TERMS OF REFERENCE
Procurement of End-User Devices

1. EXECUTIVE SUMMARY

The Kenya Revenue Authority (KRA) seeks to procure end-user computing devices and peripheral equipment to support its operational, administrative, and field activities across the country. This procurement is critical to ensuring that KRA maintains a secure, reliable, and efficient ICT environment capable of supporting modern business applications, revenue systems, taxpayer services, and emerging digital platforms.

A significant proportion of the Authority's current end-user devices have exceeded their useful life, lack modern performance capabilities, and do not meet the security and compliance requirements necessary for Windows 11, ISO 27001, Data Protection Act obligations, and enterprise automation initiatives. The proposed procurement will support KRA's digital transformation agenda, enhance staff productivity, reduce operational downtime, and strengthen security controls across all offices.

The scope of the procurement covers laptops, desktops, printers, scanners, multifunction devices, and related accessories. The vendor will also be required to configure and deploy the equipment in accordance with KRA ICT standards, ensuring seamless integration into the Authority's technology environment.

Evaluation of potential suppliers will follow the Public Procurement and Asset Disposal Act (PPADA), with mandatory compliance, vendor experience assessment, and detailed technical evaluations forming the basis for qualification. The equipment specifications provided ensure that KRA receives high-performance, durable, and internationally recognised ICT equipment with local manufacturer-backed warranties.

1.1 Introduction

This Terms of Reference (ToR) outlines the requirements for the procurement of end-user computing devices and related peripherals to support the operational needs of the Kenya Revenue Authority (KRA). The equipment will be deployed across headquarters, regional offices, and field stations to enhance productivity, efficiency, service delivery, and compliance with ICT infrastructure standards.

Tulipe Ushuru Tujitegemee!

1.2. Background and Rationale

KRA relies on robust ICT infrastructure to facilitate revenue collection, taxpayer services, and internal operations. A significant portion of current computing equipment is outdated, has exceeded its useful life, or lacks the performance and security features required to support modern applications, Windows 11, cybersecurity controls, and enterprise automation.

This procurement aims to:

- Standardize end-user computing devices
- Improve staff productivity
- Enhance cybersecurity and compliance (ISO 27001, Data Protection Act)
- Support Windows 11 migration and emerging digital platforms
- Reduce downtime and maintenance costs
- Support hybrid and mobile working environments

1.3. Objectives of the Procurement

The primary objectives are to acquire:

- **High-performance laptops and desktops** for general and specialized staff roles
- **Printers, scanners, multifunction devices (MFDs)** for document processing
- **Digital Display and Collaboration Solutions**
- **Accessories** such as keyboards, mice, carry cases, and cables
- **Vendor support and warranties** to ensure continuity of operations

1.4. Scope of Work

The selected vendor will be required to:

1.4.1 Supply

- Laptops
- Desktops
- Printers (single function & multifunction)
- Scanners
- Any other peripheral equipment specified

1.4.2 Configuration & Deployment

Tulipe Ushuru Tujitegemee!

- Pre-installation of operating systems (e.g., Windows 11 Pro)
- Configuration according to KRA ICT standards
- Delivery to KRA HQ and regional offices

2. EXPECTED DELIVERABLES

The Supplier shall provide:

1. Fully functional devices meeting all specifications
2. Configuration documentation
3. Warranty certificates
4. Test/Inspection reports
5. User and administrator manuals

Evaluation Criteria

Preliminary examination for Determination of Responsiveness

The Procuring Entity will start by examining all tenders to ensure they meet in all respects the eligibility criteria and other mandatory requirements in the ITT, and that the tender is complete in all aspects in meeting the requirements provided for in the preliminary evaluation criteria outlined below. The Standard Tender Evaluation Report Document for Goods and Works for evaluating Tenders provides very clear guide on how to deal with review of these requirements. Tenders that do not pass the Preliminary Examination will be considered non-responsive and will not be considered further.

3. SPECIFICATIONS FOR END USER TOOLS

3.1 VENDOR EVALUATION CRITERIA

No	Vendor Evaluation Criteria	Max Score
1.	**Firms Experience** **Experience/ Reputation** **A.** Provide two (2) references (up to date contact details : name of the firm, Email and telephone contacts of the contact persons) for entities to which the bidder has supplied and delivered Computers (Laptops, Desktop computers, Printers, etc) within the last five (5) years to the tender opening date. Copy of contract/Purchase order – 10 marks per reference **B.** Recommendation letter from clients in (A) above on deliveries done. The letter head should have the up to date contact and email address. (Note: A recommendation letter is not a notification of award). (5 marks per recommendation letter).	30
	CUT OFF SCORE TO PROCEED TO TECHNICAL EVALUATION	20

3.2 TECHNICAL EVALUATION

INSTRUCTIONS TO BIDDERS:

1. Bidders are required to quote for Genuine Products which are brand new, internationally recognized and mature brands,
2. Bidders MUST attach Manufacturer data sheets for the product they propose to supply.
3. Bidders MUST append official company stamp and authorized signature on any attached technical data sheets.
4. Bidders MUST provide substantive responses FOR ALL THE FEATURES in the minimum technical specifications irrespective of any attached technical documents. Use of the words such YES, COMPLIANT, NO, TICK, BLANK SPACES etc. will be considered non-responsive and shall lead to bidder's disqualification.

SCHEDULE OF REQUIREMENTS

No	Item Description	Quantities	Remarks
1	Standard Laptops	4660	
2	High End Analytics Laptops	300	
3	Desktop PCs	3000	
4	Colour Laser Printers	50	
5	B&W Laser Printers	150	
6	Multi-function Printers	80	
7	Digital Display and Collaboration Solutions	Various	

MINIMUM SPECIFICATIONS FOR STANDARD LAPTOP

No.	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	**Brand and model**	Internationally recognized mature brand Specify Brand and Model Proposed product **MUST** be brand new		
2.	**Mandatory**	Bidders must attach Manufacturer's data sheet/		

Tulipe Ushuru Tujitegemee!

		brochure for the proposed model.		
3.	**Manufacturer Authorization**	Bidder must attach Manufacturers' Authorization Letter.		
4.	**Processor**	At least 14th Generation Intel Core i7 or higher		
5.	**Processor Speed**	Processor base frequency of 1.5 GHz, up to 5.5 GHz or higher with Intel Turbo boost technology		
6.	**L3 Cache**	At least 33 MB Smart Cache with 8 performance cores and 12 efficient cores		
7.	**Memory**	At least 16 GB DDR4		
8.	**Internal storage**	At least 512 GB SSD		
9.	**Connectivity**	Realtek 802.11a/b/g/n/ac (2x2) Wi-Fi and Bluetooth 5 combo, 10/100/1000 GbE NIC		
10.	**Display**	14" diagonal, HD (1366x768), IPS, narrow bezel, backlit antiglare, 250 45%		
11.	**Graphics**	Intel UHD Graphics 770		
12.	**Portability**	Slim and portable		
13.	**Ports and Connectors**	Minimum two (2) USB 3.0 ports, 1 HDMI, stereo microphone in, stereo headphone out. RJ-45 connector must be integrated.		
14.	**Pointing Devices**	• Touch pad • External wireless optical mouse		
15.	**In built Camera**	720p HD Camera : HD IR camera		
16.	**Speakers**	In built stereo speakers		
17.	**Operating System**	Free DOS		
18.	**Security**	Finger-Print Scanner		
19.	**Battery**	10 Hours battery life		
20.	**Input Power**	220-240V AC,50 HZ		
21	**Accessories**	Carrying bag (Same size and brand as the laptop)		
22.	**Warranty**	One (1) year Manufacturer Local warranty		

Tulipe Ushuru Tujitegemee!

Remarks: Complied / Not Complied.	
Bidders who do not comply with any of the above requirements will NOT be considered for further evaluation	

MINIMUM SPECIFICATIONS FOR HIGH END ANALYTICS LAPTOP

No.	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	**Brand and model**	Internationally recognized and mature brand (Specify Brand and Model). Proposed product **MUST** be brand new.		
2.	**Mandatory**	Bidders must attach Manufacturer's data sheet/ brochure for the proposed model		
3.	**Manufacturer Authorization**	Bidder must attach Manufacturers' Authorization Letter		
4.	**Processor**	At least Intel® Core™ Ultra 7 or higher		
5.	**Processor Speed**	up to 4.8 GHz with Intel® Turbo Boost Technology		
6.	**L3 Cache**	24 MB L3 cache, 16 cores, 22 threads		
7.	**Memory**	32+ GB		
8.	**Internal storage**	1TB SSD		
9.	**Connectivity**	Intel® Wi-Fi 6 and Bluetooth® 5.4+ wireless card or higher		
10.	**Display**	• 40.6 cm (16") diagonal, 2.8K (2880 x 1800), OLED, multi-touch-enabled, 48-120 Hz, UWVA, Low Blue Light, SDR 400 nits, HDR 500 nits, 100% DCI-P3		

Tulipe Ushuru Tujitegemee!

		• Edge-to-edge glass with anti-reflection Corning Gorilla Glass • Flip able screen		
11.	**Graphics**	Discrete: NVIDIA® GeForce RTX™ 4050+ Laptop GPU (6 GB GDDR6 dedicated) ; NVIDIA® Studio		
12.	**Ports and Connectors**	• 1 USB Type-A 10Gbps signaling rate • 1 HDMI-out 2.1 • 1 headphone/microphone combo • 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort)		
13.	**Pointing Devices**	Haptic touchpad		
14.	**Keyboard**	Premium Keyboard, backlit, full-sized island-style, chiclet, spill-resistant		
15.	**In built Camera**	9MP IR camera with camera shutter, temporal noise reduction and integrated dual array digital microphones		
16.	**Speakers**	DTS:X® Ultra; Quad speakers		
18.	**Accessories**	**In the box:** • Rechargeable Tilt Pen **Additional:** • An executive laptop bag • A compatible USB-C converter/dock with RJ-45, HDMI & USB-A & USB-C ports • A wireless mouse (with an extra set of batteries)		

Tulipe Ushuru Tujitegemee!

19.	**Security**	- All-in-One keyboard - Trusted Platform Module (Discrete TPM) support - Fingerprint reader		
20.	**Operating System**	Free DOS or Windows 11 without License (KRA has Microsoft Enterprise Agreement)		
21	**Battery**	16 Hours battery life		
22.	**Input Power**	220-240V AC, 50 Hz USB Type-C® power adapter		
23.	**Warranty**	1 year locally valid manufacturer's warranty. KRA will verify with the manufacturer to ensure compliance.		

3.0   MINIMUM TECHNICAL SPECIFICATIONS FOR STANDARD DESKTOP PCs

No	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	Model	Internationally recognized mature brand Specify Brand and Model Proposed product **MUST** be brand new		
2.	Manufacturer Authorization	Bidder must attach manufacturers' Authorization letter		
3.	Processor	At least 14th Generation Intel Core i7 or higher		
4.	Processor Speed	Processor base frequency of 1.5 GHz, up to 5.5 GHz or higher with Intel Turbo boost technology		
5.	L3 Cache	At least 33 MB Smart Cache with 8 performance cores and 12 efficient cores		
6.	Memory	16 GB DDR4 3200 RAM		
7.	Internal storage	1TB SSD		
8.	Form Factor	Minitower		

Tulipe Ushuru Tujitegemee!

9.	Screen	Display size: 54.5 cm (21.5") Resolution: FHD (1920 x 1080) Contrast ratio: 3000:1 Aspect ratio: 16:9 Brightness: 200 nits Panel Technology: VA; LCD 1 HDMI 1 VDI		
10.	Graphics	Intel UHD Graphics 710		
11.	I/O Ports	1 headphone/ microphone combo 4 SuperSpeed USB Type-A, 5Gbps signalling rate 1 HDMI 1 power connector 1 RJ-45 2 USB 2.0 or better		
12.	Audio	With internal Speakers		
13.	Keyboard & Mouse	USB Multimedia Keyboard USB Optical Mouse		
14.	Network Interface Card	LAN: Integrated 10/100/1000 GbE; WLAN Realtek Wi-Fi 6 RTL8821CE 802.11a/b/g/n/ac (1x1) and Bluetooth® 4.2 M.2 combo		
15.	Operating System	Free DOS or Windows 10 without license (KRA has Microsoft Enterprise Agreement)		
16.	Input Power	220-240V AC, 50 Hz		
17.	Warranty	The proposed product **MUST** have a 1-year manufacturer's local warranty & support. KRA will verify with the manufacturer to ensure compliance.		

4.0 MINIMUM TECHNICAL SPECIFICATIONS FOR COLOUR PRINTER

No	Features	Minimum Requirements	Bidder's response	Evaluation Committee Remarks *Complied / Not Complied*

Tulipe Ushuru Tujitegemee!

1.	Brand and Model	Internationally recognized mature brand. Bidder MUST specify brand and model Proposed product MUST be brand new		
2.	Manufacturer Authorization	Bidder must attach Manufacturers' Authorization Letter		
3.	Print Quality	1200 x 1200 dpi		
4.	Print Speed and throughput	Up to 35 ppm		
5.	Print Technology	Laser colour		
6.	Display	5 Line display with numeric keypad		
7.	Memory	Standard 1 GB		
8.	Processor speed	At least 1.2 GHz		
9.	First page out	Black: As fast as 6.5 seconds Color: As fast as 7.5 seconds		
10.	Power	220 to 240 VAC, 50/60 Hz		
11.	Languages	Prescribe, PCL 6, PCL 5, postscript level 3 emulation, PDF, XPS		
12.	Media Capacity	Input tray 1: 100-sheets multi-purpose tray Input tray 2: 500 sheets		
		Output Tray: 500 sheets		
13.	Media Sizes	**Tray 1**: A4, RA4, A5, B5(JIS), 10X15cm, A6, 16k, envelopes (B5,C5 ISO,C6, DL ISO) ; Custom : 76x127 to 216X356mm; Tray 2: A4, A5, B5(JIS), B6(JIS) 10X15cm, A6, 16k; Custom: 102x148 to 216x297mm: Optional Trays 3+: A4, ra4, a5, b5 (JIS), 16k : Custom : 102 x 148to 216x356mm		
14.	Media types	Media types: paper (plain, light, bond, recycled, mid-weight, heavy, mid-weight glossy, extra heavy,		

Tulipe Ushuru Tujitegemee!

		extra heavy glossy, cardstock, card glossy, color transparency, labels, letterhead, envelope, preprinted, prepunched, colored, rough, opaque film, user-defined		
15.	Duplex Printing	Duplex as standard		
16.	Connectivity	1 Hi-Speed USB 2.0 (Hi-speed) 2 Host USB 2.0 1 Gigabit Ethernet (10BaseT/100BaseTX/ 1000Base T		
17.	Duty cycle	100,000 pages per month		
18.	Number of print cartridges	4 (1 each - black, cyan, magenta, yellow)		
19.	Compatibility	Operating Systems: All current Windows operating systems, MAC OS X Version 10.8 or higher, Unix, Linux as well as other operating systems on request		
20.	Software	Drivers for Windows Server 2003/2008/2010/2012/2016, Windows Xp/7/8/10/11		
21.	Warranty	1-year manufacturer's local warranty & support. KRA will verify with the manufacturer to ensure compliance.		

5.0 MINIMUM TECHNICAL SPECIFICATIONS FOR BLACK & WHITE LASER PRINTER

No	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	Model	Internationally recognized mature brand Specify Brand and Model Proposed product **MUST** be brand new		
2.	Manufacturer Authorization	Bidder must attach manufacturers' Authorization letter		
3.	Functions	Print		
4.	Print quality	Black (best): 1200 x 1200 dpi		
5.	Print speed and throughput	Black (A4 normal): Up to 40 ppm		
6.	Print Technology	Laser		

Tulipe Ushuru Tujitegemee!

7.	Display	2-line LCD; OK button; left button; right button; cancel button; back button, ready LED, Error LED		
8.	Memory	256 MB RAM		
9.	Processor speed	1.2 GHz		
10.	First page out	Black (letter, ready): As fast as 6.3 sec Black (A4, sleep): As fast as 8.8 sec		
11.	Power	220 to 240 VAC, 50 Hz		
12.	Languages	PCL6, HCL5e, PostScript level 3 emulation, PDF, URF, PWG Raster		
13.	Media capacity	Input tray 1: 100 sheets Input tray 2: 250 sheets Optional tray 3: 550 sheets Automatic Document Feeder (ADF): 50 sheets Output: 150 sheets		
14.	Media sizes	Tray 1: 76 x 127 to 216 x 356 mm Tray 2, optional Tray 3: 104.9 x 148.59 to 2165.9 x 356.6 mm		
15.	Media types	Paper (plain, EcoEFFICIENT, light, heavy, bond, colored, letterhead, preprinted, prepunched recycled, rough), labels, envelopes		
16.	Duplex printing	Automatic (standard)		
17.	Connectivity	1 Hi-Speed USB 2.0 1 rear Host USB 1 Gigabit Ethernet 10/100/1000 Base-T network 802.3az(EEE)		
18.	Duty cycle	Up to 80,000 pages per month		
19.	Compatibility	Windows 11, Windows 10, Android, iOS, Mobile OS, MacOS 10.15 Catalina, Mac OS 11 Big Sur, MacOS 12 Monterey, MacOS 13 Ventura, Chrome OS		
20.	Software	Drivers for Windows Server 2003/2008/2010/2012/2016, Windows Xp/7/8/10/11		
21.	Warranty	The proposed product **MUST** have a 1-year manufacturer's local warranty & support. KRA will verify with the manufacturer to ensure compliance.		

6.0 MINIMUM TECHNICAL SPECIFICATIONS FOR MULTI-FUNCTION PRINTERS

Tulipe Ushuru Tujitegemee!

No	Feature	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	Brand	Internationally recognized mature brand Bidder **MUST** specify brand and model Proposed product **MUST** be brand new		
2.	Manufacturer Authorization	Bidder must attach manufacturers' authorization letter		
3.	Function	Print, Copy, Scan		
4.	Printing technology	Laser printer		
5.	Display	7-inch Color Touch LCD Panel		
6.	CPU	ARM Cortex-A9 (Dual Core) 1.2GHz		
7.	Memory	1.5 GB		
8.	Connectivity/ IO Ports	• USB 2.0/3.0 ports • USB Host Interface • Ethernet RJ-45 • 802.11 b/g/n/Wireless LAN		
	Print Functions			
9.	Print Resolution	1200*1200 DPI		
10.	Print Speed	30 pages per minute		
11.	First Print Out Time	6.5 seconds		
	Copy Functions			
12.	Copy Resolution	Up to 600*600 DPI		
13.	Zoom Ratio	Manual 25% - 400%; Pre-defined: 5R5E		
	Scan Functions			
14.	Scanning Speed	50 images per minute		
15.	Scan Resolution, Optical	600 dpi		
16.	Transmission Type	Scan to SMB; Scan to E-mail (SMTP, SMTP over SSL); Scan to FTP or FTP over SSL; Scan to USB; TWAIN Scan; WSD Scan; WIA Scan		
17.	Address Storage	200 addresses (Common address list), 50 groups (Group address list)		

Tulipe Ushuru Tujitegemee!

No.	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks
18.	Network Printing	TCP/IP, NetBEUI, FTP, Port 9100, LPR, IPP, IPP over SSL, WSD Print, Apple Bonjour		
19.	Mobile Printing	Apple AirPrint®, Google Cloud Print™, KYOCERA Mobile Print™, and Mopria® Print Service		
20.	Duplex Printing	Duplex Printing A4, A5, B5		
21.	Paper Handling Input, Standard	Input tray: 600 Sheets Output tray: 250 sheets		
22.	Document Processor	Reversing Automatic Document Processor (RADF) / 50 Sheets		
23.	Media Size supported	A4; A5; A6; B5 (JIS); B6 (JIS); 10*15cm ; Postcards (JIS single, JIS double); Envelopes (ISO DL, ISO C5, ISO B5); Paper size: A5R – A3; Paper weight: 60 - 220 g/m2		
24.	USB Memory Printing Format	TIFF, JPEG, PDF, XPS, Open XPS		
25.	Max. Monthly Volume (Pages)	100,000		
26.	Toner	To be supplied with an extra toner kit		
27.	Compatibility	• Intuitive Plug and play • Microsoft Windows 8, 10 • Mac OSX 10.6 and above		
28.	Warranty	One (1) year Manufacturer Local warranty		

7.0 MINIMUM REQUIREMENTS FOR DIGITAL DISPLAY AND COLLABORATION SOLUTIONS

No.	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	Electronic Interactive Screens	• 30 Electronic Interactive Whiteboard 86" Touchscreen Smart Board with camera and mobile stand.		

Tulipe Ushuru Tujitegemee!

No.	Features	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
		• Wireless casting support. • Lockable wheels and sturdy bases • Minimum 4K resolution for displaying analytics dashboards and data visualizations		
2.	Smart TV's	4 Smart TV 85 Inches		
3.	Boardroom Teleconferencing (25 Branches)	• Portable (10) teleconferencing speaker for remote collaboration. • Motorized drop-down screen. • Modular conference table that can be split/combined. • Executive orthopaedic leather boardroom chairs (20). • Integrated audio system and wireless presentation capability.		

MINIMUM TECHNICAL SPECIFICATIONS FOR A 86-INCH INTERACTIVE SCREEN FOR A MEETING ROOM

Tulipe Ushuru Tujitegemee!

NO.	FEATURE	MINIMUM SPECIFICATION	BIDDER'S RESPONSE	Evaluation Committee Remarks *Complied / Not Complied*
1.	Brand and model	Internationally recognized brand, in existence for at least 10 years (bidder must specify **brand and Model**) Proposed product **MUST** be brand new		
2.	Main body	• Codec, camera, microphone array and speaker • Should not thicker than 100m		
System				
3.	CPU	8-core		
4.	RAM	12 GB		
5.	Flash	64 GB		
6.	AI computing power	4 T FLOPS		
Screen				
7.	Backlighting type	D-LED		
8.	Size	86 inches		
9.	Resolution	4K		
10.	Refresh rate	60 Hz		
11.	Precision	±1 mm		
12.	Multi-point	20 points		
13.	Anti-reflection and anti-glare	Supported		
14.	Automatic screen brightness adjustment	Supported		
15.	Multi-point	20 points		
Camera				
16.	Resolution	4K 30 fps		
17.	Zoom	2x digital zoom lens		

Tulipe Ushuru Tujitegemee!

18.	Maximum aperture	F1.8		
19.	Horizontal field of view	80°		
20.	Anti-fog, dust-proof, and anti-flicker	Supported		
21.	PTZ control	ePTZ		
22.	Automatic adjustment	Auto white balance (AWB); auto exposure (AE)		
23.	Exposure mode	Auto, manual, and shutter priority		
24.	White balance mode	Auto, manual, and one-push		
Built-in speaker				
25.	Frequency domain	100 Hz to 20 kHz		
26.	Quantity	4		
27.	Stereo	Supported		
28.	Sound level	95 dB SPL@1 m		
Microphones				
29.	Sound pickup distance	8m		
30.	Sound pickup angle	180° forward		
31.	Quantity	12		
32.	Frequency domain	100 Hz to 20 kHz		
33.	Enhanced functions	Echo cancellation, noise suppression, auto gain control and external microphones		
Electricity supply requirements				
34.	Rated operating voltage	240 V AC		
35.	Working frequency	50 Hz to 60 Hz		
Environmental requirements (in use)				
36.	Ambient temperature	0°C to 40°C Touch: 0°C to 35°C		
37.	Relative humidity	10% to 90%		
38.	EMC	Class A		
39.	Operating altitude	< 5000 m (16404 ft)		
40.	Ambient noise	< 46 dBA SPL		

Tulipe Ushuru Tujitegemee!

41.	Recommended illuminance	> 200 lux		
42.	Minimum illuminance	7 lux		
Environmental requirements (idle)				
43.	Ambient temperature	−20°C to +60°C		
44.	Relative humidity (non-condensing)	5% to 95%		
Ports				
45.	Wi-fi	• 2.4 GHz and 5 GHz		
46.	Video input ports	• 1 x HDMI (4K 30 fps) • 1 x OPS input (4K 30 fps)		
47.	Video output ports	1 x HDMI (1080p 60 fps)		
48.	Audio input ports	• 1 x 3.5 mm LINE IN • 1 x HD-AI • 1 x OPS input		
49.	Audio output ports	• 1 x 3.5 mm LINE OUT • 1 x HDMI (audio output)		
50.	Other ports	• 2 x USB Type-A • 1 x USB Type-B • 1 x RJ45 (10/100/1000 Mbit/s LAN) • 1 x RJ45 (for Touch)		
Communications Protocols				
51.	Multimedia framework protocols	ITU-T H.323 and IETF SIP		
52.	Audio codec protocols	AAC-LD mono/stereo, G.711A, G.711U, G.722, G.722.1C, and OPUS		
53.	Video codec protocols	H.265, H.264 SVC, H.264 HP, and H.264 BP		
54.	Network transmission protocols	TCP/IP, RTP, RTCP, DHCP, DNS, SMTP, SNMP, SNTP, Telnet, SSH, HTTP, HTTPS, and TR-069		
55.	Dual-stream protocols	ITU-T H.239 and BFCP		
56.	Other communications protocols	H.225, H.235, H.241, H.245, H.281, H.460, RFC2833, LDAP, and LDAPS		

Tulipe Ushuru Tujitegemee!

57.	Wi-Fi standards	IEEE 802.11 a/b/g/n/ac/w, IEEE 802.1x, WPA2, Wi-Fi AP, and station mode		
58.	IP protocols	IPv4 and IPv6 dual stack		
59.	3rd party support	Support 3rd party cloud meeting services (e.g. Webex & Teams)		
	Voice and video tracking			
60.	Distance	Auto-voice-tracking enabled at a distance of 2M away		
61.	Video	Autoframe enabled		
	Peripherals			
62.	Microphones	To be supplied with: • Two cascadable microphone arrays compatible with screen, 6M range.		
63.	Mouse and keyboard	To be supplied with: • Wireless mouse and keyboard compatible with screen.		

64.	Windows platform extension	To be supplied with:
		• OPS extension module for Windows support:-
		IntelCore i7 10th Gen or higher
		UHD Graphics 630
		RAM: 16 GB
		Storage: 512 GB
		I/O: -
		   • 1 x Power button
		   • 1 x Recovery button
		   • 1 x RJ45
		   • 3 x USB 3.0
		   • 3 x USB 2.0
		   • 1 x HDMI1.4
		   • 1 x DP1.2
		   • 1x Audio line out
		   • 1x MIC IN
		   • Wi-fi/Bluetooth		

65.	Screen cast/mirroring	To be supplied with: • Screen cast/mirroring dongle		
66.	Tablet	To be supplied with: • Touch tablet		

Tulipe Ushuru Tujitegemee!

67.	Writing	To be supplied with: • 2 Stylus pens • 2 Laser pointer devices		
	Accessories			
68.	Include	• Wall mounting brackets • Rolling stands		
	Warranty			
69.	Warranty	2-year locally valid premium manufacturer's warranty		

MINIMUM SPECIFICATIONS FOR 85" DISPLAY TV SCREEN

No.	FEATURE	MINIMUM SPECIFICATIONS	BIDDER'S RESPONSE	Evaluation Committee Remarks *Complied / Not Complied*
1.	Brand and Model	Internationally recognized brand (bidders must specify brand and model). Proposed product **MUST** be brand new.		
2.	Mandatory	Bidders must attach Manufacturer's data sheet/ brochure for the proposed model and **highlight the key features**.		
3.	Manufacturer Authorization	Bidders Must attach Manufacturer's Authorization letter		
4.	Display technology	LCD/LED		
5.	Screen Size	85 inches		
6.	Screen Type	Flat Panel		
7.	Screen Mirroring/ Casting	Screen Mirroring/Casting		
8.	Graphics & Resolution	3840*2160 pixels (4K) UHD		
9.	Picture Panel Refresh Rate	120Hz		
10.	Orientation	Landscape orientation		
11.	Connectivity	• Integrated Wireless LAN capability (Wi-Fi Certified 802.11a/b/g/n/ac/ax). • Wi-Fi Frequency: 2.4GHz/5GHz • Integrated Ethernet 10/100/1000 Gigabit LAN port • Bluetooth: Version 5.3; HID (mouse/keyboard connectivity)/HOGP (Low Energy device connectivity)/SPP		

Tulipe Ushuru Tujitegemee!

		(Serial Port Profile)/A2DP (stereo audio)/AVRCP (AV remote control). • Smartphone connectivity: Chromecast built-in. • HDMI: minimum of 3 HDMI2.1 ports with 4K120/eARC/VRR/ALLM/SBTM (Source-Based Tone Mapping). • USB: minimum of 2. • Headphone output. • Variable Refresh Rate (VRR): for HDMI™3/4 • Auto Low Latency Mode (ALLM): for HDMI™1/2/3/4 • HDCP2.3 (for HDMI™1/2/3/4)		
12.	USB drive format support	FAT16/FAT32/exFAT/NTFS		
13.	USB playback codecs	MPEG1: MPEG1/MPEG2PS: MPEG2/MPEG2TS (HDV, AVCHD): MPEG2, AVC/MP4 (XAVC S): AVC, MPEG4, HEVC/AVI: Xvid, MotionJpeg/ASF (WMV): VC1/MOV: AVC, MPEG4, MotionJpeg/MKV: Xvid, AVC, MPEG4, VP8. HEVC/WEBM: VP8/3GPP: MPEG4, AVC/MP3/ASF (WMA)/ LPCM/WAV/MP4AAC/FLAC/JPEG/HEIF; WEBM: VP9/AC4/ogg/AAC.		
14.	Viewing Angle	Wide angle		
15.	Video signal support	HDMI™ signal: • 4096x2160p (24,50,60Hz) • 3840x2160p (24,25,30,50,60,100,120Hz) • 1080p (24,30,50,60,100,120Hz) • 1080i (50,60Hz) • 720p (24,30,50,60Hz) • 576p • 480p		
16.	Audio Power Output	70Watt Speakers		
17.	Speakers	Type: Acoustic Multi-Audio+, Frame Tweeter, Beam Tweeter Configuration: Tweeter x 2, Mid Range x 2, Subwoofer x 2, Beam Tweeter x 2		
18.	Audio format support	Dolby Audio and DTS Digital Surround		
19.	Microphone	In-built Microphone used with Voice Search		
20.	Software	• OS: Android TV™ • Smart TV: Google TV™ • App Store: Google Play Store • Installed with Internet browser		
21.	Power	220-240 V, 50 Hz		

Tulipe Ushuru Tujitegemee!

22.	Accessories	➢ **In the box:** • AC Power Cord. • Table Top Stand • Voice Remote Control. • Batteries. • Operating Instructions. • Quick Setup Guide. ➢ **Additional:** • 2 x 15m HDMI cables. • TV wall mounting brackets.		
23.	Warranty	1 years on-site warranty at no additional cost.		

MINIMUM TECHNICAL SPECIFICATIONS FOR A PORTABLE TELECONFERENCE SPEAKERPHONE

No.	Feature	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
1.	Brand and model	Internationally recognized mature brand.		
2.	Collaboration Certification	Microsoft Teams Certified Zoom Certified Google Meet Certified		
3.	Capacity	In-room coverage up to 6 persons		
4.	Microphone	Omni-directional microphone for 360-degree audio pick up.		
5.	Range/ Distance	30-meter-long wireless range with PCs, 10 meters with smartphones.		
6.	Compatibility	Certified for Avaya, Cisco, Skype for business, Unify, Citrix and more		
7.	Setting up	Plug and play solution with intuitive on-device call controls.		
8.	Battery	Up to 15 hours of battery life.		
9.	Connectivity	• USB 2.0 – USB cord ~90cm • Bluetooth 4.2 - Bluetooth Low energy (BTLE)		
10.	Power	Rechargeable battery		
11.	Controls	Mute, Volume, Phone/music mode		
12.	Speaker	In built HiFi stereo speakers.		

Tulipe Ushuru Tujitegemee!

MINIMUM TECHNICAL SPECIFICATIONS FOR MOTORIZED DROP DOWN PROJECTOR SCREEN

No.	Feature	Minimum Requirements	Bidder's Response	Evaluation Committee Remarks *Complied / Not Complied*
18.	Brand and model	• Internationally recognized mature brand • Specify Brand and Model • Proposed product MUST be brand new		
19.	Type	Electric motorised wall mount		
20.	Screen Type	• Designed to be used with projectors to display images and videos in various settings. • Black edge trimming to enhance visuals with contrast		
21.	Materials	• Scratch resistant housing Mildew Resistant • Easy to Clean • PVC		
22.	Motorized Mechanism	The screen to be raised or lowered with ease using a remote control or a switch		
23.	Colour	Matte white		
24.	Aspect Ratio	16:9		
25.	Screen Dimensions	96"x 96" inches		
26.	Screen Material	Designed to provide optimal image clarity and colour reproduction		
27.	Projection Type	Front display only		
8.	Power	240V 60Hz		
9.	Installation	Bidder will be expected to install the display screen in the designated location (wall mount).		
10.	Warranty	1 year warranty		

Tulipe Ushuru Tujitegemee!

PRICE SCHEDULE

No	Item Description	Quantities	UNIT COST (Inclusive of all applicable taxes)	TOTAL COST (Inclusive of all applicable taxes)
1	Standard Laptops	4660		
2	High End Analytics Laptops	300		
3	Desktop PCs	3000		
4	Colour Laser Printers	50		
5	B&W Laser Printers	150		
6	Multi-function Printers	80		
7	Digital Display and Collaboration Solutions	30- Electronic Interactive Screens		
		4 -Smart TV 85"		
		25 - Boardroom Teleconferencing		

FINANCIAL REQUIREMENT

• N/B: Bidders to provide a detailed breakdown of how they have arrived at the total cost

• Grand Total Cost –To be carried Forward to the FORM FIN 2 Summary of Costs

Provision of additional equipment if any at the quoted unit rates as determined during the contract period

Tulipe Ushuru Tujitegemee!