area Navigation (RNAV) and Required Navigation Performance (RNP) procedures (D)

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

[i]   inclusion of communication equipment and setting their parameters (D)

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

[j]   inclusion of surveillance equipment and setting their parameters (D)

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

[k]   the storing and retrieval of all AFTN and ATS Interfacility Data Communication (AIDC) addresses (D)

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

[l]   different sectors, including restricted sectors (D)

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

[m]   details of adjacent ATS centres/ units. (D)

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

[n]   details of the minimum altitude zones. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[o]   specific maps (D)

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

[p]   different approaches procedures (D)

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

[q]   terrain (D)

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

[G] The placement of runways, navigation aids and reference points shall be defined by [a] and [b]. The Bidder shall explain how the placement of runways is achieved by the proposed system; and indicate any deviations from the requirements below. The Bidder shall also provide an indication of the percentage of the functionality specific to the requirement which is currently available on the proposed system, and the percentage which is still to be developed.

[a]   Using coordinates (latitude and longitude) (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[b]   Using existing points defined in the airspace (D)

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

[H] The airspace development tool shall have an error-checking functionality to confirm that information is entered correctly and in the format required by the system. The Bidder shall provide full details on the error-checking functionality available on the airspace development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

6.2   Exercise Development Tool

[A] The system shall have an exercise development tool. Using the exercise development tool, a Developer shall be able to create multiple exercises that are saved as separate exercise files. The Bidder shall provide detailed information on the functionality available on the exercise development tool. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[B] There shall be no limit to the number of exercises that can be created and saved. The Bidder shall indicate compliance to this requirement or explain any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The exercise development tool shall allow the creation, editing and deleting of Notices to Air Missions (NOTAMs) (checking current NOTAMs which are applicable to the particular ATS unit).

    [a]   NOTAMs shall be presented and populated in the ICAO standard format.

    [b]   NOTAMs shall be programmable per exercise and not be based on default settings.

    [c]   NOTAMs shall be displayed from the beginning of the exercise.

The Bidder shall explain how NOTAMs are handled on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The exercise development tool shall allow the creation, editing and deletion of flight plans in exercises. Flight plans shall be presented and populated in the standard ICAO format. The Bidder shall provide an example of a flight plan programmed, populated and presented by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[E] The system shall automatically apply the performance characteristics of aircraft assigned to flight plans based on the aircraft files. The Bidder shall explain how performance characteristics of aircraft are assigned to flight plans for the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] There shall be no limit to the number of aircraft programmed per exercise. The Bidder shall indicate compliance to this requirement or explain any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] A Short Flight is defined as a flight from an airport on your airspace to another airport on the same airspace. An Overflight is defined as a flight that never lands on any airport on the defined airspace. The exercise development tool shall support programming of Flight Plans (Departures, Arrivals, Short Flights and Overflights). The Bidder shall explain how programming of Flight Plans is achieved on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The exercise development tool shall allow the programming of the flight strip format to be used for exercises depending on the airspace selected. The type of flight strips (Departures, Arrivals, Short Flights and Overflights) used for the exercise will be automatically selected based on the Flight Plan. The Bidder shall explain how the programming of flight strip formats are achieved on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[I] The exercise development tool shall have the functionality to mark/ flag an exercise as an assessment during creation. If the exercise is marked/ flagged for assessment, it shall be password protected. The Bidder shall explain how assessments are created and accessed on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[J] Using the exercise development tool, a Developer shall be able to position aircraft anywhere on a route/ Sid/ Star. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[K] The exercise development tool shall have the functionality to program the position of an aircraft in the exercise at a specific point in airspace and a specific time in the simulation. This will depend on the aircraft characteristics contained in the aircraft files. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[L] The exercise development tool shall have the functionality to specify time for each exercise which is created, as there is no common clock running on all positions from an external source. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[M] The exercise development tool shall allow for manual and/ or automatic startup of aircraft in exercises. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[N] The exercise development tool shall allow the programming of any aircraft formation flight. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide

an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[O] The exercise development tool shall allow the assignment of weather files to exercises. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[P] The exercise development tool shall allow the programming of automatic or manual assignment of Squawk/ identification codes. The Bidder shall explain how Squawk/ identification codes are programmed for the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[Q] The exercise development tool shall allow the assignment of the same Squawk/ identification code to two aircraft for training purposes. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed.

COMPLIANCE (C/PC/NC/Noted)	

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

[R] The exercise development tool shall have an error-checking functionality to confirm that information is entered correctly and, in the format, required by the system. The Bidder shall provide full details on the error-functionality available on the exercise development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[S] The exercise development tool shall allow previewing of exercises during development. This shall allow the Developer to view the position of the aircraft in the airspace throughout the exercise. A slider shall be used to manipulate the exercise time (forward in time or backward in time) as the exercise is executed. There shall be pause/ play and fast forward (up to x16 at least) and rewind (up to x16 at least) buttons available on the preview screen. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[T] The exercise development tool shall allow the previewing of flight plans on the flight progress strips relevant to the airspace. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

6.3   Weather Development Tool

[A]   The system shall have a weather development tool. Using the weather development tool, a Developer shall be able to create weather files. The Bidder shall provide full details on the functionality available on the weather development tool. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B]   Each weather file may contain multiple weather scenarios which are presented at different times during the exercise as configured by the Developer. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C]   There shall be no limit to the number of weather scenarios that can be created within a weather file. The Bidder shall indicate compliance to this requirement or explain any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[D] Weather files shall be able to be used for multiple exercises. The Bidder shall explain how weather files are applied in exercises by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] Weather files shall not be exercise specific, i.e. the system shall enable the use of any weather file for any exercises running simultaneously. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] Weather files shall not be airspace specific, i.e. shall be able to be linked to any airspace for any exercise. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

> *[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]*

[G] The weather development tool shall have an error-checking functionality to confirm that information is entered correctly and in the format required by the system. The Bidder shall provide details on the error-checking functionality available on the weather development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The weather development tool shall allow for the programming of the below listed items [a] to [h] in a weather file. The Bidder shall, for each item [a] to [h], explain how the requirement is met by the proposed system and explain any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

  [a]   Wind (speed and direction) (D)

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

  [b]   Different/ multiple wind levels (D)

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

  [c]   Visibility (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[d]   Create clouds (cloud type, direction and speed of cloud movement) (D)

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

[e]   Different/ multiple cloud layers (D)

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

[f]   Temperature and dew point (D)

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

[g]   Pressure (D)

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

[h]   Supplementary information (e.g. messages containing any additional weather information)
        (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[I] The weather file shall contain weather information in standard ICAO weather formats (e.g. METAR, SPECI, TAFOR, SIGMET). The Bidder shall list the weather formats available on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

6.4 Flight Progress Strip Development Tool

[A] The system shall have a flight progress strip development tool. The flight progress strip development tool shall be used by a Developer to create flight progress strip templates. This includes different strip layouts for Departures, Arrivals, Short Flights, and Overflights per airspace. The Bidder shall provide detailed information on all the functionality available on the flight progress strip development tool. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] Flight progress strip templates shall not be exercise specific, i.e. the system shall enable the use of any flight progress strip for any exercises running simultaneously. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[C] Flight progress strip templates shall not be airspace specific, i.e. shall be able to be linked to any airspace for any exercise. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] Once linked to an exercise, the flight progress strip template shall be populated automatically with the information contained in the flight plan which is created during exercise creation. The Bidder shall explain how flight progress strip templates are populated by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] The flight progress strip template shall support customization of the below listed items [a] to [d] as a minimum. The Bidder shall explain how each requirement [a] to [d] is met by the proposed system and indicate any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

[a] Horizontal, vertical, and diagonal lines (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[b]   Solid and dashed lines (D)

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

[c]   Text: (D)

- Letters, Numbers and Characters
- Fonts
- Bold
- Size

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

[d]   A field is defined as a space on a flight strip where specific information in contained. Example of fields can be found in Figure 8 – (refer to fields) (D)
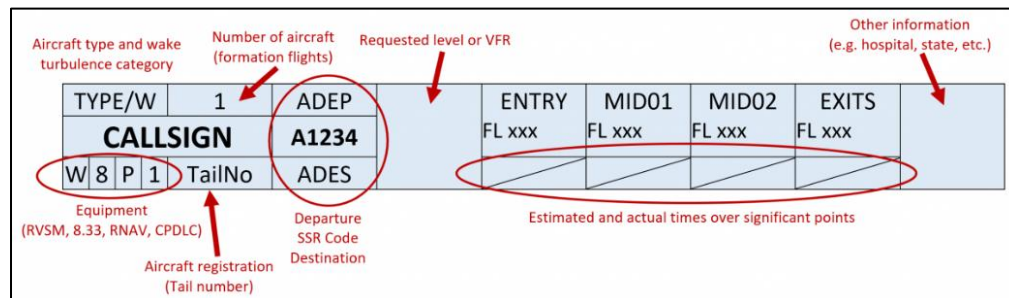
Figure 8. Example of Fields on a Flight Strip

I.   Defining size of field (height and length) and position of a field.

II.   Field Alignment (left aligned, centre aligned or right aligned)

III.   Parameters to be included in the fields

COMPLIANCE (C/PC/NC/Noted)	

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

[F] The flight progress strip development tool shall support the creation of flight progress strip templates with different lengths. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] The flight progress strip development tool shall have an error-checking functionality to confirm that information is entered correctly and, in the format, required by the system. The Bidder shall provide detailed information of the error-checking functionality available on the flight progress strip development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The flight progress strip development tool shall allow the preview of flight progress strips during development. The Bidder shall provide details on the preview functionality available on the flight progress strip development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

> [INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

6.5   Aircraft Development Tool

[A]   The system shall have an aircraft development tool. The aircraft development tool shall be used by a Developer to develop/ edit aircraft types and series which are saved as aircraft performance files. The Bidder shall provide detailed information on all the functionality available on the aircraft development tool. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B]   The aircraft development tool shall provide a default database of aircraft types and series which can be selected and edited. The Bidder shall provide detailed information on the default database available on the aircraft development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C]   The aircraft development tool shall allow for the creation of entirely new aircraft types and series. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] Each aircraft type and series shall contain the below listed items [a] to [p]. The Bidder shall describe how each requirement [a] to [p] is met by the proposed system and indicate any deviations from the requirements. The Bidder shall provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

[a]   Aircraft manufacturer and model (D)

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

[b]   Aircraft propulsion method (jet/ propeller) (D)

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

[c]   Aircraft class (light/ medium/ heavy/ super heavy) (D)

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

[d]   Min and max IAS/ Mach number (D)

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

[e]   Approach speed (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[f]   Rate of acceleration/ deceleration (D)

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

[g]   Cruising speed related to altitude (D)

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

[h]   Normal rate of climb/descent (D)

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

[i]   Max rate of climb/descent (D)

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

[j]   Expedited descent (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[k]   Performance criteria as per aircraft type (D)

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

[l]   Maximum Altitude (Service Ceiling) (D)

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

[m]   Standard Turn Rate (D)

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

[n]   Maximum Turn Rate (D)

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

[o]   Aircraft Weight (D)

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

[p]   People on Board (POB) (D)

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

[E] The aircraft development tool shall have an error-checking functionality to confirm that information is entered correctly and in the format required by the system. The Bidder shall provide details on the error-checking functionality available on the aircraft development tool. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

6.6   Development Suite

[A] The system shall have a development suite for developing airspace, exercise, weather, flight progress strip and aircraft files. The suite shall contain all the development tools specified in **sections 6- 6.5** as a minimum**.** The Bidder shall provide detailed information on all the functionality which is available on the development suite. This should be supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The development suite shall be launched from any Instructor or Pilot position on the simulator. The Bidder shall explain how the development suite is launched on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The development suite shall provide the development tools to the user depending on the login (Developer A or B). The Bidder shall explain the different login options available on the development suite. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The developer shall be presented with the following options:

[a]   Airspace Development Tool

i.   The Developer shall select this option to have access to the functionality defined in **section 6.**

[b]   Exercise Development Tool

i.   The Developer shall select this option to have access to the functionality defined in **section 6.2.**

[c]   Weather Development Tool

i.   The Developer shall select this option to have access to the functionality defined in **section 6.3.**

[d]   Flight Progress Strip Development Tool

i.   The Developer shall select this option to have access to the functionality defined in **section 6.4.**

[e]   Aircraft Development Tool

i.   The Developer shall select this option to have access to the functionality defined in **section**

[f]   Rules

ii.   The Developer shall select this option to amend existing or create new rules of the air and air traffic control.

[g]   Logout

iii.   The user shall be able to logout of the Development Suite.

The Bidder shall indicate compliance with the requirements and list any additional functionality available on the development suite. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

7   POSITION REQUIREMENTS

7.1   General

[A] The system shall have the following positions:

    i.   Four (4) Controller Positions

    ii.   Four (4) Instructor Positions

    iii.   Eight (8) Pseudo-Pilot Positions

The Bidder shall confirm that all positions including equipment have been included in the proposal and provision for costing is included in the pricing schedule.

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

[B] The system shall cater for expansion to address future training requirements which may need additional positions. The Bidder shall explain how expansion may be achieved on the proposed system and list any limitations or conditions for expansion of the system. (D)

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

7.2   Controller Position

[A]   The Controller position will be launched for simulation once an exercise has been deployed on an Instructor position. The Bidder shall explain how the Controller position is launched on the proposed system. (D)

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

[B]   The Controller position shall be equipped with the equipment contained in **section 5.1.** The Bidder shall indicate compliance with the requirement and ensure that provision for costing is included in the pricing schedule.

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

[C]   The Controller shall be able to create and save or load their "Student" profile defined in **section 10.** The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D]   The Air Situational Display (ASD) shall always display the surveillance data for the Controller (i.e. the surveillance image). The Bidder shall provide detailed information on the display of information on the ASD, supported by screenshots, technical specifications or datasheets to prove compliance with the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[E] Additional windows shall be used to display the following data:

    [a]   Weather Reports

    [b]   Electronic Flight Progress Strips

    [c]   Flight Plans

    [d]   Clock

    [e]   NOTAMs

    [f]   Free Text Area for Additional Information

The Bidder shall provide detailed information on the display of information on the ASD, supported by screenshots, technical specifications or datasheets to provide compliance with the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] The windows may be dragged and dropped onto any of the three displays depending on controller preference. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] Additional windows may be created from the surveillance image to be monitored on the right-hand auxiliary display only. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this

requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The size of the windows shall be adjustable. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[I] The default layout on launching the Controller positions shall be as follows:

[a] Surveillance image on ASD

[b] Left Auxiliary Display: Weather Reports, NOTAMs, Free Text Area, Clock

[c] Right Auxiliary Display: Flight Plans, Electronic Flight Progress Strips

The Bidder shall provide an example of the default layout available on the Controller position, supported by screenshots, technical specifications or datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[J] The Controller position shall have the following functionality:

[a] The system shall use the VCCS defined in **section 5.8** for ground to ground (Controller to Controller) and ground to air (controller to pilot) voice communications. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is

currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[b]   The system shall support CPDLC communication between Controller and Pseudo-Pilot. The Bidder shall explain the CPDLC functionality available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[c]   The system shall display data link availability status. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[d]   The system shall provide the functionality that enables the Controller to display, edit and transmit AFTN and AMHS messages on their position. The Bidder shall explain the AFTN and AMHS functionality available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[e]   The system shall display surveillance tracks and surveillance plots. The Bidder shall prove compliance with the requirement using screenshots, technical specifications, datasheets or manuals. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

 [f]   The system shall display weather contours. The Bidder shall prove compliance with the requirement using screenshots, technical specifications, datasheets or manuals. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[g]   The system shall provide the functionality that enables the Controller to access flight plans (FPL), repetitive flight plan (RPL) and supplementary flight plan (SFPL) database. The Bidder shall provide details on the flight plan functionality available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[h]   The system shall display flight plans, arrivals, departures, traffic lists (flow planning) and hold lists. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[i]   The system shall provide the functionality which enables the Controller to access the flight plan database to retrieve, create, modify, or cancel flight plans. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[j]   The system shall use appropriate methods of identification to identify aircraft. The Bidder shall explain the identification methods used by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[k]   The system shall automatically couple flight tracks with flight plans by default on completion of the identification process. Manual coupling shall be available to the Controller where

automatic coupling has not occurred. The Bidder shall explain how coupling is performed on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[l]   Coupling of flight tracks to flight plans shall result in the automatic population of aircraft labels. The system shall generate and display the aircraft label as per the filed flight plan. The controller shall be able to manipulate/ change or expand the data contained within the labels. The following shall be contained in the labels as a minimum:

    i.   Aircraft call-sign/ identification

    ii.   Type and class of aircraft

    iii.   Flight level/ altitude

    iv.   Heading of aircraft

    v.   Ground speed

    vi.   Speed of aircraft (indicated airspeed and Mach number)

    vii.   Flight Plan Route

    viii.   Estimates for points on the flight plan route

    ix.   Runway

    x.   Reduced Vertical Separation Minima (RVSM) status

    xi.   Squawk/ identification code

    xii.   Destination

    xiii.   Search and Rescue requirements

    xiv.   Critical or Global Data

The Bidder shall explain what data is contained in the labels for the proposed system and indicate any deviations from the list above. The response shall be supported by a screenshot of an example of a label on the system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[m]   The system shall have the capability to perform auto-tracking of aircraft if selected by the Controller. The Bidder shall provide details on the auto-tracking capability of the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[n]   The system shall display and allow graphic modification of flight plan route. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[o]   The system shall have an Arrival Manager (AMAN) as a sequencing tool. The Bidder shall provide details on the Arrival Manager available on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[p]   The system shall display aeronautical maps and restricted, prohibited or danger areas when active. The Bidder shall provide screenshots, technical specifications, datasheets or

manuals to prove compliance with the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[q]   The system shall contain graphic tools that the Controller may use (e.g., Bearing and Range Lines (BRLs), separation calculation and monitoring, flight plan tracking, creation and display of local maps). The Bidder shall provide details on all the graphic tools which are available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[r]   The system shall display location coordinates and marked coordinates to enable the Controller to plot. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[s]   The system shall have an air traffic flow management (ATFM) tool that displays calculated take-off time (CTOT). The Bidder shall provide details on the ATFM tool available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[t]   The system shall display weather information. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[u]   The system shall display warnings and alerts defined in **section 4.12**. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[v]   The system shall display conflict situations and expected traffic volumes. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[w]   The system shall display system messages which are defined in exercise development. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[x]   The system shall display additional information (e.g. time, controlled sectors, sector assignments, etc.). The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[y]   The system shall provide the functionality which enables the Controller to use and set parameters of filters for the information to be displayed on the ASD. The Bidder shall describe the filter functionality which is available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[z]   The system shall provide the functionality which enables the Controller to perform electronic coordination of flights (e.g. hold for release, clearances, actual time of departure

(ATD), actual time of arrival (ATA*) and estimated time of arrival (ETA), coordinated climb/ descent, direct routing, clearances, etc.). The Bidder shall describe the electronic coordination functionality which is available on the Controller position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[aa]   The system shall provide the functionality which enables the Controller to print flight strips (for procedural or FPS dependent environments). The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[bb]   The system shall track location by squawk/ identification code input. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[cc]   The system shall perform autonomous mono-radar tracking in case of failure of the flight data processor (FDP) servers (by-pass mode). The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the

percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[dd]   The system shall provide Controller access to MET reports, AIM databases, AIP, station standing instructions for the relevant ATS Unit or Sector. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[ee]   The system shall enable multi-sector planner training on the Controller position by accommodating the functionality listed in **section 7.3.** The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

7.3   Multi-Sector Planner (MSP) Position

[A] The MSP positions will be launched for simulation once an exercise has been deployed. The Bidder shall explain how MSP positions are launched on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] Multi-sector planner training exercises require the use of one Controller position for the Controller and an additional Controller position for the multi-sector planner (MSP). The same exercise must be executed on both the Controller position and MSP such that they form a mirror-image. The Bidder shall explain how multi-sector planner training exercises are executed by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The MSP position and Controller position shall be identical in configuration and have the same capabilities. The Bidder shall confirm compliance and indicate if there are any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The system shall enable the Controller and MSP to share ATC responsibilities. This means that some of the ATC functions will be performed by the MSP (e.g. functions associated with coordination, flight plans, search and rescue, records keeping, etc.). The Bidder shall explain how responsibilities are shared between Controller and MSP on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[E] Any actions performed by the Controller and the MSP shall be updated on both the Controller position and MSP position simultaneously. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

7.4   Instructor Position

[A] The Instructor Position will be launched for simulation once an exercise has been deployed. The Bidder shall explain how the Instructor position is launched by the proposed system. (D)

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

[B] The Instructor Position shall be equipped with the equipment contained in **section 5.1.** The Bidder shall indicate compliance with the requirement and ensure that provision for costing is included in the pricing schedule.

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

[C] On the ASD, the system shall provide the true representation of the Controller position's ASD including the display of all actions and commands; as well as the Instructor's ASD for their own manipulation. This can be represented by two separate tabs. The Bidder shall explain how the

requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] On the auxiliary display, the system shall provide the Instructor with all the tools which are required to manipulate the exercise data. This may be in the format of lists, drop-down lists, windows, etc. The Bidder shall describe all the tools which are available on the Instructor position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] The system shall provide an indication of the following to the Instructor on the top right corner of the auxiliary display:

[a]   The exercise number/ name

[b]   Status of positions that are selected for the exercise (e.g. INST1, CP1, CP2, Pilot1, Pilot2, etc.)

The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] Exercise data refers to all the data contained in the files which are linked to the exercise. This includes airspace, weather, aircraft performance, flight plans and flight progress strip data. The

system shall allow the Instructor to manipulate exercise data at any point of the exercise execution. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] The instructor position shall incorporate all functionality of the pseudo pilot as listed in **section 7.4**. The Bidder shall indicate if there are any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The system shall provide the functionality which enables the Instructor to start, stop, pause and terminate exercises. The Bidder shall describe the functionality which enables the control of exercises on the Instructor position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[I] The system shall provide the functionality which enables the Instructor to reverse an exercise in time to allow the Controller to apply a different set of actions. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[J]   The system shall provide the functionality which enables the Instructor to specify if the exercise is to be executed at a speed different from the default speed. This means that the Instructor shall be able to either slow-down or speed-up the exercise at any point during the execution. The Bidder shall explain how the exercise speed can be controlled by the Instructor position on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[K]   The system shall provide the functionality which enables the Instructor to alter the weather that was programmed with the exercise. E.g., change wind speeds. Any changes made by the Instructor to weather information must be available to the pseudo-pilot. The Bidder shall describe the functionality available on the Instructor position which enables the Instructor to alter weather in an exercise. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[L]   The system shall allow for degrading of surveillance systems (i.e. removal of radar to rely on ADS, and removal of the CPDLC link). The Bidder shall explain how degrading of surveillance systems is performed on the Instructor position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[M] The system shall provide the functionality which enables the Instructor to simulate non-routine situations e.g. emergencies, diversions etc. The Bidder shall explain how non-routine situations can be simulated by the Instructor position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[N] During the exercise, the instructor shall have the capability to insert a flag/ marker on the exercise time from the Instructor's position to indicate an event to be discussed during the debrief. The flag/ marker shall be saved in the local recording (refer to **section 12.4**) and shall not be visible on the Controller position until the recording is used in debriefing. The Bidder shall describe the flag/ marker insertion capability available on the Instructor position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[O] The Instructor shall be able to attach a note/ comment to the flag/ marker which they have created. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

7.5 Pseudo Pilot Position

[A] The Pseudo Pilot Position will be launched for simulation once an exercise has been deployed by an Instructor. The Bidder shall explain how the Instructor position is launched by the proposed system. (D)

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

[B] The Pseudo Pilot Position shall be equipped with the equipment contained in **section 5.1.** The Bidder shall indicate compliance with the requirement and ensure that provision for costing is included in the pricing schedule. (D)

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

[C] The system shall use the VCCS defined in **section 5.8** for ground to ground (controller to controller) and ground to air (controller to pilot) voice communications. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The ASD shall always display the surveillance data for the Pseudo Pilot (i.e. the surveillance image). The Bidder shall provide detailed information on the display of information on the ASD, supported by screenshots, technical specifications or datasheets to prove compliance with the requirement. The Bidder shall provide an indication of the percentage of the functionality specific

to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] On the auxiliary display, the system shall provide the Pseudo Pilot with all the tools which are required to manipulate the flight data and movement of aircraft under the instruction of Controller or Instructor. This may be in the format of lists, drop-down lists, windows etc. The Bidder shall describe all the tools which are available on the Pseudo Pilot position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[F] The system shall provide functionality which enables the Pseudo Pilot to receive updated weather information from the Instructor position. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] The system shall provide the functionality which enables the Pseudo Pilot to configure the ASD which includes maps, lists, tools, airspace range and coverage. The Bidder shall describe the functionality available to configure the ASD on the Pseudo Pilot position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[H] The system shall provide the functionality which enables the Pseudo Pilot to draw quick maps. The Bidder shall describe the functionality available to draw maps on the Pseudo Pilot position. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[I] The system shall provide the functionality which enables the Pseudo Pilot to input single or multiple instructions from the Controller or Instructor to be executed and effected on an aircraft in a single command. The Bidder shall describe how this requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[J] The system shall provide the functionality which enables the Pseudo Pilot to execute conditional clearances or instructions (e.g. maintain runway heading **until** passing 7000ft **thereafter** turn left). The Bidder shall describe how this requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[K]   The system shall provide the functionality which enables the Pseudo Pilot to change a flight plan. The Bidder shall describe how this requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[L]   The system shall provide the Pseudo Pilot with the functionality to execute a command to perform the below listed [a] to [cc]. The Bidder shall explain how each of the requirements [a] to [cc] is met by the proposed system, and indicate any deviation from the requirements. The Bidder shall provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

   [a]   change the IAS or Mach number (D)

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

   [b]   Change altitude or flight level. The system shall provide a corresponding indication of descending or climb. (D)

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

   [c]   Change the rate of climb or descend. (D)

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

[d] Change in heading- turn left or turn right by flying the shortest route unless direction of turn is specified by the Controller. (D)

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

[e] Intercept a radial inbound or outbound. (D)

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

[f] Fly a predefined route (e.g. SID & STARS) (D)

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

[g] Change a route (D)

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

[h] Rejoin a route (D)

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

[i]   Proceed to any Navigational Aid or prescribed point (D)

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

[j]   Fly standard circuit (D)

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

[k]   Fly a non-standard circuit (D)

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

[l]   Fly a Touch and go (D)

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

[m] Take off and land.

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

[n]   Join a predefined holding pattern (D)

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

[o] Fly different predefined instrument approaches (D)

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

[p] Fly a missed approach and go-arounds (D)

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

[q] Procedure turn approach command (D)

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

[r] Intercept the ILS (D)

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

[s] Complete a visual approach (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[t]   Orbit to the left or right (D)

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

[u]   Select and change squawk codes (D)

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

[v]   Engage BRL tool to measure and report bearing and distance between any two displayed points. (D)

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

[w]   Intercept a VOR radial (D)

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

[x]   Create a new flight/aircraft (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[y]   Transfer an aircraft to another pilot position (D)

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

[z]   squawk identification (IDENT) (D)

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

[aa] change runway in use (D)

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

[bb] Set/ change the release time on manual departure aircraft (D)

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

[cc] change Destination Aerodrome (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[M] The system shall report or provide notification for the events listed in [a] to [f]. The Bidder shall explain how each requirement [a] to [f] is met by the proposed system, and indicate if there are any deviations from the requirement. The Bidder shall provide an indication of the percentage of the functionality specific to each requirement which is currently available on the proposed system, and the percentage which is still to be developed.

[a]   VOR radial interception as specified by the Pseudo Pilot. The notification shall contain the VOR identification, and the radial intercepted. (D)

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

[b]   crossing VOR radials as specified by the Pseudo Pilot. The notification shall contain the VOR identification, and the radial crossed. (D)

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

[c]   crossing an NDB, VOR or any prescribed point as specified by the Pseudo Pilot (D)

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

[d]   reaching altitude/flight level as specified by the Pseudo Pilot (D)

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

[e]   reaching heading specified by the Pseudo Pilot (D)

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

[f]   Reaching distance from DME or waypoints as specified by the Pseudo Pilot (D)

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

[N] The system shall provide estimates to any displayed points as specified by the Pseudo Pilot. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

8   SIMULATION CONFIGURATION REQUIREMENTS

8.1   Startup

[A] A configuration page shall be presented on startup of the Instructor position. The Bidder shall describe how startup is executed on the proposed system, and support the response using screenshots, technical specifications and datasheets. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] An option to login as either a "default user", "Assessor" or "Developer" shall be provided. The user shall remain logged into the Instructor position until they log out. The Bidder shall explain how login is executed on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] If the user has logged in as a default user or Assessor, they shall be able to perform the following tasks:

[a] Select Positions

i. The user shall select the positions that will be participating in the exercise.

ii. Only positions not already in use shall be available for selection at this stage. Positions in use shall be indicated as "unavailable".

[b] Select an Exercise

i. The user shall select the exercise to be loaded.

[c] Print Flight Progress Strips

i. Printing of flight progress strips shall be available without having to execute or run the exercise.

ii. The user shall have the option to print flight progress strips. This may be done by selecting an exercise.

iii. The flight progress strips which are linked to the selected exercise shall be available for printing. There shall be an option to print discipline specific flight strips based on the positions involved in the exercise.

iv. There shall be an option to print unpopulated flight progress strips.

v. There shall be an option to select the number of flight progress strips to be printed.

vi. The flight progress strips shall be displayed electronically on the Instructor position in print preview format.

vii. Every Instructor position shall be able to print on any available Flight Progress Strip Printer.

[d] Deploy

i. The user shall be able to deploy their selections such that the relevant software is launched on the selected positions.

ii. Once "deploy" has been selected, a default layout shall be presented on the Controller position/s, Pseudo Pilot position/s and Instructor position.

[e]   Debrief

     i.   The user shall be able to select and play the local recording for debrief purposes.

 [f]   Logout

     i.   The user shall be able to logout of the Instructor position.

The Bidder shall explain how the requirements are met by the proposed system, and indicate if there are any deviations from the requirements. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] If the user has logged in as an "Assessor", an option to Playback (assessment recordings) shall be presented in addition to the options listed in [a] to [f] above. The Bidder shall explain how assessment recordings are accessed on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] If the user has logged in as a "Developer", the Development Suite described in **section 6.6** shall be launched. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

8.2   After Exercise Execution

[A] After exercise execution and once the exercise has been ended by the Instructor, the user shall be presented with the options listed under [C] in section 8.1. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

9   SIMULATION EXECUTION REQUIREMENTS

[A] Airspace files, weather files, flight progress strip files, aircraft files and exercise files shall be able to be linked in any combination for a simulation as configured by the Developer. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] Airspace files, weather files, flight progress strip files and aircraft files shall be able to be used for multiple exercises which are executed concurrently on multiple positions. The exercises which are executed may be the same on multiple positions, different exercises on multiple positions or a combination thereof. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The simulator shall be able to network multiple Controller positions into one exercise such that aircraft may be transferred between Controller positions. The Bidder shall explain how networking of positions is achieved on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The system shall automatically relaunch Controller positions and Pseudo Pilot positions to rejoin the exercise in the event of position failure. The Bidder shall explain how position failures are handled by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

10 USER PROFILES/ ACCOUNTS

[A] The system shall provide restrictions and authentication of users based on their profiles. The Bidder shall explain how restrictions and authentication of users is applied on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The system shall provide data security such that only authorized Developers can access the development tools and development files. The Bidder shall explain how data security is applied on the proposed system. The Bidder shall provide an indication of the percentage of the functionality

specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] There shall be a "Default" user account to load non-assessment exercises and configuration settings. The Bidder shall describe the restrictions and permissions on the "Default" user account. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] There shall be a password protected "Assessor" profile setup for loading assessment exercises saved on the system. These exercises shall have access restricted to only the "Assessor" profile such that only the assessor may load these exercises. The Bidder shall describe the restrictions and permissions on the "Assessor" profile. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] There shall be a single password protected profile setup for the Airspace Development Tool, Flight Progress Strip Development Tool, and Aircraft Model Development Tool (Developer A). The Bidder shall describe the restrictions and permissions on the "Developer A" profile. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[F] There shall be a single password protected profile setup for the Exercise Development Tool and the Weather Development Tool (Developer B). The Bidder shall describe the restrictions and permissions on the "Developer B" profile. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] The system shall startup with "Default" user accounts in the Controller and Pseudo Pilot positions. After startup, a user must be able to login as a "Developer A" or "Developer B" on the Pseudo Pilot positions to access the Development Suite. The Bidder shall explain how the requirement is met by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] The system shall allow for the setup of a single "Student" user profile for each student. The system shall allow students to use their profile to save their preferred configuration settings i.e. information to be displayed, display layout, font size, colour schemes, etc. such that it may be loaded when they are starting an exercise on any position. The Bidder shall describe the configuration settings that are available to the "Student" user profile. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

11 SYSTEM SECURITY REQUIRMENTS

[A] The system should use strong authentication mechanisms to prevent unauthorized access. This means it should support the use of strong passwords. The Bidder shall describe the authentication mechanisms which are available on the proposed system. (D)

Minimum password length	10 characters
Password complexity	A combination of upper case, lowercase, numbers, and special characters supported by the application.

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

[B] Data transmitted should be encrypted to protect it from interception and tampering. Secure protocols should be used to encrypt the communication channels. The Bidder shall describe the protocols (e.g., HTTPS, SSL/TLS, IPsec) used to encrypt the communication channels. (D)

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

[C] Manufacturers should inform ATNS of any firmware updates that are released to address security vulnerabilities and improve the overall security of the system. The application of the updates will be at the discretion of ATNS under the guidance of the manufacturer. An option to roll-back to the previous version shall be available. The Bidder shall indicate compliance with the requirement. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[D] Default configuration settings like manufacturer username and passwords should be changeable by ATNS. In addition, ATNS should be able to disable unnecessary features and services that may compromise security of the system. The Bidder shall describe the configuration settings which are changeable by ATNS. (D)

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

[E] 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 requirement is met by the proposed system. (D)

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

[F] The Bidder shall explain how threats to the health of the system are handled by the proposed system. (D)

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

12 ADDITIONAL FUNCTIONS

12.1 Unmanned Aircraft System Traffic Management (UTM)

[A] The system shall have the capability to integrate UTM system information such that UAS operations may be simulated. The Bidder shall provide full details on the UTM functionality available on the

proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The system shall support the future integration of UTM training into the existing ATM training offered on the simulator. The Bidder shall explain how integration of UTM training can be achieved on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] The Bidder shall describe in full detail all UAS functionality available on the simulator system. Responses shall be supported by reference to screenshots, technical specifications, datasheets or manuals. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

12.2 Voice Recognition

[A] The Bidder shall describe in full detail any voice recognition functions available on the system. Responses shall be supported by reference to screenshots, technical specifications, datasheets or manuals. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] Voice recognition functions must have the ability to be completely disabled. The Bidder shall confirm that all voice recognition functions can be completely disabled on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

12.3 Mobile Capability

[A] The Bidder shall describe in full detail any capability for the offered simulator system to be installed in a portable/ mobile training platform. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

12.4 Local Recording and Debriefing Capability

[A] The system shall locally record the voice and data for each exercise on each Controller position for the purpose of debriefing. The Bidder shall provide detailed information on the local recording and debriefing capability available on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] The recording shall be automatically discarded after 48 hours. The Bidder shall indicate the duration which the recordings will be kept by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] During playback of the local recording on the Controller position for debriefing, an instructor shall be able to click on the flags/ markers to jump to that specific point in the exercise. The Bidder shall describe how flags/ markers can be used during playback on the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The local recording capability shall not depend on an external recording system or equipment. The Bidder shall describe how the local recording functionality is achieved by the proposed system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] There shall be options to pause, stop, play, rewind and fast-forward the recording. The Bidder shall describe the playback options available on the local recording. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

12.4.1 Debriefing Tablet

[A] An Instructor shall be able to make notes or generate a log using a tablet. The tablet shall have the capability to convert handwriting to text using a stylus pen. The Bidder shall indicate whether this functionality is available on the proposed system; and include provision for the costing under "Options" in the pricing schedule. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (I)

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

[B] The tablets shall be able to link to the local recordings such that the instructor may link their notes/ logs to the playback flags/ markers. The Bidder shall indicate whether this functionality is available on the proposed system; and include provision for the costing under "Options" in the pricing schedule. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (I)

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

[C] The Instructor shall have the ability to save only their notes/ logs (not the local recordings) on the simulator server. The Bidder shall indicate whether this functionality is available on the proposed

system; and include provision for the costing under "Options" in the pricing schedule. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (I)

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

[D] The Instructor shall have the ability to print their notes/ logs as/ when required. The Bidder shall indicate whether this functionality is available on the proposed system; and include provision for the costing under "Options" in the pricing schedule. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (I)

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

13 ASSESSMENT RECORDING AND PLAYBACK

[A] The system shall have a recording and playback capability to record, save and playback all exercises which were flagged for assessment. The Bidder shall provide detailed information including technical specifications, datasheets and manuals for the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[B] The recording shall start when an exercise is deployed (**section 8)** from an Instructor position and end only when an exercise is ended by the Instructor position. The Bidder shall describe how assessment recording will be performed by the proposed recording and playback system. The

Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[C] Recordings shall not be affected by the speed of the exercise, i.e. if the exercise is paused, the recording shall continue. The Bidder shall explain how the requirement is met by the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[D] The recording shall have voice and data synchronization for playback purposes. The Bidder shall explain how the recording and playback system synchronizes voice and data for playback purposes. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[E] The system shall record all interactions on all positions. The Bidder shall explain how the requirement is met by the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[F] Each recording shall be saved as a separate file. The file name shall contain the Controller position number (e.g. CP1) and the starting time of the exercise. The Bidder shall provide an example of the naming convention which will be used for recording files. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[G] Recording files shall be saved/ archived until they are intentionally deleted. The Bidder shall explain how the requirement is met by the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[H] Playback shall be available via the Assessor login on the Instructor position. The Bidder shall explain how playback of assessments shall be performed on the system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[I] Playback shall be available in two modes:

[a]   Standalone on the Instructor position- playback of the recording is executed using only equipment on the Instructor position.

[b]   All Positions- playback of the recording is executed on all the positions which were originally involved in the exercise.

The Bidder shall explain the playback modes available on the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[J] Recording files shall be available for external storage by copying or moving files. The Bidder shall explain how the requirement is met by the proposed recording and playback system. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

[K] External drives shall be provided with the system for the purpose of archiving recording files. The Bidder shall provide details on the external drives that will be provided with the system, supported by technical specifications, datasheets or manuals. The Bidder shall provide an indication of the percentage of the functionality specific to this requirement which is currently available on the proposed system, and the percentage which is still to be developed. (D)

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

14 SYSTEM MANAGEMENT AND CONTROL

[A] The system shall enable the technical personnel to perform the following tasks:

  [a]   Operating system software update

  [b]   Setting-up of positions with relevant simulation software

  [c]   System configuration including uploading of configuration files

  [d]   Monitoring of the system health status, with indication of the availability of positions as a minimum.

The Bidder shall provide detailed information on the management and control tasks which may be performed on the system by technical personnel and indicate any deviations from the above listed tasks. (D)

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

[B] The systems shall provide the following system information as a minimum:

  [a]   System configuration settings

  [b]   Simulation position allocations and status

  [c]   Software versions and licenses

  [d]   Equipment and position status including faults and failures, displayed graphically

  [e]   System activity data

  [f]   Statistical data related to system activities.

  [g]   Event logs with classification of events into the following as a minimum:

      a. hardware failures

      b. hardware faults

      c. simulation software failures and faults

The Bidder shall provide detailed information on the system information available on the proposed system, and indicate any deviations from the information listed above. (D)

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

CHAPTER 3 – CONSOLES TECHNICAL SPECIFICATIONS

15 CONSOLE REQUIREMENTS

Figure 9 illustrates, for clarification purposes the various sections of the consoles e.g., the "working surface" and "support base" of the console. The Support base supports desk standing equipment such as Personal Computers (PCs). The working surface is used for resting arms, writing, arranging flight strip holders etc.
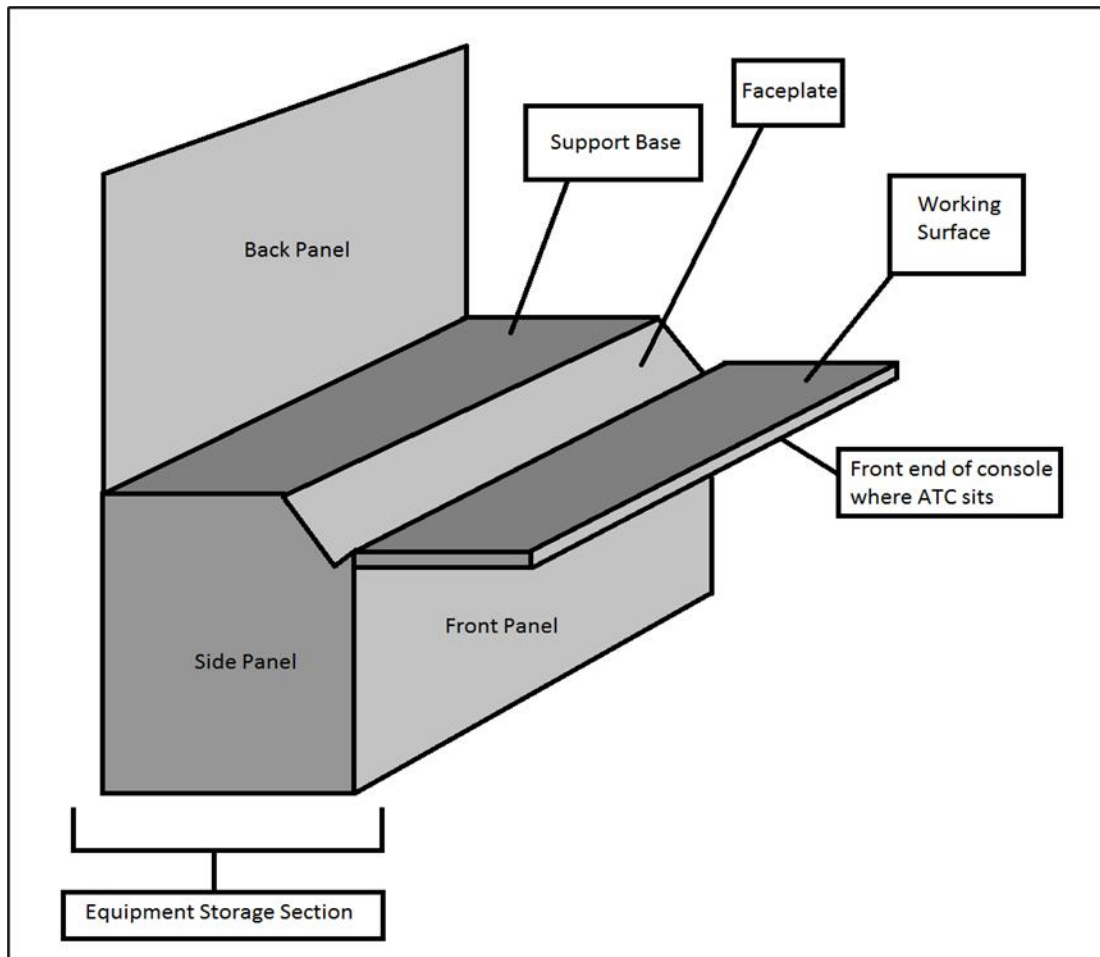
Figure 9. Console Terms for Reference

15.1 Console Layouts

The system shall be located at the ATNS Aviation Training Academy in an area with the dimensions provided below. All Pseudo Pilot positions shall be installed in a section referred to as the "Pilot Room" and the Instructor and Controller positions will be installed in a section referred to as the "Simulator Room". The "Equipment Room" wherein the main distribution board is located may be used to store any freestanding equipment cabinets and servers provided with the system. The entire area provided in Figure 10 is continuous underneath a raised access floor for cabling purposes.
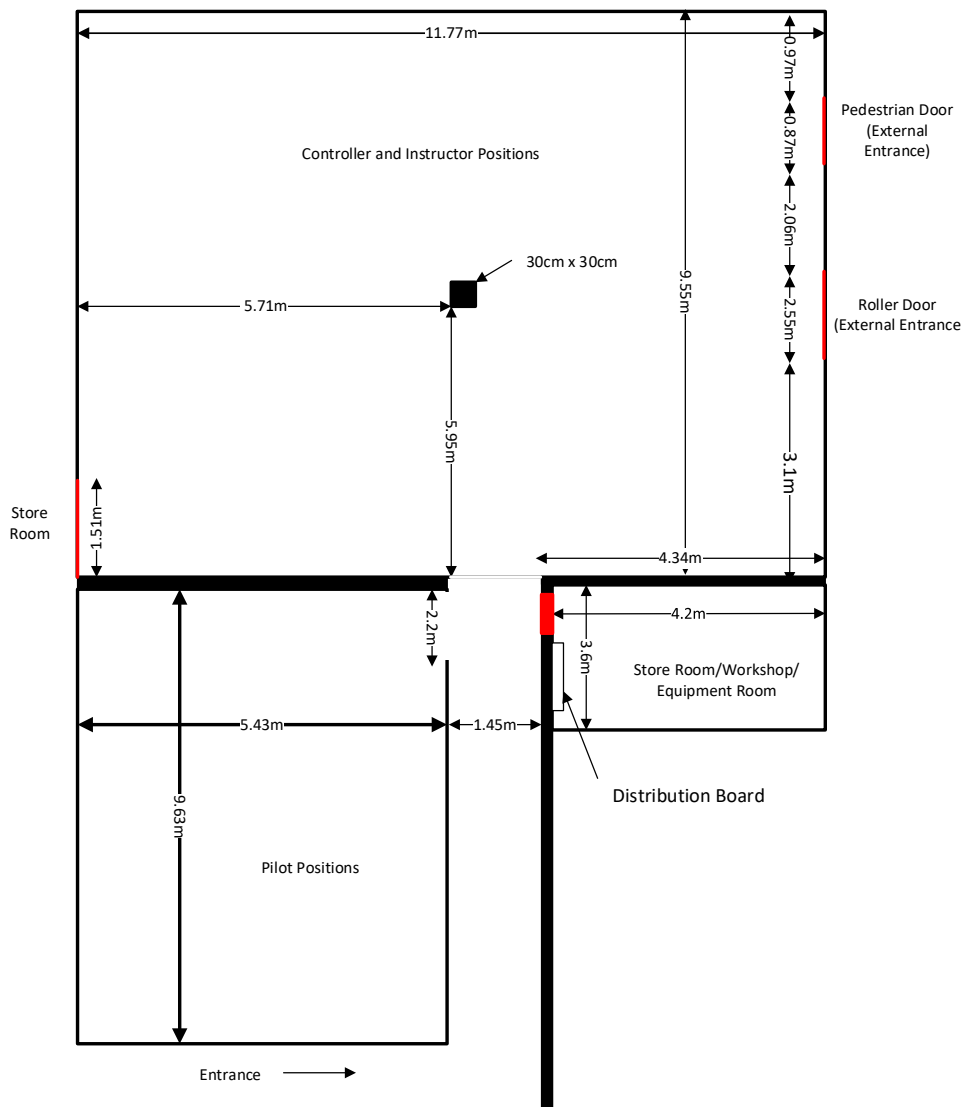
Figure 10. Simulator Room, Pilot Room and Equipment Room

[A] Four (4) Controller position consoles and four (4) Instructor position consoles shall be installed in the Simulator Room. The Bidder shall ensure that all consoles are included in the proposal and provision for the costing is included in the pricing schedule. (D)

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

[B] The preferred layout of these consoles in the Simulator Room can be found in **Figure 11** (for illustration purposes only, not drawn to scale). Each Controller position console shall have an

adjacent Instructor position console. The Bidder shall provide a proposed Simulator Room layout including the positioning of the consoles, with the Bid. (D)

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

[C]   Eight (8) Pseudo Pilot position consoles shall be installed in the Pilot Room. The Bidder shall ensure that all consoles are included in the proposal and provision for the costing is included in the pricing schedule. (D)

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

[D]   The preferred layout of these consoles in the Pilot Room can be found in **Figure 11** (for illustration purposes only, not drawn to scale. The Bidder shall provide a proposed Pilot Room layout including the positioning of the consoles, with the Bid. (D)
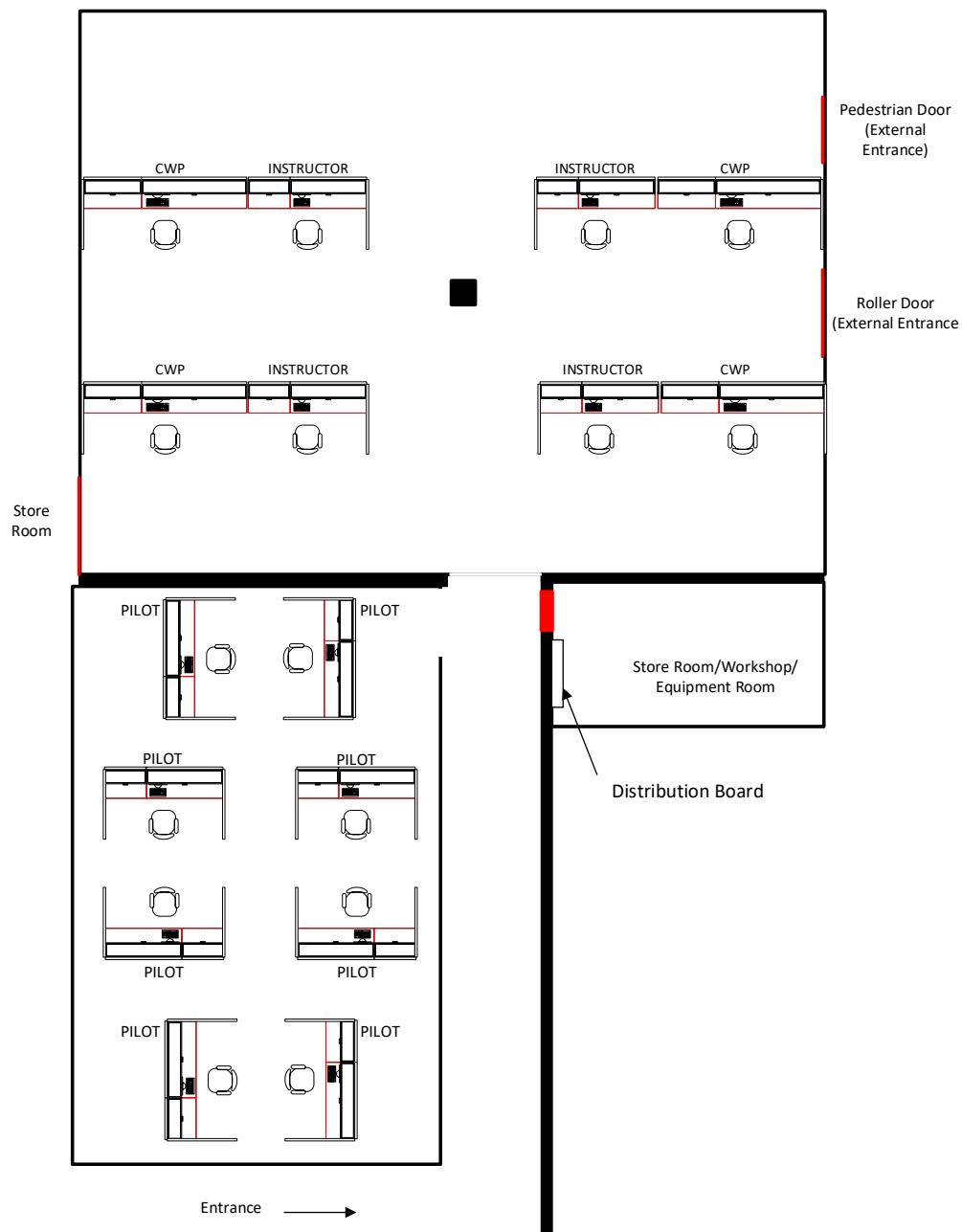
COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

Figure 11. Preferred Layout of Consoles in Simulator Room and Pilot Room

15.2 Position- Specific Requirements

There are three types of consoles required: i.e. Controller, Instructor and Pilot consoles. The following requirements are applicable to the specified positions:

15.2.1 Controller Console

[A] The preferred layout of the Controller console is provided in **Figure 12**. The Bidder shall provide detailed technical designs for the Controller console with their Bid, including the proposed layout. (D)

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

[B] The worksurface of the Controller console shall be at least 1800mm long and 600mm deep. The Bidder shall indicate the dimensions on the controller console on the detailed technical designs submitted with the Bid. (D)

COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	
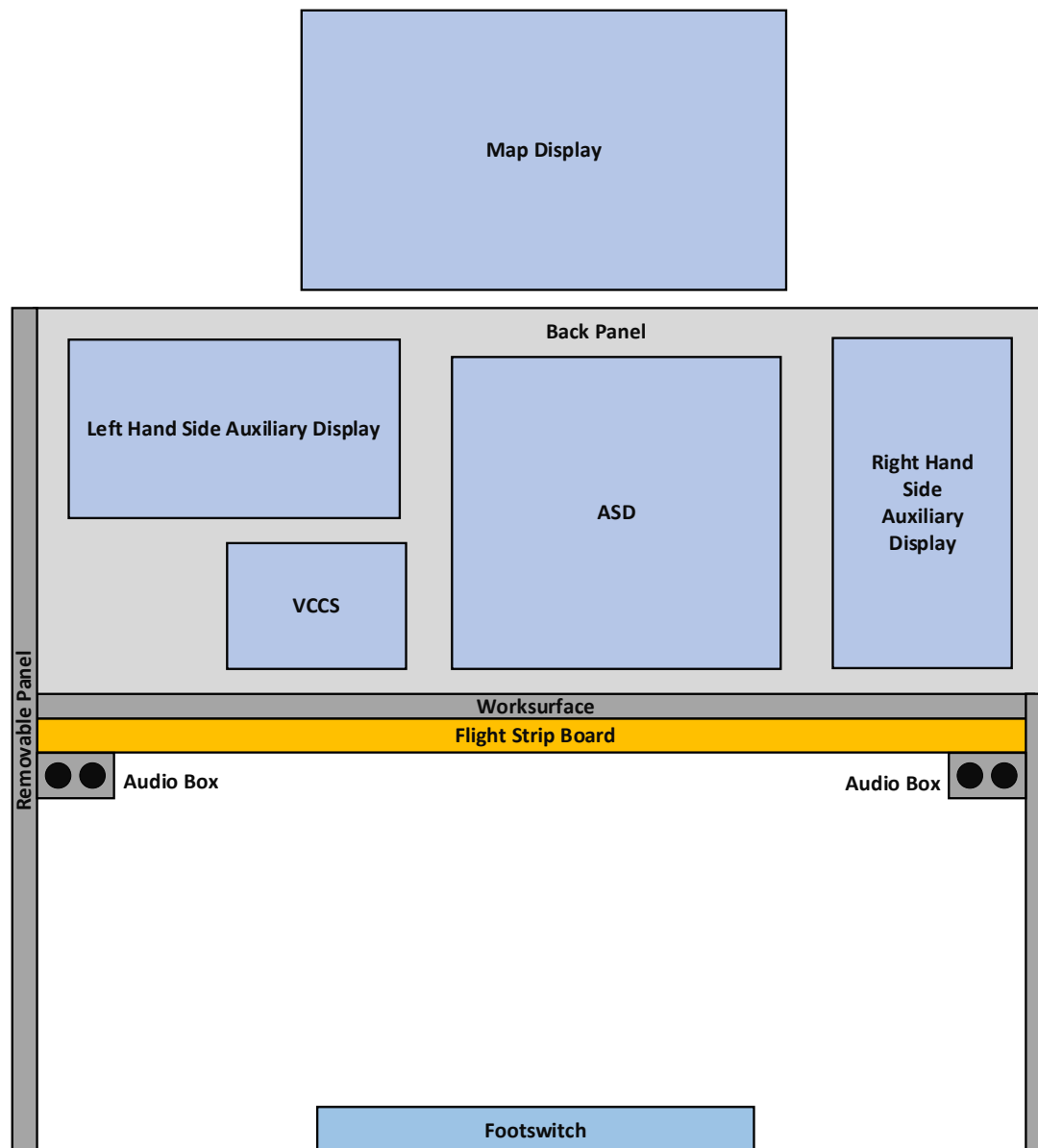
Figure 12. Controller Console Preferred Layout

15.2.1.1   Flight Strip Board

A flight strip board is used by Controllers for the arrangement of flight strip holders (holding flight progress strips) which represent flights in airspace.

A side view and a bottom view of two types of flight strip holders that are accommodated on the same flight strip board is presented in **Figure 15** and **Figure 16**.

An example of the flight strip board needed for the Controller Positions can be found in **Figure 13** and **Figure 14**. The inside dimensions of the board are 1280mm x 470 mm (length x width). The board comprises of 8mm diameter cylindrical rods spaced apart by the space sizes found in **Table**

7. The spacing and placement of the cylindrical rods are crucial to support the flight strip holders which need to be used on the board.

Figure 13. Existing Flight Strip Board
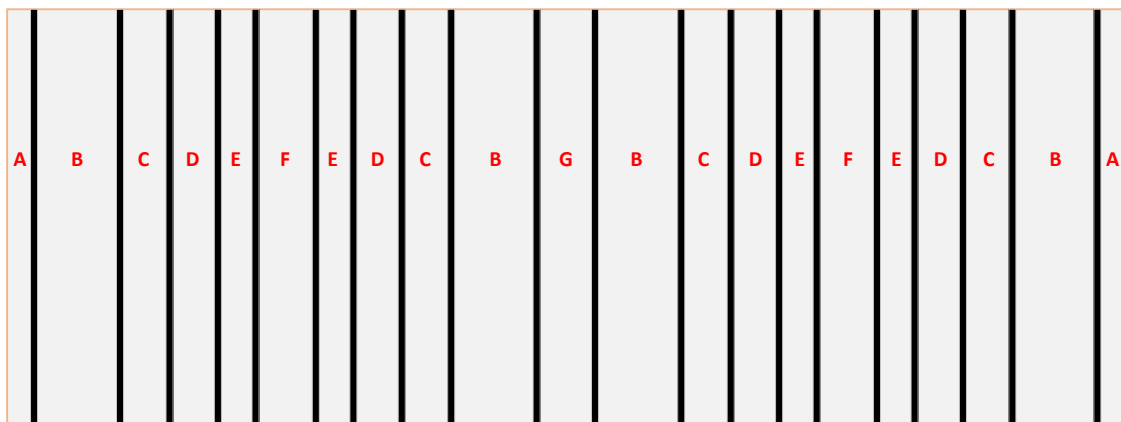
Figure 14. Flight Strip Board Configuration

Table 7. Spacing for Flight Strip Board

Representation on Figure 14	Space Size
Solid Black Bar	Cylindrical Rod 8mm diameter
A	29 mm
B	89,6 mm
C	48,2 mm
D	46,9 mm
E	34,7 mm
F	60,4 mm
G	58 mm
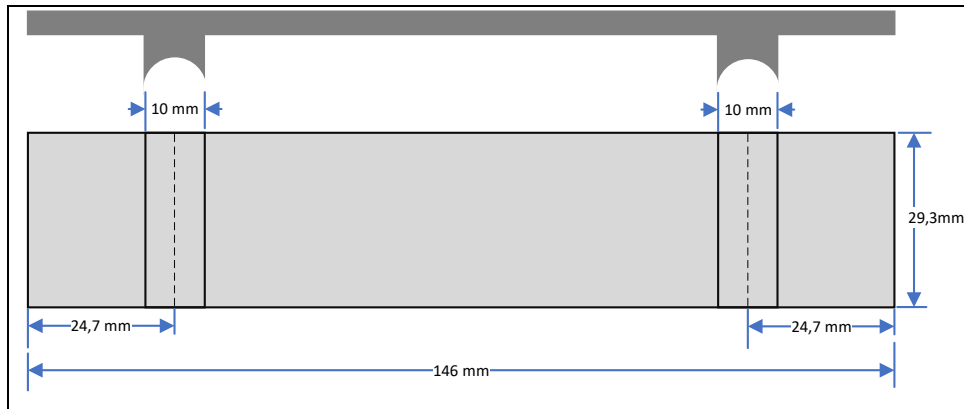
Figure 15. Type 1 Flight Strip Holder
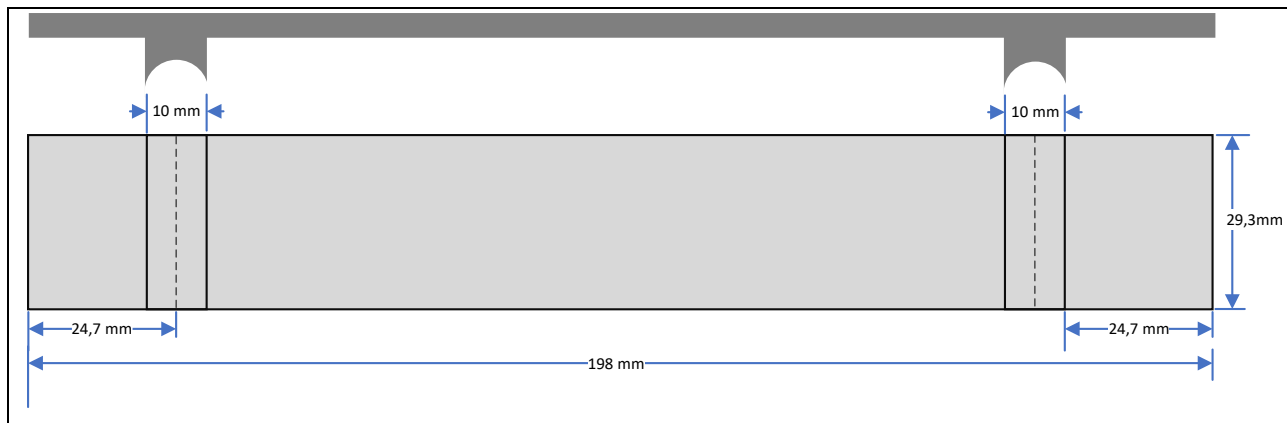
Figure 16. Type 2 Flight Strip Holder

[A] The worksurface of the Controller console shall have a built-in flight strip board with the dimensions and configuration provided above. The flight strip board must accommodate the following:

[a] Flight strip holders of two different sizes: Type 1, which is 146mm x 29.3mm (**Figure 15**) and Type 2, which is 198mm x 29.3mm (**Figure 16**)

[b] Eight (8) Type 1 flight strip holders side by side, and six (6) Type 2 flight strip holders' side by side.

[c] Fifteen flight strip holders stacked one above the other.

[d] A minimum depth of 20mm

The Bidder shall submit detailed technical designs including dimensions for the proposed solution for the built-in flight strip board. (D)

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

[B] The flight strip board shall be adjustable such that the surface on which the flight strip holders are placed may be elevated at an angle ranging from 0 to 45 degrees. The flight strip board shall have a locking mechanism to keep the flight strip board at the desired angle. The Bidder shall explain how the adjustable angle and locking of the flight strip board is achieved by the proposed design and support the response with technical designs. (D)

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

[C] The flight strip board shall be embedded in the worksurface such that it is not removable. The Bidder shall explain how the flight strip board shall be embedded in the worksurface and support the response with technical designs. (D)

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

[D] The worksurface shall be smooth and continuous with no gaps when the flight strip board is not in use. This may be achieved by means of a cover or lid, or by transitioning the worksurface without lifting the flight strip board out of the console. The Bidder shall explain how a smooth, continuous worksurface is achieved when the flight stripboard is not in use and support the response with technical designs. (D)

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

[E] Removal and replacement of any cover or lid or transitioning of the worksurface to reveal the flight strip board shall not be labour intensive or require physical intervention from more than two average build people. The Bidder shall explain how transitioning of the worksurface is achieved and provide the weight and dimensions of any cover or lid that may be included in the design. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[F]   Removal and replacement of any cover or lid or transitioning of the worksurface shall not pose a hazard to or cause damage to any of the equipment mounted on or inside the consoles. The Bidder shall explain how the requirement is met by the proposed design. (D)

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

15.2.1.2   Display/ Monitor Mounting Arms

[A]   Controller consoles shall be equipped with a display mounting solution which utilizes individual display/ monitor mounting arms for each display. The preferred layout arrangement of the displays can be found in **Figure 12.** The Bidder shall provide detailed information in the form of technical specifications and datasheets for the proposed mounting solution. (D)

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

[B]   The display/ monitor mounting arm shall be able to carry a 28-inch display and support a weight of at least 19 kilograms for the full life span of the system. The Bidder shall indicate the maximum weight which the proposed mounting arm can support. The response shall be supported by technical specifications or datasheets. (D)

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

[C] The display/ monitor mounting arm shall have the same lifespan as the system. The Bidder shall indicate any deviation from the requirement; and support the response using technical specifications or datasheets. (D)

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

[D] The display/ monitor mounting arm shall allow for horizontal, vertical and tilt adjustments. The tilt adjustment shall allow for a 30 degrees tilt in all directions with regards to its central point. The tilting adjustment shall be designed such that the displays/monitors do not tilt unless intentional force is applied. The Bidder shall explain how the requirement is met by the proposed solution; and support the response using technical specifications or datasheets. (D)

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

[E] The vertical and horizontal adjustments of the display/monitor mounting arm parts as defined above shall be lockable. This means that the display/monitor mounting arm shall allow for the locking of its positions after an adjustment (horizontal or vertical) is completed. The Bidder shall explain how the requirement is met by the proposed solution; and support the response using technical specifications or datasheets. (D)

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

[F] The joints and movable parts of the display/ monitor mounting arm shall not damage or degrade in quality with display position adjustments (including those which may be required to reveal/ use the flight strip board) throughout the lifespan of the system. The Bidder shall indicate the type of joints and materials used in the joints of the display/ monitor mounting arm. The response shall be supported by technical drawings. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[G] The display/monitor mounting arm shall incorporate a cable management system that will allow for routing of cables. This cable management system shall take into account the accessibility and manageability of different cables (e.g. power and communications cables). The Bidder shall provide details on the proposed cable management system. (D)

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

[H] The mounting adapter for the display/monitor mounting arm shall be the same as the mounting adapter for the current display/monitor mounting arm. The existing mounting adapter used are a Video Electronics Standards Association (VESA) mount plate as shown in Figure 17. The mounting adapter for the display/monitor mounting arm shall be replaceable. The Bidder shall provide details on the proposed mounting adapter including technical drawings. (D)

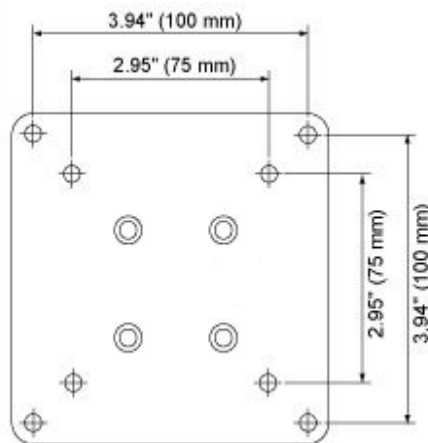| COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

Figure 17: Two types of the current display/monitor mounting adapter or plate (VESA mounts).

[I] The display/monitor mounting arm shall be installed in a manner that allows for additional display/mounting arms to be installed in the future. Provision shall be made for at least two additional mounting arms for future expansion. The Bidder shall explain how additional display/ mounting arms can be accommodated. (D)

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

15.2.1.3   Map Display

[A] The Controller console shall cater for a map display to be mounted as depicted in **Figure 18**. The Bidder shall provide details on the proposed map display mounting and indicate it in the technical drawings. (D)

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

[B] The map display shall be a 46-inch ultra-high-definition LED screen. The Bidder shall provide detailed information in the form of technical specifications, datasheets or manuals for the proposed LED screen; and include provision for the costing in the pricing schedule. (D)

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

[C] The mounting for the display shall have a VESA mount. The Bidder shall provide supporting information in the form of technical specifications or datasheets to prove compliance with the requirement for VESA mount. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[D] The mounting for the display shall hold the display firmly in position for the entire life span of the console. The Bidder shall explain how the requirement is met by the proposed system. (D)

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

[E] The mounting for the display shall incorporate a cable management system that will allow for the routing of cables. This cable management system shall take into account the accessibility and manageability of different cables (e.g. power and communications cables). The Bidder shall provide detailed information on the proposed cable management system. (D)

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

15.2.1.4   Panels

[A] The Controller console shall have a back panel permanently fixed on the rear end of the console behind the displays to minimize any distraction caused by people walking behind the console. The Bidder shall include the back panel in the technical designs. (D)

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

[B] The back panel shall be the entire length of the console and shall be high enough to block the top edge of the highest display (auxiliary or ASD) at its highest adjusted position. The Bidder shall indicate the dimensions of the back panel in the technical designs. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[C] The Controller console shall have a single removable panel which may be fitted onto either side of the console to minimize distraction caused by people walking past the console. The removable panel shall extend at least 500mm beyond the front edge of the console. The height of the removable panel shall be such that a seated Controller cannot be seen behind it. The Bidder shall indicate the removable panel on the technical drawings, including dimensions. (D)

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

[D] The panels shall be constructed from the same materials as the console. The Bidder shall provide details on the material used to construct the panels. (D)

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

[E] The panels shall be sturdy and rigid when mounted. The Bidder shall explain how the panels will be mounted on the consoles such that they are sturdy and rigid. (D)

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

15.2.2 Pilot Console

[A] The preferred layout of the Pilot console is provided in **Figure 18**. The Bidder shall provide detailed technical designs for the Controller console with their Bid, including the proposed layout. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

[B] The worksurface of the Pilot console shall be at least 1400mm long and at least 640mm deep. The Bidder shall indicate the dimensions on the controller console on the detailed technical designs submitted with the Bid. (D)

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

Figure 18. Pilot Console Preferred Layout

15.2.2.1   Panels

[A] The Pilot console shall have removable panels fitted on both sides of the console to minimize distraction caused by people walking past the console. The removable panels shall extend at least 500mm beyond the front edge of the console. The height of the removable panels shall be such that a seated Pilot cannot be seen behind it. The Bidder shall indicate the removable panel on the technical drawings, including dimensions. (D)

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

[B] The panels shall be constructed from the same materials as the console. The Bidder shall provide details on the material used to construct the panels. (D)

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

[C] The panels shall be sturdy and rigid when mounted. The Bidder shall explain how the panels will be mounted on the consoles such that they are sturdy and rigid. (D)

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

15.2.3 Instructor Console

[A] The preferred layout of the Instructor console is provided in **Figure 19. T**he Bidder shall provide detailed technical designs for the Controller console with their Bid, including the proposed layout. (D)

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

[B] The worksurface of the Instructor console shall be at least 1400mm long and at least 640mm deep. The Bidder shall indicate the dimensions on the controller console on the detailed technical designs submitted with the Bid. (D)

COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	
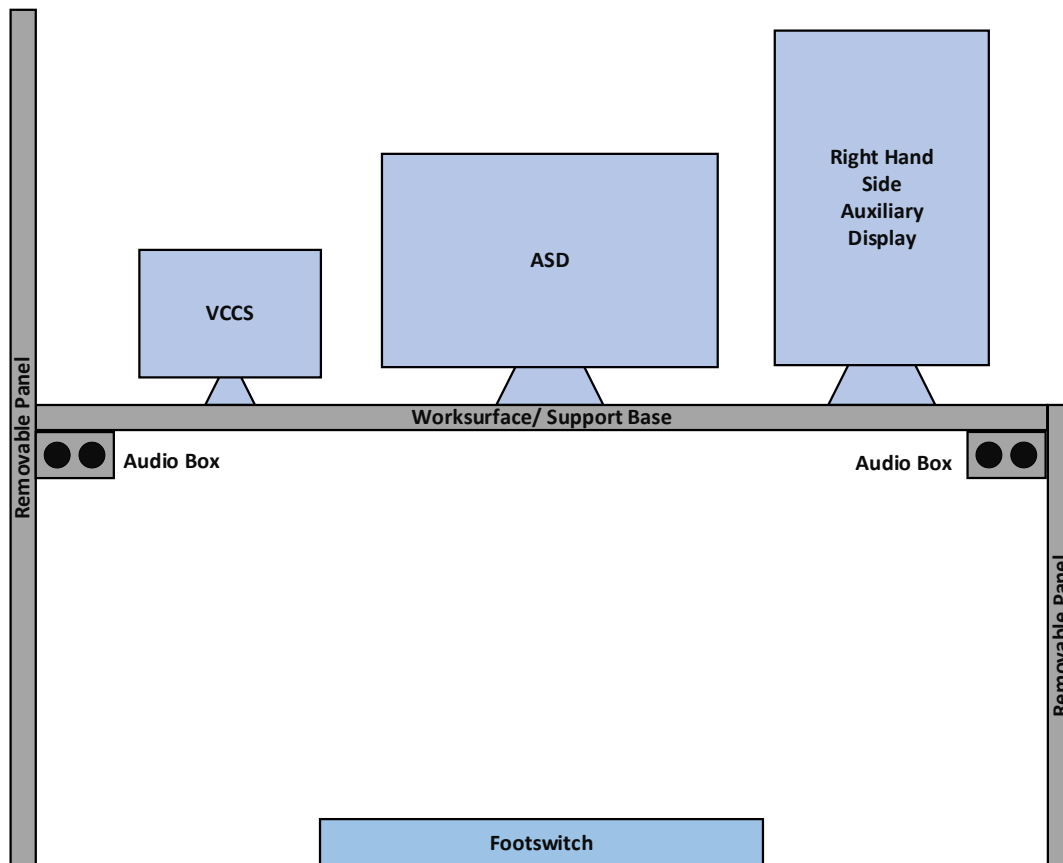
Figure 19. Instructor Position Preferred Layout

15.2.3.1   Panels

[A] The Instructor console shall have a single removable panel which may be fitted onto either side panel of the console to minimize distraction caused by people walking past the console. The removable panel shall extend at least 500mm beyond the front edge of the console. The height of the removable panel shall be such that a seated Controller cannot be seen behind it. The Bidder shall indicate the removable panel on the technical drawings, including dimensions. (D)

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

[B] The panel shall be constructed from the same materials as the console. The Bidder shall provide details on the material used to construct the panels. (D)

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

[C] The panel shall be sturdy and rigid when mounted. The Bidder shall explain how the panels will be mounted on the consoles such that they are sturdy and rigid. (D)

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

15.3 General Console Requirements

The following specifications are applicable to all three types (Controller, Instructor and Pilot) consoles.

15.3.1 General

[A] 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 displays and all other equipment such that it shall not shake if the console is pushed or pulled. The Bidder shall explain how stability of the console is achieved by the proposed design. (D)

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

[B] The Bidder shall indicate the point loads for the console that will be in contact with the floor, on the technical drawings submitted with the Bid. (D)

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

15.3.2   Console Lifespan

[A] The console and all auxiliary modules, components and equipment cabinets shall have a design life of at least 10 years. The Bidder shall indicate any deviations from the requirement. (D)

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

[B] The console shall not incorporate any cut-outs or slots that will weaken its durability and longevity. The Bidder shall explain how the requirement is met by the proposed design. (D)

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

[C] The console shall not be drilled to accommodate the installation of any components. The Bidder shall explain how the installation of components shall be achieved on the console. (D)

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

[D] The design of the consoles shall minimize the potential for damage of consoles including the chipping and structural stability of the consoles over the lifespan of the console. The Bidder shall explain how the requirement is met by the proposed design. (D)

COMPLIANCE (C/PC/NC/Noted)	

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

15.3.3 Materials

[A] The consoles and auxiliary components shall be made of a material that is fire resistant, heat resistant, moisture proof, durable, scratch resistant and hard wearing with the required design life of at least 10 years. The Bidder shall provide full details on the material/s; and supporting information to show that the material/s adheres to these requirements. (D)

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

[B] The consoles shall be water-resistant to withstand damage from spilt liquids. The Bidder shall provide full details on the material/s; and supporting information to show that the material/s adheres to these requirements. (D)

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

[C] The console shall be made from responsibly sourced and/ or recycled material. The proposed material shall adhere to the following requirements:

[a] Should the proposed consoles or auxiliary components be made from timber, the Bidder shall provide a certificate from the Forest Stewardship Council® (FSC®) to show that the timber has been sourced from sustainable forest plantations. (D)

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

[b]   At least 50% of the consoles and auxiliary components shall be made from recycled content i.e. wood, fabrics, metal and plastic, as well as organic wool and cotton that has been recycled. Bidders shall provide supporting information indicating what percentage of the proposed consoles and auxiliary components will be manufactured from recycled materials i.e. wood, fabrics, metal and plastic, as well as organic wool and cotton that has been recycled. (D)

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

[c]   At least 50% of the consoles and auxiliary components shall be recyclable. Bidders shall provide supporting information indicating what percentage of the proposed consoles and auxiliary components will be recyclable. (D)

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

[d]   There shall be no toxic substances in the materials used (i.e. adhesives, paints with high volatile organic compound content, PVC, lead, etc.) that may result in poor indoor air quality and comfort of employees. The Bidder shall indicate any deviations from the requirement. (D)

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

[e]   Flame retardant and solvent free materials shall be used. The Bidder shall indicate any deviations from the requirement. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[D] The Bidder shall provide supporting information to provide that the console and all its supporting equipment and auxiliaries shall withstand and operate within specifications under the environmental conditions as stated in Section 4.1. (D)

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

[E] The Bidder shall provide supporting information indicating how the console shall minimise room light reflections and glare taking into consideration the following: (D)

    i. The rooms in which the consoles are installed are well illuminated by electrical lighting.

    ii. The light emitted from multiple monitors simultaneously.

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

[F] The Bidder shall provide supporting information indicating how the working surface material shall support the operation of an optical mouse. (D)

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

15.3.4 Console Modularity

[A] A complete consoles design shall be modular to support installation and maintenance activities, and for ease of moving the console through passages and around corners. The Bidder shall provide modular console designs which consider the following access routes in the respective areas: (D)

     i.   Simulator Room: Direct access from outside via a roller-shutter door, however items may need to be hoisted over a safety railing.

    ii.   Equipment Room and Pilot Room: accessed via the Simulator room through a standard doorway.

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

[B] The Bidder shall indicate the separate parts that make up the console in the technical designs. The designs shall highlight how these parts combine to form the complete console structure. (D)

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

15.3.5 Ergonomics

[A] Prior to the console being manufactured, the Contractor shall submit the final console design to ATNS for approval by the ATNS Human Factors department. Figure 20 and Figure 21 are provided from the ATNS Ergonomic Specification Manual for console design reference. (I)

Chair	Fixed		Adjustment *	
	(mm)	(in)	(mm)	(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		Preferred	
	(mm)	(in)	(mm)	(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 20. Seated workspace dimensions and illustrations
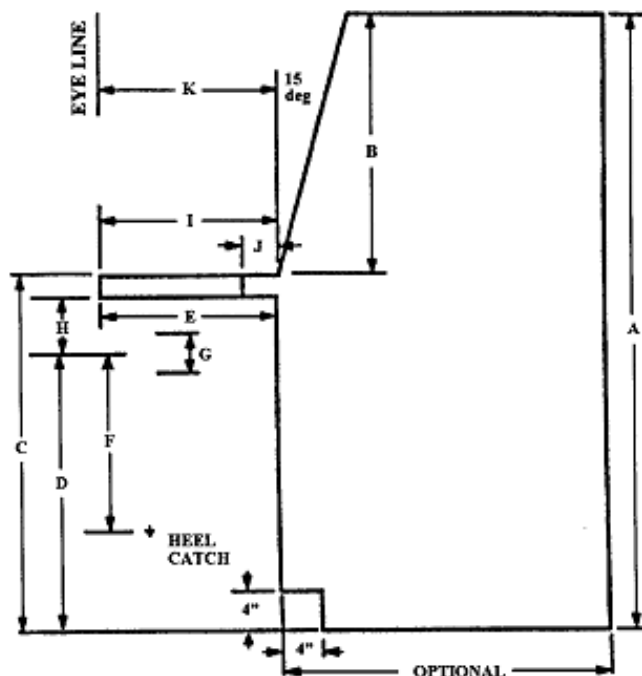
Key	Dimensions	mm	in
A.	Maximum total console height from standing surface	-	-
B.	Suggested vertical dimension of panel, including sills	-	-
C.	Writing surface: shelf height from standing surface	-	-
D.	Seat height from standing surface at midpoint of "G"	-	-
E.*	Minimum knee clearance	460	18.0
F.*	Foot 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 21. Standard Console Illustration and Dimension Key

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

[B] The Contractor shall ensure that the surfaces and edges of the console are smooth. The Bidder shall provide information indicating how this will be achieved. (D)

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

[C] The console shall have sufficient space available for leg room and essential equipment beneath the working surface on the console design. The minimum leg room dimensions are 460 x 510 x 740 mm (depth x width x height). The Bidder shall indicate the space available for leg room and essential equipment beneath the working surface on the console design. (D)

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

[D] The recommended layout for the Approach consoles is as follows:

    [a] Primary equipment within a 35-degree angle of controller position centreline:

        i. Displays

        ii. Keyboard

        iii. Flight Strip Board

        iv. VCCS

        v. Computer mouse/ mice

    [b] Secondary equipment that are applied less frequently and placed within a 45-degree centreline of the seated controller position:

        i. Embedded headset sockets/ Audio boxes

        ii. Speakers

The Bidder shall provide the proposed equipment layout for their Tower console designs. (D)

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

15.3.6   Equipment Storage Section

[A]   The consoles shall have an equipment storage section to store equipment to the rear of the console. The equipment storage section shall be indicated with dimensions in the technical design. (D)

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

[B]   The equipment storage section shall be organized in a manner that accommodates all the equipment required per position for the simulator in a neat and orderly manner. The Bidder shall provide a proposed equipment layout design for the equipment storage section. (D)

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

[C]   The equipment shall be easily accessible from the front and rear of the console for maintenance purposes. The Bidder shall explain how this requirement is met by the proposed design. (D)

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

[D]   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 legroom dimension on the technical designs. (D)

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

[E] The equipment storage section shall be perforated to permit sufficient air flow in and out of the equipment storage section. There shall be no vents in the front where the Controller, Instructor or Pseudo Pilot sits. The Bidder shall indicate the perforations on the technical designs. (D)

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

[F] The equipment storage section design shall cater for natural heat dissipation through venting to prevent heat build-up within the cabinet, while minimising the ingress of dust. The Bidder shall provide details on how this will be achieved. (D)

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

[G] The equipment storage section shall cater for air forced cooling from the floor. The Bidder shall indicate how forced air cooling is accommodated by the consoles in the technical designs. (D)

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

[H] The equipment storage section shall be cooled by forced air devices such as fans. The cooling of equipment shall be done silently without introducing any additional noise in the equipment cabinets. The Bidder shall provide detailed information on the proposed forced air devices in the form of technical specifications, data sheets or manuals. (D)

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

[I]   The equipment storage section shall not incorporate devices that generate noise. The Bidder shall indicate compliance with the requirement. (D)

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

[J]   A maintenance light shall be installed in the equipment storage section. The maintenance light shall be in the form of a low power LED tube. The fitting and cabling for the LED tube shall be provided and installed. The fitting shall have an on/off switch. The Bidder shall provide details on the proposed maintenance light. (D)

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

[K]   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 indicate the dimensions of the equipment storage section in the technical drawings to prove compliance with EIA-310. (D)

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

[L]   The equipment storage section shall incorporate heavy-duty 19-inch rack mountable sliding mechanisms that will allow technicians to slide/draw out equipment from the console beyond the edge of the console for maintenance activities. The Bidder shall provide details of the rack mountable sliding mechanisms. (D)

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

[M] Rack mountable shelves supplied with the console based on the system equipment requirements. The Bidder shall provide details on the rack mountable shelves. (D)

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

[N] The equipment storage section shall have a cable management system. The cable management system shall take into consideration the cable route as defined herein and the sliding in and out of equipment from the console. The Bidder shall provide details on the cable management system in the equipment storage section and indicate it in the technical designs. (D)

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

15.3.7   Cable Management

15.3.7.1   *Cable Routes*

Cabling for equipment will be routed through the raised access floor which is continuous in the simulator room, pilot room and equipment room. There are feeder holes running through the floor at various positions for connections to the rooms. The cabling will then be routed to the console's working surface (to any auxiliary modules, mice and keyboards) or the console's support base (to display/monitor mounting arms and monitors/displays) or the equipment storage section (to desktop computer towers). In principle, cables shall be routed to any of the following termination points, through any of the following passage/midway points and from any of the following entry points:

  i.   Console working surface,
  ii.   Console support base,
  iii.   Monitor/display mounting arm/s,
  iv.   Equipment storage section,
  v.   The raised access floor.

[A] The cable management system of the consoles shall account for the cable route defined above. The Bidder shall define and provide the design of the cable management system for the consoles and associated modules as required. (D)

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

[B] The cable management system shall ensure that cables are directed through the necessary channels or routing mechanisms, in an organised manner, without congesting the route. The cable routes of the cable management system should allow for flexible routing. The Bidder shall indicate the flexibility in routing of the cable management system. (D)

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

[C] ATNS's preference is for brush panels or similar instead of open cable entry/exit points. The Bidder shall provide a design for cable entry/exit points and indicate how it will decrease the ingress of dust within the console. (D)

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

15.3.7.2   *Cable Separation*

[A] The incorporated cable management system shall separate power cables and communication cables. The Bidder shall highlight how the cable management system will ensure separation of power cables from communication cables. (D)

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

[A] There shall be a cable routing mechanism/s for the cable management system that allows for easy access to routed cables and for installation of new cables. The Bidder shall provide details of the cable routing mechanism/s. (D)

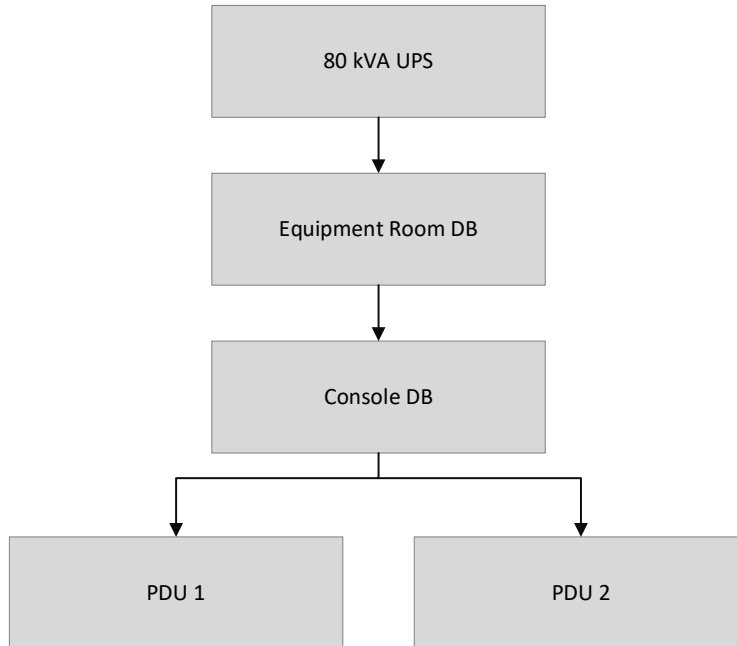| COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

[B] The capacity of the cable routing mechanism/s shall take into consideration the quantity of equipment (current and anticipated) per position. It can be assumed that each equipment will have at minimum two cables (one for power and one for communication) connecting to it. The Bidder shall provide the maximum number of cables a particular cable routing mechanism can handle. (D)

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

15.3.8 Power Distribution

[A] **Figure 22** below shows how the power shall be distributed within the console. The Bidder shall provide a detailed diagram of the power distribution layout within the console. (D)

Figure 22: Power Distribution.

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

15.3.9   Distribution Board (DB Board)

[A] Each console shall have a 12-way distribution board installed in the equipment storage section. The Bidder shall provide details of the distribution board to be installed within the console. (D)

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

[B] The DB Board shall have one mains switch. The main switch shall be a 2 pole, D Curve miniature circuit breaker with a rating of 16A. The main switch shall be clearly labelled on the DB Board. The Bidder shall provide supporting information showing compliance to this requirement. (D)

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

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

[C] The DB Board shall have eight single pole, D Curve miniature circuit breakers with a rating of 6A. Each breaker shall be numbered 1 to 8 and clearly labelled as shown below in **Figure 23.** The Bidder shall provide supporting information showing compliance to this requirement. (D)

Figure 23: Example of the DB Board.

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

[D] An Electrical Compliance Certificate (ECC) shall be provided for the installation of the DB Board and all electrical work done on the console. The Bidder shall indicate compliance to this requirement. (D)

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

15.3.10 Rotary Isolator Switch

[A] Each console shall have a rotary isolator installed. The Bidder shall provide full details on the proposed rotary isolator and indicate the rotary isolators on the technical design. (D)

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

[B] The rotary isolator shall have 2 poles with a rating of at least 32 Amps, 400V. The Bidder shall provide technical specifications or datasheets which prove compliance to this requirement. (D)

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

[C] The rotatory isolator shall have an ingress protection rating of IP65. The Bidder shall provide technical specifications or datasheets which prove compliance to this requirement. (D)

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

15.3.11 Power Distribution Units (PDUs)

[A] Each console shall be fitted with at least two Power Distribution Units (PDU). Each PDU shall have at least six International Electrotechnical Commission (IEC) C13 sockets. The PDU's shall not obstruct access to equipment. The PDU's shall be connected to the Distribution Board installed inside the console. An example of a PDU with C13 sockets is shown in **Figure 24**. Bidders shall provide details of the PDU to be used. The Contractor shall supply an Electrical Compliance Certificate for the installation of the PDUs. (D)

Figure 24: Example of an IEC power distribution unit with C13 sockets.

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

15.3.12 Audio Box

[A] Each console shall be fitted with audio boxes as per the equipment list in Section 5.1. The headset connecting ports modules will be positioned on the left-hand side and the right-hand side in relation to the centre. These stated positions shall be optimized in consideration of the mobility of the seated person. The Bidder shall indicate the positioning of the audio boxes in the console technical designs. (D)

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

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

    i.   The cable management system of the console.

    ii.   The audio boxes shall remain fixed in position until the end of life of the console.

    iii.   The audio boxes shall be mounted such that the headset connector (Figure 6) does not protrude beyond the front edge of the worksurface.

    iv.   Drilling into the console on-site will not be acceptable.

    v.   Alignment dots of the port to be facing upward for ease of headset connection.

The Bidder shall explain how the requirements are met by the proposed design. (D)

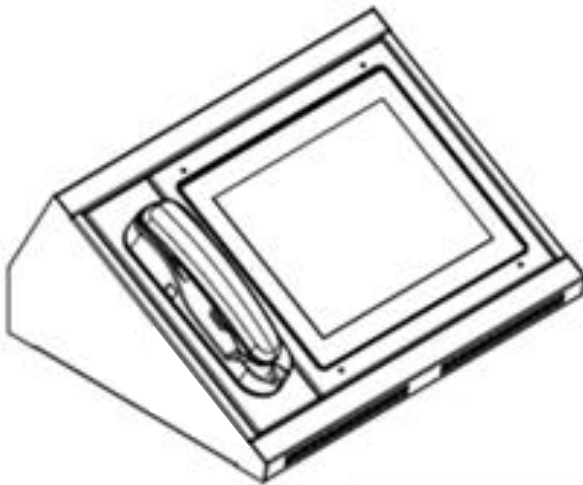| COMPLIANCE (C/PC/NC/Noted)	
[INSERT FULL RESPONSE FOR EVALUATION HERE]	
[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]	

15.3.13 VCCS Mounting Bracket

[A] The VCCS display/ touchscreen shall be accommodated on a mounting bracket at each Controller Position. The VCCS mounting bracket shall perform the following adjustments to allow for flexible positioning of the VCCS display:

       i.   Upward and downward adjustment.

      ii.   Forward and backward adjustment; and

     iii.   A 45 degrees tight tilt in all directions.

The Bidder shall provide technical designs for the proposed VCCS mounting solution. (D)

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

[B] The VCCS display/ touchscreen shall be desk mounted within a module (example in Figure 25. Example of VCCS mounting for Instructor and Pilot Consoles) on the Instructor and Pilot consoles. The Bidder shall provide technical designs for the proposed VCCS mounting solution. (D)

Figure 25. Example of VCCS mounting for Instructor and Pilot Consoles

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

[C] The VCCS shall be installed within arms-reach of the seated Controller, Instructor of Pseudo Pilot. The Bidder shall indicate the proposed VCCS positioning on the console layout designs. (D)

COMPLIANCE (C/PC/NC/Noted)	

[INSERT FULL RESPONSE FOR EVALUATION HERE]

[INSERT REFERENCE TO ADDITIONAL INFORMATION HERE]

------------------------------ END OF VOLUME 2 ------------------------------