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www.moseskotaneinstitute.com

REQUEST FOR QUOTATIONS (RFQ)

REF No	MKIQ12/2022
Description	Supply and install Networking and security in Westville
Delivery address	Moses Kotane House, Lakeside Unit 14- Derby Downs, 1 University Road
Closing date and time to submit quotation.	09 June 2022 at 16:30
Compulsory site briefing	31 May 2022 at 11 am (Westville)
Technical inquiries must be emailed to:	lisa.vuso@moseskotane.com
Quotations and enquires must be emailed to:	gcino.lugayeni@moseskotane.com

Disclaimer

- MKI reserves its right not to appoint.
- MKI reserves its right to negotiate the price with the winning bidder.

Terms and Conditions

- Quotations must be emailed by no later than 09 June 2022 at 16h30. Quotations received after the closing time and date will not be considered.
- All prices must be all-inclusive. Only firm prices will be accepted. Non-firm prices (including prices subject to rates of exchange variations will not be considered)
- Quotations to be valid for a period of 60 days from the closing date of the bid

MKIQ12/2022

1. Background

The Moses Kotane Institute is an entity of the KwaZulu-Natal (KZN) Provincial Government through the Department of Economic Development, Tourism and Environmental Affairs (EDTEA), with a mandate to conduct world-class research into training, skills development, and provincial strategic economic sectors; and to strategically lead on innovation and maritime coordination and implementation activities to respond to the needs of the provincial economy. MKI generally aims to provide timely and accurate research to support the attainment of radically transformed inclusive and sustainable economic growth for the province in partnerships with the public and private sectors.

MKI Westville Office is currently located at the **Moses Kotane House, Lakeside Unit 14-Derby Downs, 1 University Road, Westville, 3629 South Africa**. It is estimated to have 30 end-users; connected through an inter-office LAN and Data Connectivity System. The LAN connection is also used for DATA, Security Cameras, VoIP communications and video conferences and building management systems. In this regard, MKI will require a unified Wired and Wireless Local Area Network (LAN) installed and configured at the office site using CAT6 Specifications and activating the existing fibre backbone.

2. Technical Requirements

2.1. Wide Area Network (Fibre Connectivity)

Activation of existing last mile Fibre backbone.

2.2. Local Area Network

Supply and Installation of structured IP Telephony ready LAN Cabling which should include:

- Industry-standard Cat6 Cable, faceplates, patch panels, fly leads, patch cords and any other appropriate accessories.
- LAN should include the copper cabling based on Unshielded Twisted Pair wires
- Supply of network ports/outlets,
- The LAN is to use Cat6 UTP copper wiring for horizontal cabling (Industry standards 1000 Base-T, Power over Ethernet 802.3af or 802.3at).
- Supply of new CAT6 cables to be routed to the wiring closets/cabinets located in the server room.

- Fibre wiring through multimode fibre optic connections.
- All floor switches should be connected to Core Switch in the Datacentre by Fibre
- Each wiring must be properly protected and fixed to the walls and ceilings by using the technology standards to avoid electrical interference and maximum throughput.
- External wiring should be protected from the environment.
- The solution must be aesthetically well presented.
- Point-to-point, port-by-port testing of the complete wiring solution.
- Labelling of ports on both ends as well as labelling of patch panels
- The service provider must indicate in detail how the new LAN will be installed without disrupting day-to-day operations.
- To follow the guidelines described in the rest of this document

3. Wireless Local Area Network

Implement a Full Wireless Environment as detailed below using existing wireless access points:

- Analyse the radio frequency environment, optimise Access Points positioning.
- Coverage areas. Users will need access to the wireless network. They might not only need connectivity in the shared office space and conference rooms, but they may also need connectivity on the first floor of the building.
- Client devices. Ensure the solution accommodates wireless phones, laptops running Microsoft Windows with integrated 802.11b/g/n/ac radios.
- Minimise WLAN Interference

4. Existing Data Center/Server Room Infrastructure

Component	Standards
Server room physical security	<ul style="list-style-type: none">a) The server room is in a flood-proof environment above ground and towards the back of the office building away from any roads.b) The server room has a separate set of keys from the rest of the doors/offices and is also controlled with biometric access.c) Access is limited to staff that require physical access to servers and other equipmentd) Vendors are always accompanied when working in the Server roome) No flammable materials are stored inside the Server room.
Pow	<ul style="list-style-type: none">a) Allows 5-7 kilowatts of power for each rack, 24-30 kilowatts if using blade serversb) Power is conditioned.c) Equipment is connected through be on dedicated circuits.d) On-line UPS is recommended with backup power of at least 2 hours.e) A standby UPS must be providedf) Equipment is properly protected from lightning strikes. Ensure that grounding is adequately implemented so that protection is effective for the antennas, lightning protection systems and the electrical power distribution.

Component	Standards
Climate control	a) The server room maintains an ambient temperature of 20° to 24°C. The temperature should not exceed 85 degrees. b) Relative humidity is maintained at 45%-55%
Environment monitoring	a) Smoke, fire, and water-condition alarms with alert capabilities should be installed in the Server room
Fire suppression	b) Fire suppression systems must be in place with preference given to electrically safe systems such as FM-200. c) In case there is no automatic fire suppression system, Class I fire extinguishers must be put inside and by the entrance outside of the room with a count of 4 litres per cabinet.

4.1. Additional Notes

4.1.1. The prospective service provider before submitting a proposal shall conduct a site visit to the Westville premises with MKI IST Unit to discuss the site layout and plans to fully understand the nature and scope of the work.

4.1.2. MKI will provide the following:

- Cisco Meraki Switches and Unify Access Points
- Air Conditioners for Datacentre, with layer 2 switch
- Racks for the Server Room and Cabinets for the Floor Switches (additional cabinets should be quoted by the vendor if needed).
- IP Camera surveillance systems with biometric reader that require upkeep and maintenance.
- Unify wireless access points
- Wall mounted network points

4.1.3. Under normal circumstances, all problems should be resolved within a maximum of 24 hours after the notification from MKI is received.

5. MKI may wish to visit the prospective service of previous installations.

The successful service provider must have a physical presence, including the availability of 7x24x365 coverage for technical support and/or helpdesk facilities, in the province for the duration of the project implementation.

6. Expected Key Results

Working in partnership with MKI IST Unit, the prospective service provider is expected to undertake the following activities:

- Activate and manage existing security and surveillance
- Active available last mile fibre backbone
- Install an integrated Local Area Network (LAN).
- Connect all network points to Core Switch to be in the Data centre.
- Test and Certificate each installed cable.
- Label all cabling by using the agreed format with the IST Unit
- Provide documentation details for the new LAN
- The service shall also specify the warranty period associated with the supplied LAN products making up the structured cabling solution

7. Maintenance Services and Warranty

The service provider shall provide technical support for 3 months after successful installation of LAN, 12 Months support for the fibre connectivity and 12 months support for security and surveillance which includes: troubleshooting; maintenance of cabling, ducting, nodes. The service provider shall also specify the warranty for all LAN products.

8. Documentation (Duplicate)

Documentation is a fundamental element for the operation and especially network maintenance. The service provider shall also provide complete documentation of IT equipment, and LAN architecture design with a comprehensive diagram of LAN structure including the exact layout of cables in soft and printed form, after completion

9. Reporting Mechanisms

The service provider will have a dual reporting arrangement: to the MKI IST unit.

10. Implementation Timeline

All installation works should be accomplished and commissioned within 30 days after the signing of the Contract.

11. Payment

Payment will be as per RFQ terms i.e. 95% upon satisfactory completion and 5% retention amount to cover 6 months defects liability period.

12. Qualification Requirements

MKI needs the following qualifications for the potential offer:

- 12.1 Solid experience in the provision of services in nature, scale, and complexity commensurate with the present terms of reference, with already provided services possessing features required by these terms of reference; The company must have at least three similar contracts (similar by scope, nature and amount), preferably with intergovernmental organizations. Evidence of contracts is required; references from other clients are highly welcomed.
- 12.2. Qualified and experienced experts in structured Wide Area Network (Fibre connectivity) deployment, Local Area Networks, Network Administration, Security, and surveillance, and good customer service and interpersonal skills working under the general supervision and guidance of the company manager and in cooperation and under the guidance of MKI assigned focal point.

13. Applicable International Standards

- 13.1 The ANSI/TIA/EIA-492AAAA and 492AAAB standards, developed by the Telecommunication Industry Association
- 13.2 ANSI/TIA/EIA-568-B.2-1

14. Floor Plans

The floor plan will be provided at the briefing stage.

List of minimum cabling specs

The service provider should ensure to visit the locations to ensure the correct quantities based on the following minimum specifications:

Multimode Fibre 62.5/125micron core/cladding, enhanced grade, multimode, and graded-index glass fibre
Last-mile fibre connection.
Cable internal 4 pairs 24AWG CAT6 UTP- 305mtr/Roll-Grey rolls of 305 Meters
Patch cord CAT6 UTP – 1meter Grey/Blue for connecting patch panels to switches, routers, etc.
Patch cord CAT6 UTP – 10 Meter Grey/Blue for connecting servers, workstations, printers and other peripherals
Patch cord CAT6 UTP – 5 Meter Grey/Blue for connecting switches to servers
Patch cord CAT6 UTP – 10 Meter Grey/Blue for conference rooms
Patch panel 1U 19" 48port CAT6 UTP -W/Manager -Fully loaded

Cable managers 1U 19" with 4 rings
CAT6 RJ45 Connectors 50MIC gold plated contact 100 pcs per pack
Twin Cat6 RJ 45 socket outlet <ul style="list-style-type: none"> - TIA/EIA-568-B.2-1 specifications - Fully component compliant - Independently tested by Delta - 568B colour coding - 110/LSA compatible IDC connectors - Shuttered access to protect from dust ingress - Manufactured from V0 flame-retardant PVC - Protective labelling lens - Mounts in flush or bevelled faceplate
Faceplates for double socket modules
Single Cat6 RJ 45 socket outlet <ul style="list-style-type: none"> - TIA/EIA-568-B.2-1 specifications - Fully component compliant - Independently tested by Delta - 568B colour coding - 110/LSA compatible IDC connectors - Shuttered access to protect from dust ingress - Manufactured from V0 flame-retardant PVC - Protective labelling lens - Mounts in flush or bevelled faceplate
Faceplates for single-socket modules

Trunking when needed
PVC cable trunking for wall surface mounting, Standard EN 500852-1, white self-extinguishing, cadmium, and lead free PVC. With all mounting accessories,
Trunking Body: 2 compartments of size 65x150, with 2x65mm cover and integrated division

partition,
Trunking Body: 1 compartment of size 50x70
Trunking External bend 90 degrees with 2 external front cover
Internal bend 90 degrees with 2 external front cover
T-piece with 2 front cover
Body joint
Cover joint (to be included in item #2.7)
Perimeter Trunking Coupler
Screw set for trunking. 100pc/pct. Ex.: 72S bolt M V BF and nut MIO
Cable ties self-locking polyamide of size 150 x 3.5, 100pc/pct.
Tower Cable Clip Grey 2.5mm Pack of 100

15. Configurations Specifications

- The cable shall be installed following the manufacturer's recommendations and best industry practices. Cables shall be installed in continuous lengths from origin to destination(no splices).
- The cabling system brand shall be either AMP or Panduit or Krone; or technically equivalent.

16. Project planning

The service provider is highly recommended to undertake a comprehensive site survey to determine a complete overview of building setup, office distribution etc. to create an adequate plan of action

17. Data/Voice Cabling System

- Category 6 UTP Cable.
- Comply with TIA/EIA-568-B.2-1 and ISO/IEC 11801
- Comply with ANSI/TIA/EIA-492AAAA and 492AAAB standards
- All Jacks (RJ-45), Plugs, Outlets, Patch Panels, and Patch Cables must conform to Category 6 level.
- Fibre must be multimode

18. Multimode fibre

Installed cable shall be 62.5/125micron core/cladding, enhanced grade, multimode, and graded-index glass fibre. All materials in the cable shall be dielectric.

18.1. Performance

Installed fibre must meet or exceed the following performance specifications.

Wavelength (nm)	Max. Attn.(dB/Km)	Min. Bandwidth (MHz*Km)
850	3.0	200
1,300	0.9	500

19. Cabling System Configurations

Cables shall be terminated at patch panels in the rack cabinet. The service provider must connect the cabling system to Managed Switches through patch panels so that all ports are active. All data ports should be connected to data switches.

20. Cabling System Testing

The service provider must propose Testing Methodology and the methodology must conform to the guidelines provided in this document.

All cables and termination hardware shall be 100% tested for defects in installation and to verify cable performance under installed conditions. The service provider, before system acceptance, shall verify all conductors of each installed cable useable. Any defect in the cabling system installation including but not limited to cable, connectors, feed-through couplers, patch panels, and connector blocks shall be repaired or replaced to ensure 100% useable conductors in all cables installed. All cables shall be tested following this document and best industry practices.

20.1. Performance Verification

Category 6 data cable shall be performance verified using an automated test set. Test results shall be automatically evaluated by the equipment, using the most up-to-date criteria from the TIA/EIA Standard currently ANSI/TIA/EIA568-B.2, and the result shown as pass/fail. Test results shall be printed directly from the test unit or a download file using an application from the test equipment manufacturer. The printed test results shall include all tests performed, the expected test result and the actual test result achieved.

21. System Documentation

The following section describes the installation, administration, testing, and as-built documentation required to be produced and maintained by the contractor during the installation.

22. Cabling System Labelling

The service provider shall develop and submit for approval a labelling system for the cable installation. MKI will negotiate an appropriate labelling scheme with the successful service provider. At a minimum, the labelling system shall identify all components of the system: racks, cables, panels and outlets. The labelling system shall designate the cables origin and destination and a unique identifier for the cable within the system. Racks and patch panels shall be labelled to identify the location within the cabling system infrastructure. All labelling information shall be recorded on the as-built drawings and all test documents shall reflect the appropriate labelling scheme. All label printing will be machine-generated using indelible ink ribbons or cartridges. Self-laminating labels will be used on cable jackets, appropriately sized to the cable, and placed within view at the termination point on each end. Outlet labels will be the manufacturer's labels provided with the outlet assembly.

Each cable and inner duct is to be permanently labelled at each end with a unique cable number. In addition, labels shall be affixed to the cable/inner duct at every transition of a vault, hand hole, riser closet, or major pull box. Labels will be in the form of "-Location one-IST Location two- sequence number". For example, cable number 123 from Boardroom to Server room would be labelled as "MKI-BDR-SV-123.

Each fibre optic strand shall be labelled with a unique identifier at the ST coupler in the FIC. The connector shall be labelled on the identifying sheets on the front of the FIC.

Each fibre shall be labelled where it enters the back of the coupler panels. The identifier shall be in the format Cable # - tube- strand. For tight-buffered cables, the "tube identifier" shall be "xx".

23. As-built Drawings

The installation service provider will be provided with drawings at the start of the project. The service shall provide the As-built drawing to MKI after the project. The marked-up drawing set will accurately depict the as-built status of the system including termination locations, cable routing, and all administration labelling for the cabling system. In addition, a narrative will be if describe any areas of difficulty encountered during the installation that could potentially cause problems to the telecommunications system.

24. Test Documentation

Test documentation shall be provided after the project. The test equipment by name, manufacturer, model number and last calibration date should be provided at the end of the document. Unless a more frequent calibration cycle is specified by the manufacturer, an annual calibration cycle is anticipated on all test equipment used for this installation. The test document shall detail the test method used and the specific settings of the equipment during the test.

When repairs and re-tests are performed, the problem found and corrective action taken shall be noted, and both the failed and passed test data shall be collocated in the document.

25. Warranty and Services

25.1 Cabling System Warranty

The contractor shall facilitate the System Performance Warranty between the Cabling System manufacturer and MKI. The extended component warranty shall be provided which warrants the functionality of all components used in the system for at least 20 years from the date of acceptance. The performance warranty shall warrant the installed cabling system. Copper links shall be warranted against the link performance minimum expected results defined in TIA/EIA-568-B.2-1 (latest draft).

26. Post Installation Maintenance

The service provider shall furnish an hourly rate with the proposal submittal, which shall be valid for one year from the date of acceptance. This rate will be used when cabling support is required to affect moves, adds, and changes to the system (MACs). MACs shall not void the Contractor's nor manufacturer's warranty.

27. Project Management

The service must propose a Project Schedule and time required to finish the project. The service provider shall establish a point of contact with MKI who will be responsible for reporting progress and updating MKI's Technical Representatives, with issues that MKI must address to facilitate the cabling system installation. Information critical to the completion of the task or project shall be communicated to MKI's Technical Representatives, as the requirement becomes known. Casual information shall be passed during the scheduled progress report

The following documents to be submitted with the quotation

- Proof of company registration, where applicable i.e., unless you are a sole proprietor
- Valid tax clearance certificate/pin
- Valid BBBEE certificate by a SANAS accredited agency/company or affidavit
- Bank account confirmation letter
- Proof of registration on the Treasury Central Supplier Database (CSD)
- Supplier declaration form (attached hereinto)

NB: Failure to submit the above documents will lead to disqualification.

DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorized representative declare his/her position in relation to the evaluating/adjudicating authority where-
 - the bidder is employed by the state; and/or
 - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who is/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.
2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
 - 2.1 Full Name of bidder or his or her representative:
.....
 - 2.2 Identity Number:
.....
 - 2.3 Position occupied in the Company (director, trustee, shareholder²):
.....
 - 2.4 Company Registration Number:
.....
 - 2.5 Tax Reference Number:
.....
 - 2.6 VAT Registration Number:
.....
 - 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹“State” means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

²“Shareholder” means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

.....

Name of state institution at which you or the person connected to the bidder is employed :

.....

Position occupied in the state institution:

.....

Any other particulars:

.....

.....

.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars.

.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? **YES/NO**

2.10.1 If so, furnish particulars.

.....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? **YES/NO**

2.11.1 If so, furnish particulars:

.....

3 Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Tax Reference Number	State Number / Employee Peral Number

4 DECLARATION

I, THE UNDERSIGNED (NAME).....

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

May 2011