

## 1. TECHNICAL REQUIREMENT OVERVIEW

### 1.1 PRODUCT REQUIREMENTS

The Teams Boardroom solution, Endpoints, Accessories and Peripherals to be implemented in an environment with the seat numbers.

**Bidder's solutions must adhere to the required products below:**

#### Teams Boardroom solution

Requirements	
1.	Must support both wired and wireless expansion microphones
2.	Must display microphone status, time-in-call, time elapsed
3.	Password protection – Prevents unauthorized users from accessing, controlling or making changes to the system
4.	More than 10 Simultaneous conferencing HD sessions
5.	Must Include Display Note licenses for collaboration purposes.
6.	Integrated USB Media Player and auto-input switching capabilities, so the screen sees. zero downtime of content
7.	Integrated 250W x 2 audios for convenient audio playback
8.	Minimum of 2 x USB Ports, 2 x HDMI Ports and 1 x Ethernet ports per Monitor.
9.	The solution must enable Hands-free camera operation, simple touch interface control and audio innovations to eliminate distractions for more effective meetings
10.	Clean design includes metal bezel and pull-down IR receiver
11.	CEC support through HDMI connections for enabling connected video devices
12.	The solution must allow for remotely updating Bridges and video conferencing endpoints in batches.
13.	The solution must be open, standards-based interoperability and native integration into UC deployments including Microsoft Teams / Webex by Cisco / Office 365 / Zoom. Must support AudioCodes management system.
14.	Meeting room display/Scheduling panel to display boardroom availability on the boardroom doors.
15.	The Solution must be able to interface with Microsoft Exchange/ Microsoft Exchange online and be able to operate independently through web interface.

16.	The solution must be enabled for video and content sharing.
16.	The solution must cater for a Touch Control Panel, which must have the same user interface as the conference video phone in Microsoft Teams or Zoom mode.
17.	The solution must be able to conduct 1080p for 40 people and content resolution to share video clips, CAD animations, medical diagrams, or anything else you can dream up in high resolution.
18.	The solution must have High-Fidelity loudspeakers to ensure that the audience in the room can listen clearly to everyone.
19.	The solution must be fully factory-integrated with the display screens, cameras, microphones, codecs, control devices and equipment rack. The equipment must come as a single solution instead of after-market integrated solution.
20.	The solution must be able to operate on an Ethernet and Wireless Network
21.	The solution must allow administrators to move participants between conferences for administrative purposes.
22.	The solution must provide a web interface where a user can manage and maintain the bridge and schedule conferences.
23.	The solution must provide multiple conference control functions, including: <ul style="list-style-type: none"> <li>a) Add, delete, broadcast, and view a participant.</li> <li>b) Set continuous presence.</li> <li>c) View participant status; and</li> <li>d) View network statistics in real time.</li> </ul>
24.	The solution must support inhouse network architecture which at this point is Cisco
25.	The solution must support content sharing through wireless connectivity.
26.	The architecture of solution must be scalable by license to allow for expanded capacity and conferencing features as the network grows.
27.	The solution must support the content in Picture in Picture (PIP) mode.
28.	Preferably, the product should support control via a wireless tablet, the size of which must be at least 10 inches.
29.	Preferably, the product should be able to connect to the internet via WIFI access.

## Conferencing Management Software

Requirements	
1.	The Solution must not duplicate MCU resources and should complement the Microsoft Teams, Cisco Webex, and Zoom AV MCU: 5 Ports are required
2.	Must support 1080 P HD secure virtual meeting rooms.
3.	Must support inhouse AudioCodes Automated device management to assist in device administration.
4.	Must support Scheduling.

5.	Secure communication with home workers, customers, and partners for B2B and B2C applications.
6.	Web browsers click-to-join simplicity, to conduct a full high-quality audio, video, and content-sharing session.
7.	Connect multiple devices, including standards-based video endpoints and web users, by simply calling into a virtual meeting room.
8.	Share multiple documents and content sources at once with other co-workers.

## Reporting and Monitoring

Requirements	
1.	Automated provision and maintenance of hardware video endpoints and personal software endpoints.
2.	Auto generated reports and analytics for tracking, reporting, troubleshooting, and ROI Metrics.
3.	Resiliency by automatically reacting to network issues/outages, ensuring high availability of services.
4.	System-wide dashboards.
5.	Secure firewall transversal for external communication.
6.	Network bandwidth controls and optimization.
7.	UC integration into platforms— e.g., Cisco Webex / Zoom
9.	Multi-protocol call control with gateway
10.	Auto cascade for size and bandwidth
11.	Advanced dial plan management and routing with bandwidth management
12.	Flexible call models—Ad hoc dial-in, dial-out, scheduled calls etc.
13.	Administrator, operator, chairperson, and auditor views and conference controls.
14.	Conference templates to easily save layouts for recurring meetings.
15.	Microsoft Teams integration to integrate with Zoom and Cisco Webex.
16.	The solution must enable Hands-free camera operation, simple touch interface control and audio innovations to eliminate distractions for more effective meetings.
17.	three years OEM warranty

## 1.2 SOLUTION REQUIREMENTS

### (1) SOLUTION TARGET ARCHITECTURE

The Teams Boardroom solution must be able to call both internal and external stakeholders. It must also be able to simultaneously accommodate video calls from all parties, and other stakeholders and must be a dual-screen setup.

The Teams boardroom unit must be able to automatically track active speakers in the boardroom, providing the far side with the best possible view in the large boardroom of the active speaker.

The bidder must propose complete solution architecture, including hardware and software details, for the Teams boardroom solution, and must demonstrate how various components integrate with each other, including back-end and front-end interfaces and re-usability user identities.

### (2) SOLUTION INTEGRATION REQUIREMENTS

The Boardroom solution must allow connectivity directly into legacy and new technologies.

**The following is the functionality required:**

- (a) PC presentations (in-room)
- (b) PC presentations (remote)
- (c) Teams/ Webex/Zoom Boardroom solution
- (d) Playing video material (e.g., video casts)
- (e) Video and Data display capabilities
- (f) Wireless Content Sharing

- (3) **Additional information Boardroom for installation in each boardroom. Pricing should be based on compatibility with the working devices Transnet Engineering provided that Bidders are contesting with.**

## A. Koedospoort Boardroom

### 1. Kopanong Ground

Floor the following devices that are working:

Boardroom Devices	Brand type	Quantity
Microphone	Bosch Push to Mic	15
Ceiling Speakers	JBL	4
Projector Screen	Fixed Mounted Projector Screen	2

The following devices are not working:

Components	Brand type	Quantity
Control Unit	CCU Bosch Control Unit	1
LED Screen	65" NEC LED Screen	2
4X1 HDMI Switcher	VS-41H	1
Digital Power AMPLIFIER	InterM DPA	1
Camera	Polycom	3

**KOPANONG BOARDROOM PRICE \_\_\_\_\_****2. Fhatha Lushaka Boardroom**

The following devices are working.

<b>Boardroom Devices</b>	<b>Brand Type</b>	<b>Quantity</b>
Projector's	NEC Laser Projector's	3
Microphone	Long Bosch Mic – Push to Talk	20
Control Unit	CCU Bosch Control Unit	1
LED Screen	65" NEC LED Screen	2
4X1 HDMI Switcher	VS-41H	1
Digital Power Amplifier	InterM DPA-300Q	1
Encoder	AMX NMX -ENC-N2312	20
Sound Control	RC4-HE Head End	1
Avaya Switch	24 Port Ayava Switch 4926GTS PWR+	2
Tesira Forte VI	Biamp	1
Camera	Avaya	3
Fixed Projector Screen	Projector Screen	3
Ceiling Speakers	JBL	4
In-House Speakers	JBL	4

The following devices are not working:

<b>Boardroom Devices</b>	<b>Brand type</b>	<b>Quantity</b>
Touch Panel	AMX	1
LED Screen	65" NEC LED Screen	2
Netlink	AMX NX-3200	1
Ceiling Speakers	JBL	4
Microphone	Long Bosch Mic – Push to Talk	6
Encoder	AMX NMX -ENC-N2312	4

**FHATHA LUSHAKA BOARDROOM PRICE \_\_\_\_\_****3. TE EXCO Boardroom (15-Seater)**

The following devices are not working:

<b>Components</b>	<b>Brand type</b>	<b>Quantity</b>
65" LED Screen	Samsung	2
NEC Projector	Fixed Mounted Screen	1
Projector Screen	3MX3M Fixed Mounted Screen	1
Touch Panel	Creston	1
Microphone	Bosch Push to Talk	8
Camera	Polycom Camera	3

The following devices are working:

<b>Boardroom Devices</b>	<b>Brand type</b>	<b>Quantity</b>
--------------------------	-------------------	-----------------

Camera	Polycom Camera	2
Control Unit	CCU Bosch Control Unit	1
Digital Power AMPLIFIER	InterM DPA-300Q	1
Ceiling Speakers	JBL	4

The following devices are not working:

Boardroom Devices	Brand type	Quantity
Touch Panel	AMX	1
LED Screen	65" NEC LED Screen	2
Netlink	AMX NX-3200	1
Ceiling Speakers	JBL	4
Microphone	Long Bosch Mic – Push to Talk	6
Encoder	AMX NMX -ENC-N2312	4

TE EXCO BOARDROOM PRICE \_\_\_\_\_

#### 4. CE's Boardroom

The following devices are working.

Boardroom Devices	Brand Type	Quantity
LED Screen	65" NEC LED Screen	2
4X1 HDMI Switcher	VS-41H	1
Digital Power Amplifier	InterM DPA-300Q	1
Encoder	AMX NMX -ENC-N2312	20
Sound Control	RC4-HE Head End	1
Avaya Switch	24 Port Avaya Switch 4926GTS PWR+	2
Camera	Avaya	3

The following devices are not working:

Boardroom Devices	Brand type	Quantity
Touch Panel	AMX	1
Netlink	AMX NX-3200	1
Sound bar	Crestron	1
BYOD	Crestron	1
Ceiling Speakers	JBL	0
Microphone	Bosch Mic – Push to Talk	6

CE'S BOARDROOM PRICE \_\_\_\_\_

**Compiler**

Amos Mathibela

*APMathibela*

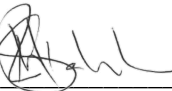
**Signature**

26 January 2024

**Date**

**Reviewer**

Daniel Hlahla



**Signature**

25/01/2024

**Date**

**Approver**

Ziphle Nchoba



**Signature**

26/01/2024

**Date**