# *ANNEX II + III:* TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

**Publication reference: INTPA/ACC/2021/EA-OP/0067 - Supply of IT Hardware, Training Equipment, E-Learning Platforms and Audit Management Information System for PFM Oversight Institutions in Ghana**

**Annex III - The Contractor's Technical Offer**

The tenderers are requested to complete the template on the next pages:

* Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
* Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words ‘compliant’ or ‘yes’ are **NOT SUFFICIENT**).
* Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offeredspecifications.

**Contract tittle Lot 1: Supply, Delivery and Installation of Training Equipment, Laptops for the Parliamentary Training Institute (PTI), Laptops for Ghana Audit Service (GAS) and Personal Computers for the Internal Audit Agency (IAA)**

**PROJECT OVERVIEW**

**Ghana Public Financial Management Support Programme**

The Government of Ghana, over the last few years, has undertaken a number of initiatives aimed at strengthening public financial management (PFM). One of the key initiative is the Ghana PFM Support Programme. The overall objective of the Ghana PFM Support Programme is to improve the economic governance and business environment and to maximize the benefits of the Economic Partnership Agreement (EPA) for Ghana in the context of Ghana beyond aid by supporting the building of a more robust oversight function of selected independent Government institutions. The main beneficiaries of this programme are:

* The Parliament of the Republic of Ghana//Parliamentary Training Institute (PTI)
* Ghana Audit Service (GAS)
* Internal Audit Agency (IAA)
* Public Procurement Authority (PPA)

**Parliamentary Training Institute (PTI)**

The Parliamentary Training Institute (PTI) was founded in December 2016 to build capacity of legislators, legislative staff and stakeholders in governance through training, cutting edge research and other initiatives to enhance democratic governance by providing focused relevant capacity building programmes for members of parliament and staff of parliamentary services. The PTI was established to also collaborate with national and international organizations for the promotion of knowledge and continuing education for members and staff of parliamentary services, undertake and promote research on parliamentary democracy and good governance.

**Ghana Audit Service (GAS)**

The Ghana Audit Service (GAS) receives its mandate from the 1992 Constitution and the Audit Service Act 2000 (Act 584) and is the Supreme Audit Institution (SAl) of Ghana. Accordingly, the Service must meet high ethical and technical standards and procedures laid down by the Service and the International Organization of Supreme Audit Institutions (INTOSAI). To meet all of its constitutional, statutory and professional audit responsibilities, the management of the Service has identified a need for capacity building to properly respond to the wide range of Public Financial Management (PFM) reforms being implemented by the Government of Ghana. The supply of Information Technology (IT) equipment and implementation a Learning Management System is a critical need for the Service to effectively utilize the Audit Management Software and enhance the capacity of staff.

**Internal Audit Agency (IAA)**

The Internal Audit Agency (IAA) was established through an Act of the Parliament of Ghana, Act 658, in 2003. It was established as an apex oversight body to coordinate, facilitate and provide quality assurance for internal audit activities within the Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs) with the view to enhance efficiency, accountability and transparency in the management of public sector resources.

Details of the requirements are presented below:

1. **Objective**

The specific objective is to engage a service provider to:

* Supply the required hardware to enable PTI obtain the needed capabilities to deliver on their mandate and perform efficiently in an enhanced IT environment
* Supply laptops to GAS to implement and roll-out of its Audit Management Information System.
* Supply Personal Computers to IAA to implement and roll-out of an end to end (E2E) Audit Management Information System.
* The rollout of the AMIS is expected to have a bearing on coordination roles between the IAA and GAS in the carrying out of their respective mandates

1. **Scope of Work**

The tenderer shall supply, install, configure, test, train and handover:

* IT and network hardware, training equipment and furniture in accordance with the required specifications listed
* Laptops and Computers as plug-and-play with licenses activated for Microsoft Office Suite

1. **Key Deliverables**

* IT and Network Hardware, Training Equipment and Furniture for PTI
* 10 Laptops for PTI
* 604 Laptops for GAS
* 200 Personal Computers (PCs) for IAA

| **1. Item No.** | | **2. Specifications Required** | **3. Specifications offered** | | **4. Notes, remarks,** | | **5. Evaluation committee’s notes** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **ref to documentation** | |
| 001 | DESKS | * Wooden desk with drawer |  | |  | |  |
| * Length 100cm by Width 60cm |  | |  | |  |
| * Height 75cm |  | |  | |  |
| 002 | CHAIRS | * Black bonded leather steel chair |  | |  | |  |
| * Non-Swivel |  | |  | |  |
| * 25-29" Length by 23-25" Width by 34-37" Height |  | |  | |  |
| 003 | SMARTBOARD | * Multitouch capabilities: 16 simultaneous interaction points |  | |  | |  |
| * Weight: 2 lb. 10 oz. (1.2 kg) |  | |  | |  |
| * Display: LCD with LED back light, Aspect ratio (16:9), Optimal resolution - 4K UHD (3840 × 2160) at 60 Hz |  | |  | |  |
| * Dimensions: 75 3/8" × 54 1/4" × 11 3/4" |  | |  | |  |
| * Wi-Fi IEEE 802.11A/B/G/N/AC with 2 × 2 MIMO (both 2.4 and 5 GHz bands) |  | |  | |  |
| * Bluetooth 4.2 dual mode (backwards compatible with Bluetooth 2.1 + EDR) |  | |  | |  |
| * Connectors HDMI 1.4 (3840 × 2160), USB 3.0 Type-A, RJ45 Gigabit Ethernet4 |  | |  | |  |
| * Power requirements: 100V to 240V AC, 50 Hz to 60 Hz |  | |  | |  |
| * Software: SMART Learning Suite |  | |  | |  |
| 004 | ALL IN ONE DESKTOP COMPUTER | * DIMENSIONS: 24.21 x 7.48 x 17.98 in |  | |  | |  |
| * Screen: 24-inch Touch Display |  | |  | |  |
| * PROCESSOR: 9th Generation Intel® Core i7-8400T processor |  | |  | |  |
| * MEMORY: 8 GB memory |  | |  | |  |
| * STORAGE: 1 TB HDD storage |  | |  | |  |
| * GRAPHICS: Intel UHD Graphics 620 |  | |  | |  |
| * Network: Integrated Bluetooth ® 4.2 and Wireless Lan |  | |  | |  |
| * Wireless Keyboard and optical mouse |  | |  | |  |
| * POWER SUPPLY: 230 W external AC power adapter |  | |  | |  |
| * MEMORY CARD DEVICE: 3-in-1 memory card reader |  | |  | |  |
| * EXTERNAL I/O PORTS:4 USB 3.1 |  | |  | |  |
| * Software: Windows 10 Professional Preinstalled |  | |  | |  |
| * Software: Microsoft Office 2019 Preinstalled |  | |  | |  |
| 005 | SERVER | * Processor: 2.66 GHz Intel Xeon 6-Core |  | |  | |  |
| * RAM: 16 GB Minimum |  | |  | |  |
| * Hard Drive: 2 TB Minimum |  | |  | |  |
| * Network: 2xGigaBit NIC |  | |  | |  |
| * Power: 2xPower Supplies |  | |  | |  |
| * 2 U Rack Mountable |  | |  | |  |
| * OS: Windows Server 2019 Preinstalled |  | |  | |  |
| 006 | SMART BOARD UPS | * Output power capacity: 4.0kWatts / 10.0kVA |  | |  | |  |
| * Nominal Output Voltage: 230V |  | |  | |  |
| * Output Voltage Note: Configurable for 220: 230 or 240 nominal output voltage |  | |  | |  |
| * Output Connections: (4) IEC Jumpers (Battery Backup) |  | |  | |  |
| * (2) IEC 320 C19 (Battery Backup) |  | |  | |  |
| * (8) IEC 320 C13 (Battery Backup) |  | |  | |  |
| * Nominal Input Voltage: 230V |  | |  | |  |
| * Input frequency: 50/60 Hz +/- 3 Hz (auto sensing) |  | |  | |  |
| * Input Connections: Hard Wire 3-wire |  | |  | |  |
| * Expected Battery Life: 3 - 5years |  | |  | |  |
| * Battery Volt-Amp-Hour Capacity: 1000 or more |  | |  | |  |
| * Interface Ports: DB-9 RS-232, Smart Slot |  | |  | |  |
| * Control panel: LED Display |  | |  | |  |
| * Rack Height: 5U |  | |  | |  |
| * Net Weight: 100KG or less |  | |  | |  |
| 007 | PRINTER | * Resolution (black): up to 1200 x 1200 dpi |  | |  | |  |
| * Resolution (color): up to 1200 x 1200 dpi |  | |  | |  |
| * Monthly page volume: 10,000 or more |  | |  | |  |
| * Print technology: laser |  | |  | |  |
| * Display: LCD |  | |  | |  |
| * Automatic paper sensor: yes |  | |  | |  |
| * Paper trays: 2 or more |  | |  | |  |
| * Mobile printing capability: yes |  | |  | |  |
| * Connectivity, standard 1 hi-speed USB 2.0 device; 2 hi-speed USB 2.0 host; 1 gigabit/fast ethernet 10/100/1000 base-tx network; hardware integration pocket |  | |  | |  |
| * Paper handling input, standard 100-sheet multi-purpose tray, 550-sheet input tray 2 |  | |  | |  |
| * Paper handling output, standard 500-sheet output bin |  | |  | |  |
| * Duplex printing: manual/automatic |  | |  | |  |
| * Media sizes supported: tray 1: a4, a5, a6, ra4, b5, b6, 16k, 10 x 15 cm |  | |  | |  |
| * Media types: paper (plain, light, bond) |  | |  | |  |
| * Power input voltage: input voltage: 220v to 240v nominal, (+/-10%) 50 - 60hz nominal (+/- 3hz), 6 a |  | |  | |  |
| * Print speed, black (normal): up to 50 ppm |  | |  | |  |
| 008 | PHOTOCOPIER | * Core functions: Print, Copy, Scan, Send, Store and Optional Fax |  | |  | |  |
| * Control Panel: LCD Color Touch panel |  | |  | |  |
| * NETWORK: 1000Base-T/100Base-TX/10Base-T, Wireless LAN (IEEE 802.11 b/g/n) |  | |  | |  |
| * Standard: USB 2.0/USB 3.0 |  | |  | |  |
| * Paper Supply Capacity: 2500 or more |  | |  | |  |
| * Paper Output Capacity: 500 sheets or more |  | |  | |  |
| * Supported-Media-Types (Standard) |  | |  | |  |
| * Paper Decks (1/2): Thin (52-63 gsm), Plain (64-105 gsm), Colour (64-90 gsm), Letterhead (151-180 gsm), Bond (76-105 gsm) |  | |  | |  |
| * Supported-Media-Sizes (Standard): A3, B4, A4, A4R, B5, B5R, A5, A5R, A6R, SRA3, 11""x17"", LGL\_R, LTR, LTR\_R, |  | |  | |  |
| * Copy speed: 30 ppm or more |  | |  | |  |
| * Copy resolution (DPI): Scan: 600 x 600, Print: Up to 2,400 x 2,400 |  | |  | |  |
| 009 | CAMCORDER | * Video: 4K/Full HD |  | |  | |  |
| * Clear Image Zoom: (24x for HD, 18x for 4K) |  | |  | |  |
| * Network: Wi-Fi/NFC |  | |  | |  |
| * Dual media slots for recording |  | |  | |  |
| * Onboard ND filter (4 steps) |  | |  | |  |
| * Connections: 3G-SDI, HDMI®, Multi/Micro USB, professional audio XLR terminals, REMOTE, and Composite (RCA) |  | |  | |  |
| * Onboard LCD Monitor |  | |  | |  |
| * Video Output: Integrated into Multi/Micro USB jack (x1), RCA pin (x1), Composite 1.0Vp-p, 75 Ohms |  | |  | |  |
| * USB: Multi/Micro USB jack (x1) |  | |  | |  |
| * Audio Input: XLR-type 3-pin (female), line/mic/mic +48 V selectable |  | |  | |  |
| * Audio Output: Integrated into Multi/Micro USB jack, RCA pin (Monaural) |  | |  | |  |
| * DC Input: DC jack |  | |  | |  |
| * HDMI Output: HDMI connector (Type A) |  | |  | |  |
| * Headphone Output: Stereo mini jack |  | |  | |  |
| * MIC: Onboard Microphone |  | |  | |  |
| * Remote: Stereo mini-mini jack |  | |  | |  |
| * 72 inch or more tripod stand inclusive |  | |  | |  |
| 010 | FLAT SCREEN MONITOR | * Display: Full HD, LED |  | |  | |  |
| * Screen Size: 55 inches |  | |  | |  |
| * Max Screen Resolution: 1920x1080 pixels |  | |  | |  |
| * Connection: HDMI, USB, DVI, Serial Ethernet Port |  | |  | |  |
| 011 | WIRELESS MICROPHONE SYSTEM | * Wireless Frequency: UHF |  | |  | |  |
| * Transmitters: Two Bodypacks + Two Headset & Lapel Mics |  | |  | |  |
| * Outputs: A quarter Inch mixed outputs + XLR- |  | |  | |  |
| * Operating Distance: 170 – 220ft |  | |  | |  |
| * Channels: 2 |  | |  | |  |
| 012 | WALL MOUNT SPEAKERS | * Power Outputs: 2X100W Max Power |  | |  | |  |
| * Woofer: 5.25" Injection Molded PP Cone Buty Rubber Surround |  | |  | |  |
| * Tweeter: 1" PET Dome |  | |  | |  |
| 013 | WHITE BOARD | * Size: 90x120cm |  | |  | |  |
| * Type: Dry Erase |  | |  | |  |
| * Magnetic: Yes |  | |  | |  |
| * Frameless: No |  | |  | |  |
| * Thickness: 6.5 |  | |  | |  |
| 014 | WIRELESS LASER PRESENTER | * Laser: Yes |  | |  | |  |
| * Wavelength: 500nm or more |  | |  | |  |
| * Battery type: 2 AAA batteries |  | |  | |  |
| * Battery life (Laser pointer): 15 hours pr more |  | |  | |  |
| * Battery life: 1050 hours or more |  | |  | |  |
| * Wireless operating distance: 30m or more |  | |  | |  |
| * Wireless technology: 2.4 GHz wireless technology |  | |  | |  |
| * Supported OS: Microsoft Windows, Mac OS |  | |  | |  |
| * Interface: USB |  | |  | |  |
| 015 | HDMI SPLITTER | * Switch Operation: Manual |  | |  | |  |
| * Input HDMI ports: 1 |  | |  | |  |
| * Output HDMI ports: 3 |  | |  | |  |
| * HD Audio and HDCP Compliant |  | |  | |  |
| * Single Link Video Range: 3840x2160p. |  | |  | |  |
| * Support video formats: full HD-HDTV/2160p/1080p |  | |  | |  |
| 016 | TYPE C TO MULTI PORT ADAPTOR | * Input: USB Type C |  | |  | |  |
| * Output: HDMI Digital AV Adapter, Multi Ports Hubs with USB 3.0, HDMI |  | |  | |  |
| 017 | CAMERA | * Sensor: 24.1MP APS-C CMOS |  | |  | |  |
| * Lens mount: Canon EF-S or other |  | |  | |  |
| * Screen: 3.0-inch, 920,000 dots |  | |  | |  |
| * Burst shooting: 3fps |  | |  | |  |
| * Autofocus: 9-point AF |  | |  | |  |
| * Video: Full HD 1080p |  | |  | |  |
| * Connectivity: Wi-Fi and NFC |  | |  | |  |
| * Battery life: 500 shots |  | |  | |  |
| * Weight: 500g or lower |  | |  | |  |
| 018 | MIXER | * Channels Qty (for SD): 8-channel |  | |  | |  |
| * Mic Phantom Power: 48 V |  | |  | |  |
| * Headphones Output: Yes(3.55mm) |  | |  | |  |
| * Mic Channels: 3 mono |  | |  | |  |
| * Mic Channels Connector: XLR |  | |  | |  |
| * Line Channels: 8 mono |  | |  | |  |
| * Line Channels Connector: phone stereo 6.3 mm |  | |  | |  |
| * EQ Band Qty: 3 |  | |  | |  |
| * AUX Channels: Control Room Out |  | |  | |  |
| 019 | ACCESS POINTS | * Maximum Throughput 2.4GHz Radio: 450Mbps or more |  | |  | |  |
| * Maximum Throughput 5GHz Radio: 1.3Gbps |  | |  | |  |
| * Maximum Throughput per AP: 1.75Gbps |  | |  | |  |
| * Security and Standards: WPA, WPA2 (AES), 802.11i, 802.1x, IPSec, IKEv2, PKCS #10, X509 DER / PKCS #12 |  | |  | |  |
| * Dynamic Channel Control: 802.11h: DFS & TPC support (ETSI) |  | |  | |  |
| * Ethernet Interfaces: 2 or more |  | |  | |  |
| * Wall mounting: Yes |  | |  | |  |
| 020 | LAN CABLING | * CAT 6 Shielded cables, >250MHz bandwidth |  | |  | |  |
| 021 | SERVER UPS | * Output power capacity: 5.0kVA |  | |  | |  |
| * Nominal Output Voltage: 230V |  | |  | |  |
| * Output Voltage Note: Configurable for 220: 230 or 240 nominal output voltage |  | |  | |  |
| * Output Connections: (4) IEC Jumpers (Battery Backup) |  | |  | |  |
| * (2) IEC 320 C19 (Battery Backup) |  | |  | |  |
| * (8) IEC 320 C13 (Battery Backup) |  | |  | |  |
| * Nominal Input Voltage: 230V |  | |  | |  |
| * Input frequency: 50/60 Hz +/- 3 Hz (auto sensing) |  | |  | |  |
| * Input Connections: Hard Wire 3-wire |  | |  | |  |
| * Expected Battery Life: 3 - 5years |  | |  | |  |
| * Battery Volt-Amp-Hour Capacity: 100 or more |  | |  | |  |
| * Interface Ports: DB-9 RS-232, Smart Slot |  | |  | |  |
| * Control panel: LED Display |  | |  | |  |
| * Rack Height: 1 U |  | |  | |  |
| * Net Weight: 20KG or less |  | |  | |  |
| 022 | AUDIO HEADSETS | * Connectivity: USB-A receiver + Bluetooth |  | |  | |  |
| * Compatibility: Windows/Mac/Chrome OS |  | |  | |  |
| * Microphone type: Unidirectional |  | |  | |  |
| * Adjustable microphone: Yes |  | |  | |  |
| * Headband: Adjustable + padded |  | |  | |  |
| * Sound quality: Laser-tuned drivers+equalizer |  | |  | |  |
| * Controls: On-earcup controls |  | |  | |  |
| * Cable length/ wireless range: 40 ft/12 m Bluetooth range |  | |  | |  |
| * Battery life: Rechargeable 6-hr battery or more |  | |  | |  |
| 023 | LAPTOPS FOR PTI | * Processor: Intel Core i5, 2.5 GHz processor speed with turbo boost technology, 64-Bit, Generation 9 or higher |  | |  | |  |
| * Operating Systems: Windows 10 Professional 64-Bit factory installed |  | |  | |  |
| * Memory: 8GB RAM |  | |  | |  |
| * Hard Drive: 512SSD |  | |  | |  |
| * Display: 14 or 15” Display with IPS and FHD resolution (1920 x 1080) |  | |  | |  |
| * Video Card: Intel HD Graphics 4400 |  | |  | |  |
| * Video ports: VGA, HDMI (HDMI with VGA Interface cable acceptable) |  | |  | |  |
| * USB ports: 3xUSB ports (USB 3.0 minimum capability is a plus) |  | |  | |  |
| * Networking: Ethernet 10/100MBps/1000mBPS Port, Wireless, Bluetooth |  | |  | |  |
| * Microphone and Speakers: Inbuilt, with audio ports for external audio devices |  | |  | |  |
| * Webcam in-built |  | |  | |  |
| * Keyboard: US Keyboard, Full size, Full numeric Pad back light keyboard |  | |  | |  |
| * AC Adapter: 3-pronged AC adaptor (UK) |  | |  | |  |
| * Warranty: Minimum three Years, Parts & Service |  | |  | |  |
| * Software: Microsoft Office 2019 Preinstalled |  | |  | |  |
| 024 | LAPTOPS FOR GAS | * Processor: Intel Core i5, 2.5 GHz processor speed with turbo boost technology, 64-Bit, Generation 9 or higher |  |  | |  | |
| * Operating Systems: Windows 10 Professional 64-Bit factory installed |  |  | |  | |
| * Memory: 16GB RAM, |  |  | |  | |
| * Hard Drive: Internal 1TB, 7200 RPM Sata |  |  | |  | |
| * Display: 14 or 15” |  |  | |  | |
| * Video ports: VGA, HDMI (HDMI with VGA Interface cable acceptable) |  |  | |  | |
| * USB ports: 3xUSB ports (USB 3.0 minimum capability is a plus) |  |  | |  | |
| * Networking: Ethernet 10/100MBps/1000mBPS Port, Wireless, Bluetooth |  |  | |  | |
| * Microphone and Speakers: Inbuilt with audio ports for external audio devices |  |  | |  | |
| * Webcam in-built |  |  | |  | |
| * Keyboard: US Keyboard, Full size, Full numeric Pad back light keyboard |  |  | |  | |
| * AC Adapter: 3-pronged AC adaptor (UK) |  |  | |  | |
| * Warranty: Minimum three Years, Parts & Service |  |  | |  | |
| * Accessories: Must include Carrying Case |  |  | |  | |
| * Microsoft Office Suite 2016 (64 bit) Pro |  |  | |  | |
| 025 | Personal Computer (PCs) for IAA | * Processor: Intel Core i5, 2.5 GHz processor speed with turbo boost technology, 64-Bit, Generation 9 or higher * Operating Systems: Windows 10 Professional 64-Bit factory installed * Memory: 16GB RAM, * Hard Drive: 512 SSD. * Display: 14 or 15” * Video ports: VGA, HDMI (HDMI with VGA Interface cable acceptable) * USB ports: 3xUSB ports (USB 3.0 minimum capability is a plus) * Networking: Ethernet 10/100MBps/1000mBPS Port, Wireless, Bluetooth * Microphone and Speakers: Inbuilt, with audio ports for external audio devices * Webcam in-built * Keyboard: US Keyboard, Full size, Full numeric Pad back light keyboard * AC Adapter: 3-pronged AC adaptor (UK) * Warranty: Minimum three Years, Parts & Service   Accessories: Must include Carrying Case |  |  | |  | |
| 026 | Support Services | **Hardware and other related equipment**  The tenderer responses should indicate how they would provide the required services (i.e. supply, install, configure, test, train and handover) for all hardware related items listed above.  Where necessary (i.e. laptops and personal computers), appropriate licenses should be activated for Microsoft Office Suite. |  |  | |  | |

**Contract title Lot 2: Supply, Delivery and Installation of Web-based internal Audit Management Information System to the Internal Audit Agency (IAA)**

**PROJECT OVERVIEW**

**Ghana Public Financial Management Support Programme**

The Government of Ghana, over the last few years, has undertaken a number of initiatives aimed at strengthening public financial management (PFM). One of the key initiative is the Ghana PFM Support Programme. The overall objective of the Ghana PFM Support Programme is to improve the economic governance and business environment and to maximize the benefits of the Economic Partnership Agreement (EPA) for Ghana in the context of Ghana beyond aid by supporting the building of a more robust oversight function of selected independent Government institutions. The main beneficiaries of this programme are:

* The Parliament of the Republic of Ghana//Parliamentary Training Institute (PTI)
* Ghana Audit Service (GAS)
* Internal Audit Agency (IAA)
* Public Procurement Authority (PPA)

A brief on the beneficiary institution is highlighted below:

**Internal Audit Agency (IAA)**

The Internal Audit Agency (IAA) was established through an Act of the Parliament of Ghana, Act 658, in 2003. It was established as an apex oversight body to coordinate, facilitate and provide quality assurance for internal audit activities within the Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs) with the view to enhance efficiency, accountability and transparency in the management of public sector resources.

The current maturity of IT at IAA may be considered to be marginally beyond foundational. Currently, IT policy documents do not cover incident management and enterprise support indicating that organizational IT support may not be optimal. Technology management and operation approaches appear to be employed on a case-by-case basis as observed in the rollout of the Team Mate audit application which did not meet the end to end business requirements for the Agency. The Information Communication Technology (ICT) unit at the Agency is responsible for monitoring and maintaining information technology systems and services for IAA operations.

The unit employs a centralised model in the operation of its infrastructure. A total of three (3) people (2 permanent and one temporary) currently support technology at the Agency which is adequate for the organizational head count of 53 people. The Head of the unit is supported by two individuals with general expertise in technology operations covering areas of day to day support and infrastructure maintenance responsibilities. Currently, departments and units at the IAA leverage typical productivity software for day to day activities. More specifically, Microsoft Excel and Word are the only applications utilised for technical operations. The IAA’s locally hosted file sharing sever is utilised for the central storage of all reports. The agency has no redundancy planning in place to prevent data loss should the primary infrastructure fail.

Following a BoG recommendation, IAA procured ‘Team Mate’, an internal audit application to support the activities of the body. Team Mate was funded by the World Bank till 2012 and licensing for the application has not been renewed since. As such, the organization currently lacks a core Technology Enabler (software platform) to drive its core responsibilities.

Reports from MDAs/ MMDAs are largely submitted in hardcopy. They are subsequently transcribed into spreadsheets for analysis and review. The process is highly manual, repetitive and prone to errors. The current report submission process would have to be reengineered to allow the submission of reports electronically in a standardised format for all agencies. This is required for the introduction of the proposed online web-enabled audit management tool.

Details of the requirements are presented below:

**1. Objective**

The specific objective is to implement and roll-out of an end to end (E2E) Internal Audit Management Information System. The IAMIS is expected to be a leading Commercial Off-the-Shelf (COTS) solution and have the following capabilities:

* Operationalize an internal audit management and monitoring system that is fully compliant with IAA audit methodologies and business processes.
* Enable IAA management to develop risk-based annual audit plans and monitor the progress of the audit assignments.
* Customizable electronic working papers supporting different types of audit methodologies and quality assurance processes.
* Automated audit follow up process and preparation of audit reports.
* Ability to automate audit workflow, management and execution processes, enabling access to timely and relevant audit information.
* The capture of the audit workflow and controls and monitoring during all stages of the audit process (including mechanisms for capturing ethical declaration by internal auditors, etc.)
* The rollout of the IAMIS is expected to have a bearing on coordination roles between the IAA and GAS in the carrying out of their respective mandates.

**2. Scope of Work**

Key activities in scope include:

* Leveraging business process design and analysis proficiencies to validate requirements.
* Developing functional & technical design specification for reports, integrations and customizations.
* Building reports, data load programs (data migration), integrations and customizations.
* Executing Unit Testing.
* Executing System Testing and Performance Testing.
* Facilitating User Acceptance Test.
* Executing cut-over and requisite data migration cycles
* Providing hyper care support at a minimum.
* Have a Service Level Agreement for software support and maintenance.

**Additional Responsibilities:**

IAMIS Sytem Implementation

| Component | Responsibility |
| --- | --- |
| Module and systems | Implement all modules required to meet system functionality requirements. |
| Reports | Deliver all individual custom reports including core systems reports per the Functional Requirements Specification (FRS) specification. |
| Workflows & Alerts | Standard workflows and alerts are considered as part of the scope and are required to be configured as per applicability. |
| Integration | Provide integration points with the following third-party applications as part of the applicable scope:   * Ghana Audit Service AMIS * An upper threshold of APIs to be exposed for consumption will be agreed with IAA. |
| Customizations | Implement all customizations required to deliver the full FRS are considered in the scope. |
| Data Migration | Vendor will undertake data conversion related activities for legacy data and the scope of data migration (if applicable) will be as follows:   * Providing appropriate data collection templates to the client team. In the data collection template, necessary mapping between IAMIS and legacy system will be jointly defined by IAA and vendor. * Vendor will only perform data load to target system once IAA provides in the specified format |
| Go Live and Transition | Vendor shall develop and execute cutover strategy and cut-over plan to future state system. |

Training and Support Requirements

| Component | Responsibility |
| --- | --- |
| Training | Training on the use of the system is required to facilitate effective and continuous utilisation of the E2E IAMIS after deployment. |
| The implementation vendor will be required to provide training to all identified users on the operation, management and administration of the system. |
| Training should be designed to meet the specific goals of improving user and administrator capability, capacity, productivity and performance. |
| For system administrators, there is a requirement to impart an understanding of the system architectural components including:   * Database, data schema and key tables. * Core infrastructure – platform application modules and corresponding hardware. * System configurations established for both hardware and software during the implementation of the system. |
| Support | Vendor will provide level 2 support for a limited agreed period as described below, once the issue is logged by raising ticket or calling or sending electronic mail.  Level 3 support will be provided for a minimum of 1 year.  Definitions:  Level-0: User attempts to self-resolve by referring to your training documentation or online help or approaching peers.  Level-1: User approaches core users or IT Team for resolving the issue.  Level-2: Users will raise the issue by logging ticket or mail or on call. Support Team will resolve the issue within the time period depending on SLA and closes the ticket.  Level-3: In case of level 2 support team failing to resolve the issue, requests are escalated to a development team either directly responsible for core software updates or able to liaise with OEM to resolve issues. |
| The Hyper-Care support duration will be 4 weeks from the date of go-live and for the functionalities delivered in as per the validated and signed off functional requirement specification. |

**Deliverables**

The vendor is required to deliver on the following outcomes listed below at the end of the implementation window:

1. Commercial off-the-shelf solution (Not a Bespoke Software Application) which will encompass the entire internal audit lifecycle stages. This should be the most recent and stable Solution.
2. Cloud resources and infrastructure to be configured and provisioned to “plug and play” with deployed AMIS solution environment
3. Test Reports
4. End-user Manuals
5. Training Delivery Report
6. Go-live Readiness Report
7. On-site and off-site Support/Maintenance Schedule (Minimum of 12 months post go-live)

| 1. Item No. | | 1. Specifications Required | 3.Specifications offered | | 4. Notes, remarks,  ref to documentation | | 5. Evaluation committee’s notes | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01 | HOSTING SERVICES | **Cloud-based solution hosted at an agreed hosting site with contracting party.**   * Cloud resources must be capable of running IAMIS and sustain non-functional performance requirements for system production environment and backup. * Vendor to provide optimal server specifications to support their solution with live streaming capabilities with basic configuration for running web applications |  | |  | |  | |
| 02 | SOFTWARE | 01 – Internal Audit Strategy | | | | | | |
| Ability to define a strategic plan coverage period and its span (1,2,3 or 4 years). |  | |  | |  | |
| Ability to document stakeholder Internal Audit expectations and categorize the expectations by the stakeholder group within a strategic period. |  | |  | |  | |
| Ability to input and capture the broad scope and emphasis of the IAA Internal Audit Strategy for the current period. |  | |  | |  | |
| Ability to input and capture the strategic pillars (annual initiatives) of the overall current Internal Audit Strategic plan. |  | |  | |  | |
| Ability to display and report on overall strategic pillars for the purpose of Internal Audit Agency/Service management review by strategy coverage period. |  | |  | |  | |
| Ability to capture an inventory of Audit focused ‘Thrust Areas’ across all internal audit engagements. |  | |  | |  | |
| Ability to tag and link each internal audit thrust area to a specific strategic pillar. |  | |  | |  | |
| Ability to maintain a history or archive of Internal Audit Strategic Plans. |  | |  | |  | |
| Ability to build a new strategic plan using previous period’s plan as a base template |  | |  | |  | |
| 02 – Audit Planning and Scheduling | | | | | | |
| Ability to set custom audit periods for covered entities based on type/classification of the entity. |  | |  | |  | |
| Ability of the preparer to set up users (contacts) and assign roles at the engagement level pending approval by designated secondary reviewer as part of the standard workflow |  | |  | |  | |
| Ability to capture audit workflow. |  | |  | |  | |
| Ability of the to capture approval hierarchy for all audit engagements |  | |  | |  | |
| Ability of the preparer to document training needs of staff for the year |  | |  | |  | |
| Ability of the preparer to attach information requested including management inputs, IA’s strategic plan, risk register of covered entity, SMTDP (Sector Medium Term Development Plan) / strategic plan of covered entity, programme-based budget of covered entity, etc. The information could be in different file formats including Word, Excel, PowerPoint, PDF (portable document format), other image formats such as jpeg. Etc. |  | |  | |  | |
| Ability of the preparer to create the audit entity/ thrust areas pending approval by a designated secondary reviewer as part of the standard workflow |  | |  | |  | |
| Ability of the preparer to select and assign risk factors and scores. |  | |  | |  | |
| Ability to populate risk library with risks, controls and controls objectives for the organisation. |  | |  | |  | |
| Ability to set scoring formulas and scoring bands for each organisation. |  | |  | |  | |
| Ability to choose scoring metrics, e.g. impact and likelihood, which best describe an approach to risk determination. |  | |  | |  | |
| Ability of the preparer to prioritise audits based on the risk assessments/ scores. |  | |  | |  | |
| Ability of the preparer to assign/ map resources to the audits. |  | |  | |  | |
| Ability of the preparer to submit annual audit plan for review and approval by designated secondary reviewer as part of the standard workflow |  | |  | |  | |
| Ability of the reviewer(s) to review and approve the annual audit plan. The reviewer(s) should be able to provide comments, if any. However, the reviewer(s) should not be able to edit the plan. |  | |  | |  | |
| Ability of the preparer to submit change request(s) after the approval of the annual audit plan. |  | |  | |  | |
| Ability of the reviewer(s) to review and approve change request(s) to the annual audit plan |  | |  | |  | |
| Ability of the preparer to print the approved annual plan for filing / communication |  | |  | |  | |
| Ability to create plans based on previous plans and templates. |  | |  | |  | |
| 03 – Engagement/Assignment Planning | | | | | | |
| Ability for IAMIS core risk matrix methodology size to be configured (3x3 vs 5x5 etc) |  | |  | |  | |
| Ability of the preparer to create an assignment / work plan indicating the purpose, plan period, the assignment to be used for and the approver. |  | |  | |  | |
| Ability of the preparer to create an internal audit engagement / assignment / project based on the approved assignment plan |  | |  | |  | |
| Ability of the preparer to add other internal audit staff to the audit engagement using scheduling tools such as Gantt chart, etc |  | |  | |  | |
| Ability of staff added to audit engagements to receive email notifications |  | |  | |  | |
| Ability of the user(s) to concurrently complete independence confirmations |  | |  | |  | |
| Ability to require user(s) to provide comments for each standard item in the independence confirmation(s). |  | |  | |  | |
| Ability of the Head of Internal Audit Unit to review and approve independence confirmations by the internal audit staff |  | |  | |  | |
| Ability of the preparer to upload a copy of the planning memorandum (engagement letter) shared with the client. |  | |  | |  | |
| Ability of the preparer to directly enter or upload minutes and attendance sheet of the kick-off meeting. |  | |  | |  | |
| Ability of the preparer to directly enter or upload minutes and attendance sheet of the entry conference meeting. |  | |  | |  | |
| Ability of the preparer to document IA’s understanding of the thrust area under review. |  | |  | |  | |
| Ability of the preparer to attach evidence to support the documentation of the understanding of the thrust area under review. |  | |  | |  | |
| Ability of the preparer to select a reviewer to review the documentation of the thrust area under review. |  | |  | |  | |
| Ability of the reviewer to review the understanding of the thrust area under review and document conclusions. |  | |  | |  | |
| Ability of the preparer to document objectives, risks and controls. |  | |  | |  | |
| Ability to add comments and attach supporting documentation to assessments of risks and controls |  | |  | |  | |
| Ability to require preparer to carry out audit according to quarter work plan |  | |  | |  | |
| Ability of preparer to assign/allocate reviewer to review documentation of objectives, risks and controls. |  | |  | |  | |
| Ability of reviewer to review evidence of documentation of objectives, risks and controls. Reviewer should be able to provide comments but should not be able to edit the original documentation. |  | |  | |  | |
| Ability of the preparer to evaluate existence and effectiveness of controls. |  | |  | |  | |
| Ability of the preparer to document findings /observations from the evaluation of the existence and effectiveness of controls. |  | |  | |  | |
| Ability of the preparer to analyse the findings / observations according to the following parameters: criteria, condition, cause, effect and corrective action. |  | |  | |  | |
| Ability of the preparer to document audit programmes to test controls and substantive testing. |  | |  | |  | |
| Ability of the preparer to select reviewer to review audit programmes. |  | |  | |  | |
| Ability of the reviewer to receive email notification on assigned review task. |  | |  | |  | |
| Ability of the reviewer to review audit programmes and provide comments. The reviewer should not be able to edit the audit programmes. |  | |  | |  | |
| 04 – Audit Fieldwork and Execution | | | | | | |
| Ability of the preparer to initiate controls testing. |  | |  | |  | |
| Ability of the preparer to select the population. |  | |  | |  | |
| Ability of the preparer to select the sampling approach (statistical or non-statistical sampling) in cases where not the entire population will be tested. |  | |  | |  | |
| Ability of the preparer to add comments / justification for sampling approach selected. |  | |  | |  | |
| Ability of the preparer to select the sampling method and size in cases where the statistical sampling approach will be used. |  | |  | |  | |
| Ability of preparer to add comments / justification for sampling method and size used. |  | |  | |  | |
| Ability of the preparer to select a reviewer to review population, sampling approach, method, size and justifications. |  | |  | |  | |
| Ability of reviewer to receive email notifications on assigned review tasks. |  | |  | |  | |
| Ability of reviewer to review population, sampling approach, method, size and justifications and provide comments. The reviewer should not be able to edit original documentations. |  | |  | |  | |
| Ability of the preparer to document the findings / results from the controls testing. |  | |  | |  | |
| Ability of the preparer to analyse the findings / observations according to the following parameters: criteria, condition, cause, effect and corrective action. |  | |  | |  | |
| Ability of the preparer to attach evidence to support the findings / results of the controls testing performed |  | |  | |  | |
| Ability of the preparer to select a reviewer to review the findings / results of the controls testing and the supporting evidence |  | |  | |  | |
| Ability of reviewer to receive email notifications on assigned review tasks |  | |  | |  | |
| Ability of reviewer to review findings / results of controls testing and the supporting evidence. The reviewer should be able to provide comments. The reviewer should not be able to edit the findings / results of the controls testing. |  | |  | |  | |
| Ability of the preparer to initiate substantive testing |  | |  | |  | |
| Ability of the preparer to select sampling technique |  | |  | |  | |
| Ability of the preparer to select the sampling size |  | |  | |  | |
| Ability of the preparer to select a reviewer to review sampling technique, size and justifications |  | |  | |  | |
| Ability of reviewer to receive email notifications on assigned review tasks |  | |  | |  | |
| Ability of reviewer to review sampling technique, size and justifications and provide comments. The reviewer should not be able to edit original documentations. |  | |  | |  | |
| Ability of the preparer to document the findings from substantive testing |  | |  | |  | |
| Ability of the preparer to analyse the findings according to the following parameters: criteria, condition, cause, effect and corrective action. |  | |  | |  | |
| Ability of the preparer to attach the evidence to support findings MMDS of the substantive testing performed |  | |  | |  | |
| Ability of the preparer to select a reviewer to review the findings / results of the substantive testing and the supporting evidence |  | |  | |  | |
| Ability of reviewer to receive email notifications on assigned review tasks |  | |  | |  | |
| Ability of reviewer to review findings / results of substantive testing and the supporting evidence. The reviewer should be able to provide comments. The reviewer should not be able to edit the findings / results of the substantive testing. |  | |  | |  | |
| Ability of the preparer to upload minutes and attendance sheet of exit meeting. |  | |  | |  | |
| Ability to allow multiple users to concurrently work on different activities in the same tab/phase/stage and in different tab/phase/stage. |  | |  | |  | |
| Ability of preparer to request initial responses on findings using a findings sheet. |  | |  | |  | |
| 05 – Audit Wrap-up and Reporting | | | | | | |
| Ability of the preparer to download or export draft internal audit report templates. |  | |  | |  | |
| Ability of the preparer to attach /upload draft internal audit report after modification of template to reflect the draft findings of the assignment. |  | |  | |  | |
| Ability of the preparer to select a reviewer to review the draft internal audit report. |  | |  | |  | |
| Ability of reviewer to receive email notifications on assigned review tasks. |  | |  | |  | |
| Ability of reviewer to review the draft internal audit report. The reviewer should be able to provide comments to the draft internal audit report. |  | |  | |  | |
| Ability of the preparer to email the draft internal audit report to the contact person for the covered entity for responses. |  | |  | |  | |
| Ability of the preparer to attach finalised internal audit report after reviewing and incorporating management responses to the draft internal audit report. |  | |  | |  | |
| Ability of the preparer to print finalised report for filing and submission to audit committee |  | |  | |  | |
| 06 – Audit Follow-Up (Issue Tracking) | | | | | | |
| Ability to track and follow up on findings from creation to closure. |  | |  | |  | |
| Ability to analyse follow-up activity / tracking according to the following parameters:   * finding ID * criticality/ rating * status of finding * thrust area * agreed action/ remediation plan * person responsible * status of remediation plan implementation * the expected date of closure / remediation |  | |  | |  | |
| Ability to perform an ageing analysis on outstanding issues. |  | |  | |  | |
| Ability to define classification criteria for findings ranked as high, medium or low. |  | |  | |  | |
| Ability to generate system generated alerts on outstanding issues and notify designated parties for further action. |  | |  | |  | |
| Ability to configure frequency of alert notifications |  | |  | |  | |
| Ability to configure and prioritize alert notifications on the basis of outstanding issue and related finding ranking (high, medium, low). |  | |  | |  | |
| Ability to configure alert notification to coincide with Annual Internal Audit Reporting deadline schedules. |  | |  | |  | |
| **Non-Functional Requirements** | | | | | | |
| **07 – Software Availability, Distribution and Support (Commercial Off-the-Shelf – Requirements- COTS)** | | | | | | |
| Internationally distributed IAMIS software package available from an authorized software vendor network. Must have active user install bases in all the following geographic regions; Member states of the European Union, North American or African- Caribbean- Pacific (ACP) States. | |  | |  | |  |
| IAMIS solution is ‘plug-and play’ ready or can be used out of the box to meet most generic internal audit workflow requirements (*Ref: 01-06 of Item No. 2-Software Requirements*) | |  | |  | |  |
| IAMIS solution must have a pre-established customer support center/framework.  Support center should deliver dedicated remote assistance by phone, email and tele-support. Capability to deploy onsite personnel to Ghana. | |  | |  | |  |
| IAMIS solution must have been in existence for at least the last 5 years with annual updates and fixes made available to user community. | |  | |  | |  |
| IAMIS solution modules/elements should be able to be configured to meet current and future organizational needs. | |  | |  | |  |
| **08 – Access Security** | | | | | | |
| Users must be authenticated before they can make use of the system. |  | |  | |  | |
| Users shall be forced to change their password the next time they log in if they have not changed it within the length of time established as “password expiration duration.” |  | | ` | |  | |
| Users must change the initially assigned login authentication information (password) immediately after the first successful login.  The initial password may never be reused. |  | |  | |  | |
| The access permissions for system data may only be changed by the system’s data administrator. |  | |  | |  | |
| Passwords shall never be viewable after the point of entry, all passwords should be salted and hashed using an irreversible hashing algorithm. |  | |  | |  | |
| Each unsuccessful attempt by a user to access an item of data shall be recorded in an audit trail. |  | |  | |  | |
| System should capture record of all user actions in an audit trail. |  | |  | |  | |
| Users shall receive notification of profile changes via the preferred communication method of record when profile information is modified. |  | |  | |  | |
| The system shall provide a role-based user access mechanism where an administrator can create and manage users, organisations, user groups, roles, and role permissions. |  | |  | |  | |
| 09 - Accessibility | | | | | | |
| The system shall utilise UTF-8-character encoding in all areas. |  | |  | |  | |
| 10 - Availability | | | | | | |
| The system shall be available 24/7 with all service level agreements adhered to. Maintenance shall be done during off-peak periods and backups should be provided. |  | |  | |  | |
| The geographic location of the server shall not impede the availability of the system; hence the connection requirements and firewall restrictions should not impede the server from performing as expected. |  | |  | |  | |
| 11 - Confidentiality | | | | | | |
| The system shall encrypt all data in transit employing a publicly known asymmetric encryption (public-key) for all data in transit |  | |  | |  | |
| The system shall support encryption of all data in storage. |  | |  | |  | |
| 12 - Efficiency | | | | | | |
| The system shall support 5,000 user account provisions. |  | |  | |  | |
| The system shall support 50% of provisioned users concurrently at peak periods with no performance issues. |  | |  | |  | |
| The account update process shall roll back all related updates when any update fails to commit. |  | |  | |  | |
| The system shall be compatible with all major modern browsers (Chrome, Safari, Firefox, IE9). |  | |  | |  | |
| 13 - Integrity | | | | | | |
| The system is to be designed as a robust and dependable operational system which is tolerant to operator errors and which will recover cleanly from power cuts or other disasters. |  | |  | |  | |
| 14 - Reliability | | | | | | |
| The system shall be able to operate over reasonably common internet connection speed, the server shall respond to client requests in less than one (1) second. |  | |  | |  | |
| 15 - Usability | | | | | | |
| The system must guide users through an interface based on end-user concepts. |  | |  | |  | |
| The system must be easy to learn and does not obstruct the thematic understanding of the users. |  | |  | |  | |
| The system must make it easy to correct mistakes. |  | |  | |  | |
| 16 - Flexibility | | | | | | |
| The system shall allow for the modification to adapt to different environments, configurations and user preferences. |  | |  | |  | |
| 17 - Maintainability | | | | | | |
| The system shall not be shut down for maintenance more than once in a 24hour period. |  | |  | |  | |
| 18 - Modifiability | | | | | | |
| No piece of text that might be displayed to a user shall reside in source code.  That is, every piece of text that a user might see must be modifiable without changing source code |  | |  | |  | |
| A development programmer who has at least one year of experience supporting this software application shall be able to add a new product feature, including source code modifications and testing, with no more than one week of labour. |  | |  | |  | |
| De-facto architectural patterns and design patterns must be used in the construction of the system architecture. |  | |  | |  | |
| The code shall be written professionally with proper indentations and comments. Functions shall be built modularly to enable abstraction of different parts of the system. |  | |  | |  | |
| Function calls shall not be nested more than two levels deep. |  | |  | |  | |
| 19 - Scalability | | | | | | |
| The system shall be scalable to support unlimited growth in the number of users and audit entities. |  | |  | |  | |
| The system shall allow several entries to be made at the same time without downgrading performance. |  | |  | |  | |
| 20- Installability | | | | | | |
| It shall be possible for the system’s main server software to be installed by a competent system administrator who has no previous knowledge of the system or of the third‐party products it uses, but who is familiar with the operating system of the machines on which it is to be installed.  The software shall be installed from a popular portable medium |  | |  | |  | |
| Installing an upgrade shall not modify existing configuration values.  An exception is made for any values that the new version uses in different ways from the previous version.  The motivation for this requirement is to avoid wasting the time of users who have spent considerable time configuring the system to suit themselves |  | |  | |  | |
| The system should be able to run on commodity hardware and non-specialized software environments. |  | |  | |  | |
| 21 - Portability | | | | | | |
| The system should be easily transferable to another software and/or hardware environment as specified by the client’. |  | |  | |  | |
| All timestamps recorded by the system shall be in UTC (Universal Time Coordinated) when placed into permanent storage. |  | |  | |  | |
| 22 - Reusability | | | | | | |
| Web applications shall be developed to adhere to HyperText Markup Language (HTML) guidelines and standards. |  | |  | |  | |
| All software that runs on a client device shall be written in a prevalent programming language such that the software can be run on a personal computer without having to download a supporting environment. |  | |  | |  | |
| 23 - Interface Requirements | | | | | | |
| The system should be able to interface with other popular audit workflow tools or solutions to import and export data. |  | |  | |  | |
| The system should be able to exchange data with other applications and systems using the Extensible Markup Language (XML) encoding. |  | |  | |  | |
| 24 – Other Functional Requirement | | | | | | |
| Ability to filter and sort search results at the global and local level. |  | |  | |  | |
| Ability to include images, emails and pdfs into file as audit evidence. |  | |  | |  | |
| Ability to cross-reference work papers in one phase to a work paper in another phase |  | |  | |  | |
| Ability to hyperlink to websites, including files stored outside the database, e.g. ACL |  | |  | |  | |
| Ability to create and link work papers to bookmarks. |  | |  | |  | |
| Ability to integrate with Microsoft Office Suite for document management and calendar management. |  | |  | |  | |
| Ability to produce risk assessment detail report. |  | |  | |  | |
| Ability to produce audit universe heat map report. |  | |  | |  | |
| Ability to produce risk category heat map report. |  | |  | |  | |
| Ability to customize report templates to tailor layouts to custom reporting standards. |  | |  | |  | |
| Ability to search their team for specific skills, credentials, languages, experience or locations to meet the needs of a project. |  | |  | |  | |
| Ability to detect scheduling conflicts so schedulers can easily identify when they are about to create a conflict – and if conflicts exist, easily resolve them |  | |  | |  | |
| Ability to generate reports to demonstrate individual schedules, resource utilization, resource skills, free time, etc. |  | |  | |  | |
| Ability to allow multiple users to concurrently work on different activities in the same tab/phase/stage and in different tab/phase/stage |  | |  | |  | |
| Ability to perform and track audit activities using the system in offline mode, when you’re not connected to the internet or WAN, and synch work when you reconnect. |  | |  | |  | |
| 03 | IMPLEMENTATION TEAM | Project Manager   * 10+ years of project management * Led at least one (1) Internal Audit system implementation, preferably for an audit management information system * Demonstration of public sector experience * Degree in Mangement Information Systems (MIS) or related field /Project Management is preferred. * Change Management Experience |  | |  | |  | |
| Solution Architect   * 8+ years of working experience as a solution architect * At least 4 years experience deploying the IAMIS solution being proposed with at least 1 year spent implementing the proposed application in a public sector accountability institution * Conceptualization, Design, implementation and Delivery Management of internal audit management information system. * Degree in Computer Science or related field preferred. * Possess strong understanding of the package solution being proposed * Have done similar projects using the above-mentioned skills within the last 5 years |  | |  | |  | |
| Internal Audit Functional Specialist/Business Analyst   * 8+ years of working experience. * At least 3 years experience with the IAMIS solution being proposed with at least 1 year spent implementing the proposed application in a public sector accountability institution * Possess experience in defining business requirements for internal audit management systems. * Experience in running user workshops to gather and confirm requirements for systems configuration and deployment, preferably in the public sector. * Must have good data analysis experience. * CIA or ACCA qualifications are requirements |  | |  | |  | |
| Trainer   * 5+ years of end-user training experience * Should have delivered training on the relevant solution and subject matter area within the last 3 years. |  | |  | |  | |
| 04 | IMPLEMENTATION | Must demonstrate successful implementation over the last five (5) years of at least one (1) Internal Audit Management Information Systems developed in the Public Sector based on the **International Professional Practice Framework (IPPF)** (2017), and evidenced by **completion certificate signed by the beneficial entities** |  | |  | |  | |
| Demonstrated past implementations must include requirement analysis, application design, software configuration, training, testing and full system roll outs. |  | |  | |  | |
| Vendor must show evidence of software manufacture’s authorization to implement their product, where applicable. |  | |  | |  | |
| Vendor’s response must show details of implementation methodology with milestone deliverables. The vendor will be required to implement the software. This will entail the following key activities:   * Leveraging business process design and analysis proficiencies to validate requirements. * Developing functional & technical design specification for reports, integrations and customizations. * Executing Unit Testing. * Executing System Testing and Performance Testing. * Building reports, data load programs (data migration), integrations and customizations. * Facilitating User Acceptance Test. * Executing cut-over and requisite data migration cycles. * Facilitating go-live activities. |  | |  | |  | |
| Provide Knowledge transfer and project management approach. |  | |  | |  | |
| Tender’s response must include a Change Management strategy for transitioning IAMIS platform to contracting entity. |  | |  | |  | |
| 05 | SUPPORT AND MAINTENANCE | Must indicate proposed technical support team in Ghana for remote and onsite support as needed. |  | |  | |  | |
| Vendor’s response must include a proposed maintenance plan for one year following implementation. The vendor will be required to:   * Provide hyper care support at a minimum. * Have a Service Level Agreement for software support and maintenance for at least 12 months. |  | |  | |  | |
| Prior experience providing user support and/or management for at least one organization evidenced by a Reference from contracting organization. |  | |  | |  | |

**Contract title Lot 3: Supply, Delivery and Installation of E-learning Platform to the Parliamentary Training Institute (PTI) and Ghana Audit Service (GAS)**

**PROJECT OVERVIEW**

**Ghana Public Financial Management Support Programme**

The Government of Ghana, over the last few years, has undertaken a number of initiatives aimed at strengthening public financial management (PFM). One of the key initiative is the Ghana PFM Support Programme. The overall objective of the Ghana PFM Support Programme is to improve the economic governance and business environment and to maximize the benefits of the Economic Partnership Agreement (EPA) for Ghana in the context of Ghana beyond aid by supporting the building of a more robust oversight function of selected independent Government institutions. The main beneficiaries of this programme are:

* The Parliament of the Republic of Ghana//Parliamentary Training Institute (PTI)
* Ghana Audit Service (GAS)
* Internal Audit Agency (IAA)
* Public Procurement Authority (PPA)

A brief on the beneficiary institutions is highlighted below:

**Ghana Audit Service (GAS)**

The Ghana Audit Service (GAS) receives its mandate from the 1992 Constitution and the Audit Service Act 2000 (Act 584) and is the Supreme Audit Institution (SAl) of Ghana. Accordingly, the Service must meet high ethical and technical standards and procedures laid down by the Service and the International Organization of Supreme Audit Institutions (INTOSAI). To meet all of its constitutional, statutory and professional audit responsibilities, the management of the Service has identified a need for capacity building to properly respond to the wide range of Public Financial Management (PFM) reforms being implemented by the Government of Ghana. The supply of Information Technology (IT) equipment and implementation a Learning Management System is a critical need for the Service to effectively utilize the Audit Management Software and enhance the capacity of staff.

**Parliamentary Training Institute (PTI)**

The Parliamentary Training Institute (PTI) was founded in December 2016 to build capacity of legislators, legislative staff and stakeholders in governance through training, cutting edge research and other initiatives to enhance democratic governance by providing focused relevant capacity building programmes for members of parliament and staff of parliamentary services. The PTI was established to also collaborate with national and international organizations for the promotion of knowledge and continuing education for members and staff of parliamentary services, undertake and promote research on parliamentary democracy and good governance

Details of the requirements are presented below:

**1. Objective**

The specific objective is to engage a service provider to supply the required software, implement and roll-out e-learning platforms to enable PTI and GAS obtain the needed capabilities to deliver on their mandates and perform efficiently in an enhanced IT environment. The e-learning platform is expected to be a leading Commercial Off-the-Shelf (COTS) solution.

**2. Scope of Work**

The tenderer shall provide implementation services and support for the following specific activities:

* Supply and install the e-Learning system software for PTI and GAS.
* Install and configure e-Learning system.
* Establish and test onsite and remote connectivity to service provider.
* Assist in developing online learning content.
* Test user access to system both on-premise and offsite.
* Obtain user licenses per agreement with the contracting authority.
* Develop and obtain sign off for Training Strategy.
* Provide an end user training plan and training materials for utilizing the LMS.
* Provide training for application Administrators and IT support staff.
* Run a pilot to test end to end functionality of the eLearning application.
* Deploy and commission e-learning application.
* Provide short term post-implementation support onsite.
* Have a Service Level Agreement for software support and maintenance

**3. Key Deliverables**

* Web-based e-Leaning Management System for PTI and GAS
* Commercial off-the-shelf solution (Not a Bespoke Software Application). This should be the most recent and stable Solution.
* Resources and infrastructure to be configured and provisioned to “plug and play” with deployed solution environment
* Test Reports
* End-user Manuals
* Training Delivery Report
* Go-live Readiness Report
* Support/Maintenance Schedule (Minimum of 12 months post go-live)

| **1. Item No.** | | **2. Specifications Required** | **3. Specifications offered** | **4. Notes, remarks,** | **5. Evaluation committee’s notes** |
| --- | --- | --- | --- | --- | --- |
| **ref to documentation** |
| 001 | LEARNING MANAGEMENT SYSTEM FOR PTI (E-LEARNING) | * **Software Features and Capabilities** |  |  |  |
| System should have the ability to support Interactive video learning. |  |  |  |
| System should be able to produce and support virtual conferencing and remote conferencing. |  |  |  |
| System must make provision for a course library that can be updated with content on demand. |  |  |  |
| System should have the ability to track system performance and provide alerts for system management. |  |  |  |
| System should be able to produce customizable reports & course analytics. |  |  |  |
| System must support the development and tracking of online tests, quizzes and presentations. |  |  |  |
| System should be able to produce course certificates/badges etc. to users upon completion of training and tests where applicable. |  |  |  |
| Pre-installed general content in the fields of management, finance, administration etc |  |  |  |
| System Installation to include specialised content to be provided by the purchaser |  |  |  |
| System should allow for addons and integrations such as webinar. |  |  |  |
| System should be SCORM Compliant. |  |  |  |
| Internationally distributed e-Learning Management software package available from an authorized software vendor network. Must have active user install bases in all the following geographic regions: Member states of the European Union, North American or African- Caribbean- Pacific (ACP) States. |  |  |  |
| E-Learning Management solution is ‘plug-and play’ ready or can be used out of the box to meet the standard software features and capabilities stated above herein |  |  |  |
| E-Learning Management solution must have a pre-established customer support center/framework. Support center delivers dedicated remote assistance by phone, email and tele-support. Capability to deploy onsite personnel Ghana |  |  |  |
| E-Learning Management solution must have been in existence for at least the last 5 years with annual updates and fixes made available to user community. |  |  |  |
| Learning Management solution modules/elements should be able to be configured to meet current and future organizational needs. |  |  |  |
| * **Hosting Services** |  |  |  |
| **Option 1 – Cloud-based solution**  Hosted at an agreed hosting site with contracting party with live streaming capabilities with basic configuration for running web applications.  **Option 2 – On-premises solution**  Develop system specifications on server hosted on premise at a designated location of the contracting party.  **(Please indicate Option to be provided)** |  |  |  |
| * **System users:** |  |  |  |
| 300 Minimum |  |  |  |
| * **Implementation Team** |  |  |  |
| * Project Manager to provide oversight and direction for project team during implementation * Minimum Qualification: Must have 5+ years’ experience managing large IT implementations for public sector organizations. * Have an internationally recognized project management certification preferably for IT projects implementation. |  |  |  |
| * Solution Architect/Developer to design and develop/configure application * Must have 8+ years in application development and solution design for web-based applications. * Must have at least 3 years’ experience with the learning solution being proposed * Must have at least one relevant developer certification of international repute. |  |  |  |
| * Content Developer to assist with training content development and learning management activities   + Minimum Qualifications: 5+ years’ experience in building online training applications in both cloud and on-prem settings, evidenced by past credentials on such implementation. |  |  |  |
| * Trainer to provide training and user guides on how to use system   + Minimum Qualifications: At least 5 years’ experience in providing learning instructions and capacity building in similar projects within the last 3 years   + Must have at least 2 years’ experience with the e-learning solution being proposed |  |  |  |
| * **Implementation** |  |  |  |
| Must demonstrate successful implementation over the last three (3) years of at least two (2) Web Based E-Learning System, and **evidenced by completion certificate signed by the beneficial entities.** |  |  |  |
| Demonstrated past implementations must include requirement analysis, application design, software configuration, training, testing and full system roll outs. |  |  |  |
| Tenderer must show evidence of software manufacture’s authorization to implement their product, where applicable. |  |  |  |
| Tenderer’s response must show details of implementation methodology with milestone deliverables. The tenderer will be required to implement the software. |  |  |  |
| Provide knowledge transfer and project management approach. |  |  |  |
| Tender’s response must include a Change Management strategy for transitioning e-Learning platform to contracting entity. |  |  |  |
| **Support and Maintenance** |  |  |  |
| Must have technical support team in Ghana for remote and onsite support as needed |  |  |  |
| Tenderer’s response must include a proposed maintenance plan for one year following implementation |  |  |  |
| Prior experience providing user incident management for an organization evidenced by an attestation from contracting organization is required |  |  |  |
| Vendor must be able to provide software licenses that are acceptable to contracting party (perpetual license preferred). |  |  |  |
| 002 | LEARNING MANAGEMENT SYSTEM FOR GAS (E-LEARNING) | * **Software Features and Capabilities** |  |  |  |
| System should have the ability to support Interactive video learning. |  |  |  |
| System should be able to produce and support Virtual conferencing and remote conferencing. |  |  |  |
| System must make provision for a course library that can be updated with content on demand. |  |  |  |
| System should have the ability to track system performance and provide alerts for system management. |  |  |  |
| System should be able to produce customizable reports & course analytics. |  |  |  |
| System must support the development and tracking of online tests, quizzes and presentations. |  |  |  |
| System should be able to produce course certificates/badges etc. to users upon completion of training and tests where applicable. |  |  |  |
| Pre-installed general content in the fields of management, finance, administration etc. |  |  |  |
| System Installation to include specialised content to be provided by the purchaser. |  |  |  |
| System should allow for addons and integrations such as webinar. |  |  |  |
| System should be SCORM Compliant. |  |  |  |
| Internationally distributed e-Learning Management software package available from an authorized software vendor network. Must have active user install bases in all the following geographic regions: Member states of the European Union, North American or African- Caribbean- Pacific (ACP) States. |  |  |  |
| E-Learning Management solution is ‘plug-and play’ ready or can be used out of the box to meet the standard software features and capabilities stated above herein |  |  |  |
| E-Learning Management solution must have a pre-established customer support center/framework. Support center delivers dedicated remote assistance by phone, email and tele-support. Capability to deploy onsite personnel Ghana |  |  |  |
| Learning Management solution must have been in existence for at least the last 5 years with annual updates and fixes made available to user community. |  |  |  |
| Learning Management solution modules/elements should be able to be configured to meet current and future organizational needs. |  |  |  |
| **Hosting Services** |  |  |  |
| **Option 1 – Cloud-based solution**  Hosted at an agreed hosting site with contracting party with live streaming capabilities with basic configuration for running web applications.  **Option 2 – On-premises solution**  Develop system specifications on server hosted on premise at a designated location of the contracting party.  **(Please indicate Option intended to be provided)** |  |  |  |
| **System users:** |  |  |  |
| 2000 Minimum |  |  |  |
| * **Implementation Team** |  |  |  |
| * Project Manager to provide oversight and direction for project team during implementation * Minimum Qualification: Must have 5+ years’ experience managing IT implementations for public sector organization * Demonstration of public sector experience * Have an internationally recognized project management certification preferably for IT projects implementation |  |  |  |
| * Solution Architect/Developer to design and develop/configure application * Minimum Qualifications: Must have 8+ years in application development and solution design for web-based applications. * Must have at least 4 years’ experience with the learning solution being proposed * Must have at least one relevant developer certification of international repute. |  |  |  |
| * Content Developer to assist with training content development and learning management activities * Minimum Qualifications: 5+ years’ experience in building Online Training Applications in both cloud and on-prem settings, evidenced by past credentials on such implementation |  |  |  |
| * Trainer to provide training and user guides on how to use system * Minimum Qualifications: At least 5 years’ experience in providing learning instructions and capacity building in similar projects within the last 3 years * Must have at least 2 years’ experience with the learning solution being proposed |  |  |  |
| * **Implementation** |  |  |  |
| Must demonstrate successful implementation over the last three (3) years of at least two (2) Web Based E-Learning System evidenced by **completion certificate signed by the beneficial entities** |  |  |  |
| Demonstrated past implementations must include requirement analysis, application design, software configuration, training, testing and full system roll outs. |  |  |  |
| Tenderer must show evidence of software manufacture’s authorization to implement their product, where applicable. |  |  |  |
| Tenderer’s response must show details of implementation methodology with milestone deliverables. The tenderer will be required to implement the software. |  |  |  |
| Provide knowledge transfer and project management approach. |  |  |  |
| Tender’s response must include a Change Management strategy for transitioning eLearning platform to contracting entity. |  |  |  |
| ► **Support and Maintenance** |  |  |  |
| Must have technical support team in Ghana for remote and onsite support as needed. |  |  |  |
| Tenderer’s response must include a proposed maintenance plan for 1 year following implementation. |  |  |  |
| Prior experience providing user incident management for an organization evidenced by an attestation from contracting organization is required. |  |  |  |
| Vendor must be able to provide software licenses that is acceptable to contracting party (perpetual license preferred). |  |  |  |
| 003 | SUPPORT SERVICES (E-LEARNING FOR PTI AND GAS) | * The tenderer responses should indicate how they would provide the required services for the following activities: * Supply and install the e-Learning system software. * Install and configure e-Learning system. * Establish and test onsite and remote connectivity to service provider. * Assist in developing online learning content. * Test user access to system both on-premise and offsite. * Obtain user licenses per agreement with the contracting authority. * Develop and obtain sign off for Training Strategy. * Provide an end user training plan and training materials for utilizing the LMS covering. * Provide training for application Administrators and IT support staff. * Run a pilot to test end to end functionality of the e-Learning application. * Deploy and commission e-learning application. * Provide short term post-implementation support onsite. * Have a Service Level Agreement for software support and maintenance |  |  |  |