Eskom	Report	Technology

Title: **GENERIC TECHNICAL REQUIREMENTS FOR PHYSICAL SECURITY TECHNOLOGIES CONTRACTS**

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Content

Tables

1. Introduction

This specification forms part of Eskom's Physical Security Technologies contracts process. This document details the support requirements an external Supplier must meet prior and during the contract.

2. Supporting clauses

2.1 Scope

2.1.1 Purpose

The purpose of this document is to describe the Eskom's Physical Security Technologies general support requirements to an external Supplier. Sections covered in this document are shown below; external documents are referenced where applicable.

2.1.2 Applicability

This document shall apply to Eskom Transmission Division.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

[1] ISO 9001 Quality Management Systems

2.2.2 Informative

[2] ISO 14001 Environmental Management

[3] 240-48929482: Tender Engineering Evaluation Procedure

[4] ISO 45001: 2018 Occupational Health and Safety Management System

[5] 32-726: SHE Requirements for the Eskom Commercial Process

[6] 32-1034: Eskom's Procurement and Supply Chain Management Procedure.

[7] 474-59: Internal Audit Procedure

[8] 32-123: Contractor Health and Safety Requirements

[9] OHS Act 85 of 1993 and its Regulations

2.3 Definitions

2.3.1 General

Definition	Description
May & Should	Used for a condition/action that is not mandatory.
Must, Shall, Will	Used for a condition/action that is mandatory.
Site	The physical location(s) where the system or part of the system is installed.

2.3.2 Disclosure classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.3.3 Severity Levels

2.3.3.1 P1 - Emergency

a) A complete system failure which affects the system (catastrophic event) OR

b) A malfunction in the system's functionality which affects the system in a catastrophic manner OR

c) A complete loss or disturbance of the system or no visibility to the systems OR

d) Loss of redundancy on business-critical systems OR

e) Cybersecurity incident

2.3.3.2 P2 - High

Situations that may result in emergencies. Major problems or disturbances that require immediate action.

2.3.3.3 P3 - Medium

Severe problems or disturbances affecting a specific area of functionality, but not the whole system. Serious disturbance with impact to end-user services.

2.3.3.4 P4 - Low

Minor problems that have a minor effect on the functionality of the system.

2.4 Abbreviations

Abbreviation	Description
ATP	Acceptance Test Plans
CD	Compact Disk
DRT	Design Review Team
FAT	Factory Acceptance Test
FMEA	Failure Mode, Effects and critical Analysis
ISO	International Organization for Standards
MTBF	Mean Time Between Failures
OEM	Original Equipment Manufacturer
OH&S	Occupational Health and Safety
RSA	Republic of South Africa
SABS	South African Bureau of Standards
SCOT	Steering Committee of Technologies
SHEQ	Safety Health Environment and Quality
SIP	System Implementation Plan
SOW	Scope of Work
SRFU	System Ready for Use

2.5 Roles and responsibilities

As defined in the document content.

2.6 Process for monitoring

This document is intended to be issued with enquiries for procurement of Physical Security Technologies commodities and/or related services. The cross-functional teams (CFTs), consisting of End Users, Subject Matter Experts and SHEQ Advisors are to advise on changes and/or improvements required on the content of the document. The document will also be subject to Eskom's documentation process and will be reviewed for relevance as and when required.

2.7 Related/supporting documents

Not applicable.

3. Enquiry and After Sales Support

This document is to be adhered to by the Supplier throughout the duration of the contract. The applicable Eskom Contract requirements are outlined in Annex A, the Supplier's response to the requirements shall be indicated.

3.1 Supplier's Profile

3.1.1 Accreditation

a) Where the supplier is not the Original Equipment Manufacturer (OEM) of the offered product or parts of the solution, the supplier shall submit a letter of accreditation (or authorization) from the OEM. The letter of accreditation shall clearly indicate what the tendering supplier is authorized for the offered product, and the duration thereof.

b) The supplier shall provide a signed copy of their Environmental Policy.

c) Where the supplier is ISO 14001 certified, proof of certification shall be provided.

d) Where the nature of works includes decommissioning and/or disposal of materials, the supplier shall provide proof of safe disposal certificate or safe recycling of decommissioned materials.

e) The supplier shall provide proof of compliance to all legislative requirements applicable to the scope of the tender (e.g. PSIRA registrations, EFSI certificates etc).

3.1.2 Experience and Expertise

a) It is required that proof of the proposed product(s) in the enquiry that are currently or were previously used by other customers be provided, with the corresponding software.

b) Supplier shall provide details on available test facilities for functionality testing. This includes, site names, location and the type of testing that can be done at each facility.

c) Customer Reference List and Case Studies.

1) The supplier shall provide international or local evidence of similar work done including product(s) and/or services rendered. This shall be in the form of a customer reference list and/or case studies. The list shall include at minimum the following:

i. Name of Customer

ii. Date contract was placed

iii. Contract completion date

iv. Scope of contract (products and services including activities performed)

v. Product/Equipment (product overview, hardware, firmware and software versions)

2) Eskom reserves the right to contact the customers provided on the Reference List.

d) Skills Matrix

1) The supplier shall provide a skills matrix for the resources that will be assigned to this transaction. The skills matrix list shall at minimum cover the following:
   i. Number of resources per portfolio (e.g., Project Management, Engineer, Technician, SHEQ, etc.)
   ii. Distribution of skills per province
   iii. Curriculum Vitae (CVs) of the identified resources, which should include details on experience, qualifications, certifications and where applicable, professional registrations.
2) Eskom reserves the right to request proof of certifications and qualifications of the identified resources.

e) Points of Contact and Escalation Processes

1) The supplier shall provide contact information for their service/helpdesk, which will be the point of reporting for faults, warranty, and other service related matters. The helpdesk details shall cover at minimum the following information:
   i. RSA Telephone Number
   ii. Email address (Online access for customer self-service)
   iii. Website (Online access for customer self-service)
   iv. Physical location (primary)
   v. Physical location (secondary), and clarify how business continuity is achieved
   vi. Escalation procedure with relevant contacts for each escalation level.
2) The supplier shall provide contact information for the relevant service manager or project manager for this transaction, which will be the point of reporting for P1 and P2 faults, and other service-related matters. The contact details shall cover at minimum the following information:
   i. Full Names of Primary and Secondary Contact
   ii. Email addresses (Online access for customer self-service)
   iii. Office (location and telephone)
   iv. Cell (telephone)
   v. Escalation procedure with relevant contacts for each escalation level.

3.2 Supplier's Obligations

a) The supplier shall provide a Method Statement (detailing the work activities to be provided).

b) The supplier shall provide their Waste Management procedure.

c) The supplier shall provide their Incident Management procedure (environmental).

d) The supplier shall provide a copy of identified Environmental Aspects and Impacts (based on the scope).

e) The supplier shall provide a copy of identified risks and actions to address the risks associated with activities (based on the scope).

f) The supplier shall provide a signed copy of Eskom's Acknowledgement of SHE Requirements form (as issued with the enquiry).

g) Any information that is shared by the supplier to Eskom during the enquiry will be binding during the current and subsequent projects. This includes technical and non-technical information in any form which includes but is not limited to brochures, webpages, leaflets, books, etc.

h) The supplier shall provide a data handling procedure. The procedure shall at minimum address how the supplier manages sensitive data, and how Eskom's sensitive data and documentation will be securely handled in transit, in storage and how it will be disposed of when no longer required.

i) The supplier shall provide a data sanitisation procedure. The procedure shall at minimum address how the supplier sanitises faulty equipment and/or modules before disposal or redeployment.

j) The supplier shall hand back all of Eskom's data and documentation produced as part of the supplier's fulfilment of the scope of the contract and during the duration of the contract. Once this data is handed over, the supplier should sanitise its repositories of such data and documentation.

k) No information given in this document or in other related/supporting documents will reduce the Supplier compliance obligations.

l) There shall be formal meetings monthly to discuss any issues with the product(s), solution and/or services rendered. These issues will then be documented, and solutions shall be presented where possible.

3.3 Product Design and Engineering

3.3.1 Project Scope of Work

a) The supplier shall respond to the Project Scope of Work as provided.

3.3.2 Design Artefacts

a) The solution shall be accompanied by a basic design. A basic design comprises of document(s) detailing the overall architecture, solutions/systems configuration/layout and equipment and/or software selected. System design choices. This should include information on design options, costing, constructability, procure-ability, operability, sustainability, reliability, availability, inspect-ability, testability, expandability, decommission-ability and all other risks considered prior to arriving at the recommended option.

b) A detailed design comprises of document(s) detailing the selected equipment, interfaces, modules, ports, software, firmware, operating systems, and applications for the solution. System network addressing plan, licensing and configuration templates. This also includes information on Bill of Materials (BOM) and/or Quantities (BoQ). The supplier shall provide the template(s) for the detailed design for evaluation purposes.

c) The supplier shall develop the detailed design and it will be reviewed by Eskom post contract award, as part of the solution development process.

d) A System Implementation Plan (SIP) comprises of document(s) detailing the installation and commissioning activities, site survey forms, staging plans, installation test plans (ITPs) and knowledge transfer plans (operator, administrator and technician) and training plans (planner, operator, administrator and technician), and cutover plans. The supplier shall provide the template(s) for the SIP for evaluation purposes.

e) The supplier shall develop the SIP after developing the detailed design, as part of the solution development process.

f) A System Ready for Use (SRFU) comprises of document(s) detailing the acceptance test plans (ATPs), commissioning, and change management plans, operator readiness plans, maintenance, administration, disaster recovery plans and procedures. The supplier shall provide the template(s) for the SRFU for evaluation purposes.

g) The supplier shall develop the SRFU after developing the SIP, as part of the solution development process.

3.3.3 Design assurance

a) All designs produced shall be submitted for review by the relevant Eskom design review committees, the supplier shall present these, if required, and to take on full design accountability.

b) OEM validation of designs shall be obtained where applicable.

c) Penetration tests shall accompany all physical security and cybersecurity designs.

d) The supplier shall be OEM accredited to offer the solution (letter from OEM shall be provided as proof of accreditation).

e) The supplier shall be OEM accredited to offer the design and planning services on the offered solution (letter from OEM shall be provided as proof of accreditation).

f) Supplier shall provide case studies demonstrating use of offered solution. The case studies should be clear on the level of skills and expertise the supplier has with delivery of similar solutions (i.e., design, planning, installation, commissioning, SHEQ, and project management).

g) The Supplier shall document an Engineering Architecture Design that describes how the current installed Eskom Physical Security systems can interface and integrate with their proposed solution. The design shall take into consideration current and future migration plans as stipulated by Eskom.

h) The Engineering Architecture will be presented to the relevant Eskom Technical Governance for approval.

i) The proposed solution should cover all aspects of the product(s) which include software and hardware designs.

j) The Supplier shall ensure that all the stipulated requirements are understood and considered: functional, performance design, etc. It is the responsibility of the Supplier to seek further description from Eskom if necessary.

k) The proposed solution should be reliable and scalable in line with Eskom’s technology roadmaps.

l) The designs shall be reviewed and signed off by an ECSA registered Engineer.

m) All designs shall comply with the issued specifications and the Eskom OT Cyber Security standards.

n) The designer shall ensure that the applicable safety standards required by the regulations are complied with in the design, taking into consideration the OH&S specification submitted by Eskom.

o) The Supplier’s Design may be used by Eskom in other projects.

3.3.4 Design Engineering

a) The supplier shall always be ready to demonstrate and/or test any functionality called for in the specification. The demonstration and/or testing will primarily be at the supplier's premises and/or its customer(s). In specific instances, where integration to existing systems is required, the demonstrations will be at Eskom premises.

b) For functional demonstrations, the Supplier shall submit a detailed ATP which describes how the Supplier intends to demonstrate the required functionality. Eskom reserves the right to add or remove tests on the ATP. The ATP is applicable for equipment (hardware), software, and management systems.

c) The final ATP shall be signed off by a technical representative of Eskom.

d) The supplier shall produce a Factory Acceptance Test (FAT) Procedure for all the supplied equipment.

e) The Supplier shall complete the FMEA tables for all the supplied equipment. These FMEA tables shall be used as an input in the development of the Maintenance Standard for the tendered equipment. The supplier shall develop the Maintenance Standard through the Eskom SCOT process.

f) The development of the Maintenance Standard must consider the threats and limitations the proposed system has. It shall aim to maintain the performance of the equipment throughout the duration of the contract, including any foreseen modifications.

g) Inform Eskom of any known hazards emanating from the design and how they should be mitigated

3.3.5 Application

a) The Supplier shall analyse and interpret the Eskom requirements into the System design.

b) The Supplier shall review existing site-based data and include the data into their design.

c) The Supplier shall conduct site surveys to ensure accuracy of the information used in the design. At minimum, the site survey information shall include the following:

1) Cabinet space
2) DC and AC power requirements
3) Cable routing
4) Earth points
5) Air conditioning
6) Site layout (floor drawings and cabinet layout)
7) Condition of existing equipment
8) Required interfaces
9) SOW per site
10) A list of additional works required per site

d) The Supplier shall request Eskom for access to the sites under consideration.

e) The Supplier must inform Eskom of any additional infrastructure required on site.

f) Design documentation is required across all sites.

g) The proposed application design shall be presented to the relevant DRT committee (Eskom to advise) for review and approval.

h) Data shall only be stored in Eskom approved project files, formats and folders. Any data shall be available to the authorized staff when required.

i) Where there are deviations from the approved standards, the deviations shall be submitted to the Eskom PTM&C DRT for approvals.

j) The supplier shall comply with the Eskom SHE requirements when conducting site surveys.

3.3.6 Equipment and Product Profile

a) The supplier shall give the first date of manufacture for all proposed equipment.

b) The supplier is required to provide sets of product brochures.

c) The supplier shall provide the MTBF figures for all the proposed equipment.

d) An overview of the product(s) proposed in relation to the enquiry shall be given.

e) The product development and history shall be documented. Emphasis shall be placed on the continuity and integration of the product range.

f) A product life cycle road map shall be provided for all proposed products and/or equipment. Any foreseen future developments and time frames must be outlined.

g) All product(s) submitted in the enquiry must be available for purchase throughout the contract duration. Where the product(s) are phased out by the OEM during the contract period, the supplier shall ensure continuity of supply of these product(s) to Eskom, for at least the duration of the contract.

h) The supplier must be able to provide support for the product(s) in the enquiry for a minimum period of 10 years from the date of the contract being awarded. Where the product(s) are phased out by the OEM during the contract period, the supplier shall ensure continuity of support of these product(s) to Eskom, for the minimum period of 10 years from the date of the contract being awarded.

i) The supplier may suggest industry standard, economic and environmentally friendly solutions if the proposed solution replaces obsolete or older equipment, more so when the older equipment was offered by the same Supplier. Eskom is not obligated to implement the Suppliers suggestions.

j) The supplier shall provide Eskom with a description of any additional functionality above the technical requirements stipulated in Eskom specifications. These may be accessible through minor modifications or software updates/upgrades/etc. Eskom shall reserve the right to implement these additional features.

3.4 Supply and Delivery

a) The Supplier is required to provide a Certificate of Conformance for each item to be supplied and/or delivered (Serial Number should be used for traceability). Where Batch testing was done the serial number of the item to be supplied and/or delivered must be traceable to the Batch tested

The supplier shall provide delivery lead times for each offered products, equipment, module, software and associated licences.

3.5 Installation and Commissioning

a) The installation and commissioning services will be required from the Supplier on an as and when required basis when deemed necessary by Eskom.

b) All the services performed must meet the standards of [1] ISO 9001 Quality Management Systems

c) The Supplier must produce a breakdown cost of all the activities they need to perform for installations and commissioning including OH&S costs.

d) The Supplier is required to provide a set of installation manuals.

e) All commissioning tests must be performed using approved ATP signed off by Eskom. The ATP is applicable for equipment (hardware), firmware, software, and management systems.

f) Where the Supplier does the installations for Eskom, the complete ATP shall be signed off after each installation by the Supplier and an Eskom technical representative.

g) The Supplier must produce marked up, As Built documentation from the Application Design documents. This must be handed over to the Eskom's Application Design Engineers.

3.6 Support Services

3.6.1 Prelude

a) Supplier shall offer support and maintenance for all product(s), equipment and/or solutions offered.

b) The requirements in 3.6.2 are to be quoted by the supplier annually but may be paid by Eskom to the supplier on a monthly basis.

c) The supplier shall log all issues originating from Eskom and provide monthly issue resolution reports with trends. The Eskom person logging the issue shall be given a unique (system generated) reference number.

d) The supplier shall provide Eskom with an escalation procedure/process to be invoked when an issue is not being resolved according to the service response times.

e) Non-adherence to requirements service level requirements may result in non-payment of service charge.

3.6.2 Service Level Requirements

a) Provide a 24-hour standby service.

b) Where applicable, provide a minimum of 20 hours per month on-site support.

The on-site support shall be able to handle 2nd and 3rd level support requirements.

The on-site support shall be first point of contact for all technical and support issues to be escalated by Eskom to the supplier, the response to such issues shall be as per below:

Table 1: Service Response Times

Classification	Severity	Reported to	Remedy	Restoration
P1	Emergency	Service Manager	Within 4 hours	8 hours
P2	High	Service Manager	8 hours	24 hours
P3	Medium	Helpdesk/Service Desk	Next business day	72 hours
P4	Low	Helpdesk/Service Desk	1 week	4 weeks

c) Escalations and Resolution

1) Issues that cannot be resolved by Eskom will be escalated to the supplier.

2) The escalation will be done through the supplier's helpdesk/service desk system or telephonically or via email.

3) The supplier shall work closely with Eskom until the escalated issue is resolved.

4) Upon resolution, the supplier is expected to make the following minimum information available to Eskom:

i. Description of the issue (and similar issues escalated prior)

ii. Possible Causes

iii. Impact Assessment and Services/Sites Affected

iv. Steps Taken to Prevent Recurrence/Resurgence

5) For P1 and P2 incidents (or on request by Eskom management) the supplier shall produce a technical report (the format for which will be communicated by the requesting party in Eskom).

d) Operations, Administration and Maintenance

1) Administration and maintenance activities of the management systems shall be performed by the supplier on a weekly basis. These activities include (but not limited to): management of licenses, database management, and management of system/user generated logs, management of system memory/storage, management and maintenance of user accounts/groups.

2) The supplier shall develop incident response and recovery plans for major systems failures (P1 incidents) which includes response to cybersecurity incidents.

3) The supplier shall conduct system health check and test the disaster recovery (DR) procedures on a biannual basis (where applicable). The system health and DR test reports shall be tabled, discussed and handed at the contract meeting.

4) When firmware and software updates/patches are released, the supplier shall conduct a system and service impact assessment, rollout plan, and rollback plan and present that to Eskom with the release. Once Eskom has made preparations/interventions/mitigations for the release to be applied, the supplier shall be available to assist with the rollout of the release.

5) Minor (or same) version upgrade will be done as part of maintenance activities and will not be charged for separately.

6) For sites that do not have internal systems operational support, there should be an option for the supplier to provide 24/7 on site technical support.

e) Repairs and Replacements

1) The supplier shall offer the following services for all faulty modules/equipment/units:

i. For critical and service affecting systems (e.g., System management hardware), the supplier shall offer a same day replacement service of faulty units.

ii. For non-critical systems, the supplier shall repair the item within 4 weeks.

iii. If the item is declared irreparable, then the supplier shall offer the replacement item within 6 weeks of receiving the faulty item.

iv. The repaired unit or replacement unit shall have a fault report attached to it. The fault report shall at minimum contain the following information:

- Date Received
- Serial Number (failed unit)
- Fault type/group/description
- Number of times this unit (serial number) has failed
- Number of times similar units have failed
- Indication if units were repaired or replaced
- Serial Number (replacement unit)
- Date Released

f) Knowledge and Skills Transfer

1) The supplier shall ensure that all issues escalated (and resolved) are recorded and available in an online, searchable facility that is accessible to Eskom personnel.

i. This body of knowledge shall be handed over to Eskom at the end of the agreement/contract in a memory stick storage.

2) Unless the task/activity is urgent, the supplier should guide Eskom resources on how to resolve the issues themselves. For urgent tasks, the supplier shall restore the service first, and explain later.

3) The on-site resource shall also guide Eskom resources on how to do the operations, administration and maintenance activities.

3.6.3 Major Upgrades Support Requirements

a) Major upgrades shall be on an as and when required basis, however the pricing for that shall be contractually fixed and reviewed on an annual basis.

3.6.4 Ad hoc Support Requirements

a) Any other support required by Eskom and not part of SLA shall be on a time and material basis.

3.6.5 Hardware

a) The supplier shall support the equipment installed, even if there are other versions still in production that the supplier is working on or supplying to other customers.

b) As and when the supplier finds unforeseen common causes of equipment failure or limitations, these must be communicated through to Eskom.

c) Equipment failure mitigation techniques and recommendations should be given by the supplier when discovered. If any of the findings require a change in the currently approved Maintenance Standard, the relevant Eskom Technical Governance must also approve the new Maintenance Standard.

3.6.6 Software

a) The supplier shall provide software maintenance, including but not limited to: patches, upgrades, updates, bug fixes, etc.

b) Any upgrades/bug fixes/etc., must be justified, at least in terms of necessity.

c) At least 2 previous versions of currently installed systems and previously offered by the supplier must be supported for the duration of the contract.

d) All software licenses must be provided by the supplier for the duration of the contract.

3.6.7 Warranty

a) The supplier shall indicate the duration (in months) of the OEM warranty for each product offering.

b) The OEM warranty must cover an unlimited amount of swap out services for the offered products, for the duration of the warranty.

c) Failures of products under warranty shall be reported to the supplier with remedy and response times as per the criticality of the failed product.

3.6.8 Spares

a) The supplier shall provide a list of critical spares that Eskom should keep, together with an indicative percentage of the installed base.

b) The supplier shall provide a list of locations per province of its spares distribution centres (warehouses) that will be used for the distribution of the offered products.

c) A Spares Management Policy must be provided by the Supplier. The policy shall include at minimum the spares management philosophy and testing of spares.

d) The Supplier shall provide any repairs and the return thereof, of any previously unused spares on Eskom's premises that have become faulty and were never used, even though the spare(s) are no longer covered by the OEM warranty.

e) A list of Spares Agents known by the Supplier should be provided; the use of these Agents by Eskom is however not binding.

f) The Supplier should ensure that there are Spares Distribution Centres available across the whole country.

3.7 Equipment for Evaluation

a) Only equipment that meets the international standards and comply with recommendations from bodies such as the SABS will be accepted.

b) The product(s) must at minimum have all the required components to meet the Technical Specifications. All components and systems provided for the demonstration(s) must form part of the proposed solution for the purposes of the enquiry.

c) The supplier is to provide staff to assemble the system prior to the demonstration and disassemble the system when the evaluation is complete.

d) All documentation created during or prior the enquiry will use the metric system of weights and measurements.

e) Each test performed should be present in the Test Procedure. The results should indicate the test type and must be cross-referenced to clauses in the appropriate specification.

f) The supplier shall demonstrate the normal and the worst operating conditions the equipment will experience.

g) Eskom reserves the right to provide the supplier with the minimum test cases.

h) Eskom reserves the right to at any time, during working hours, visit the factory to view the factory acceptance tests being performed prior equipment rollout.

i) During factory visits, Eskom will inspect the equipment and the tests to check if all is to Eskom's satisfaction. NB: The presence of an Eskom representative does not relieve the Supplier of any responsibility in terms of meeting all the technical requirements. The presence of the representative also does not prevent the rejection of any equipment found to be faulty at a later stage.

j) If there is any equipment that is not meeting Eskom's standards, has repeated failures or a particular equipment exceedance of the MTBF values then the Supplier is to replace all such units.

k) All equipment delivered to Eskom shall always be accompanied by a test certificate confirming that the delivered equipment passed all agreed upon FATs.

l) It is preferable that all equipment offered is standard off-the-shelf and has been proven in the field for at least 1 year.

3.8 Test Equipment and Tools

a) The supplier is to provide a list of all the recommended tools and test equipment for all on-site and workshop maintenances. Details of the minimum specifications/data sheets of the tools and equipment shall be provided.

b) The supplier is to provide a list of all special-to-type test sets and equipment. These are to be provided if there are no commercially available off-the-shelf tools that are available or if the use of such tools would be grossly uneconomic.

c) In the event of special-to-type tools and test sets are recommended, the manufacturers cost including delivery is to be stated.

3.9 Training

3.9.1 Formal Training

a) The Supplier shall provide all required training equipment and material (including stationery).

b) The preferred mode for content delivery for all formal training is contact (in person). Other modes of content delivery such as e-training can be proposed for consideration by Eskom.

c) Training on the equipment, tools and systems must be given to the selected Eskom employees by the Supplier in RSA.

d) Training must at minimum cover: installation, commissioning, testing, maintenance and fault rectification down to components or modules.

e) The Supplier must at least provide a course prior delivering the first equipment. Subsequent courses may also be offered.

f) Eskom reserves the right to request the Supplier to offer refresher courses or any other courses Eskom deems necessary.

g) The courses are to be preferably hosted at an Eskom site. Eskom will be responsible for organizing a venue.

h) All training material must be assessed and approved by Eskom.

i) In the case where students need to travel to test venues, Eskom will cover the costs.

j) The Supplier must give a list of all courses offered, brief course descriptions and syllabi. The experience and qualifications of the respective Instructors offering the courses must also be given.

k) The Supplier is responsible for providing Eskom with an attendance register for every course offered.

l) The Supplier is responsible for delivering the course certificates of competence for successful candidates to Eskom. The certificates shall be delivered to Eskom within 45 days of the course attendance. The certificates are compulsory as proof of competence for every course attended.

m) Successful candidates shall be certified to install, commission, operate and maintain the equipment covered in the course. Their interaction with the equipment shall not affect the current equipment warranty.

3.9.2 Informal Training

a) Eskom reserves the right to request for specific on-site training.

b) The supplier shall ensure that all issues escalated (and resolved) are recorded and available in an online, searchable facility that is accessible to Eskom personnel. These shall be handed over to Eskom at the end of the agreement/contract in a memory stick storage.

c) Unless the task/activity is urgent, the supplier should guide Eskom resources on how to resolve the issues themselves. For urgent tasks, the supplier shall restore the service first, and explain later.

d) The on-site resource shall also guide Eskom resources on how to do the operations, administration and maintenance activities.

3.10 Handbooks

a) Handbooks must be sufficiently comprehensible to Eskom’s satisfaction.

b) The handbooks must clearly show the system circuitry. The Supplier must clearly display test points, supply voltage, signal voltages, typical values at terminals, etc.

c) The installation guidelines that are relevant within Eskom must be given. The commissioning procedure that meets the standards set in Eskom must be given, at minimum clearly stating: the test types, type of equipment/tools required, expected results with acceptable limits, factory test results, etc.

d) The Supplier is responsible for any costs incurred due to updating or changing descriptions, drawings, equipment, etc.

e) If there are any errors discovered in the manuals, the Supplier shall rectify these and send them back to Eskom at the Suppliers expense.

f) If there are other drawings not included in the standard manuals, the Supplier shall supply Eskom with a soft copy of these in a Microsoft Visio format. If the Supplier insists on using another format, then the Supplier must supply Eskom with the relevant software through Eskom's Group IT.

g) The Supplier must provide a minimum of 3 sets of hardcopy manuals, free of charge, once a contract is established.

h) The Supplier must provide a soft copy on a memory stick, free of charge, once a contract is established. The memory sticks should be free of malware.

i) Eskom reserves the right to order additional manual copies should the need arise.

3.11 Project Management

a) The supplier shall provide a detailed breakdown of schedule with production stages, from placing of order to delivery of equipment/product(s) and services for the applicable scope of works.

b) The supplier shall provide an installation project schedule per site.

c) The supplier shall provide details on the number of members for the project team.

d) The supplier shall provide details on shipping and storage of equipment.

e) The supplier shall provide details on equipment warranty before installation.

f) Supplier shall propose and develop a Project Management plan for the implementation of the solution. This shall include the identified implementation risks and mitigations thereof.

4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Nelson Luthuli	Senior Manager (Acting) – PTM&C
Cornelius Naidoo	Telecoms and physical Security T&S Middle Manager – PTM&C

5. Revisions

Date	Rev	Compiler	Remarks
June 2022	1	R Moshoeshoe	First revision

6. Development team

The following people were involved in the development of this document:

- Donald Moshoeshoe

Annex A – Eskom's Requirements for This Contract and The Suppliers Response

Requirement	Schedule A: Eskom's requirement(s) for this contract. Marked with an 'X', if the Supplier is required to comply.	Schedule B: Supplier's response. Mark with an 'X', if the Supplier will comply.
3.1) Supplier's Profile		
3.1.1) Accreditation		
3.1.2) Experience and Expertise		
3.2) Supplier's Obligations		
3.3) Product Design and Engineering		
3.3.1) Project Scope of Work		
3.3.2) Design Artefacts		
a) Basic design		
b) Design Guide		
b) Detailed design		
d) Planning Book (Blue Book)		
e) System Implementation Plan (SIP)		
f) System Ready for Use (SRFU)		
g) As Built Document		
3.3.3) Design Assurance		
3.3.4) Design Engineering		
3.3.5) Application		
3.3.6) Equipment and Product Profile		
3.4) Supply and Delivery		
3.5) Installation and Commissioning		
3.6) Support Services		
3.6.1) Prelude		
3.6.2) Service Level Requirements		
3.6.3) Major Upgrades Support Requirements		

3.6.4) Ad hoc Support Requirements		
3.6.5) Hardware		
3.6.6) Software		
3.6.7) Warranty		
3.6.8) Spares		
3.7) Equipment for Evaluation		
3.8) Test Equipment & Tools		
3.9) Training		
3.9.1) Formal Training		
3.9.2) Informal Training		
3.10) Handbooks		
3.11) Project Management		