****

**SARS RFP 08-2022**

**SARS TECHNICAL SECURITY TENDER FOR THE PROCUREMENT OF:**

**MODERNISED CCTV SYSTEM and A LICENCE PLATE RECOGNITION SYSTEM INCLUDING MAINTENANCE FOR A PERIOD OF THREE YEARS**

**BUSINESS REQUIREMENTS SPECIFICATION**

**Introduction**

The South African Revenue Service (SARS) has approximately one hundred and fifty six (156) offices (SARS Sites) nationally. The protection of SARS’s assets, people, and general physical security at SARS Sites is of pivotal importance due to the nature of the operations and activities of SARS. The successful Bidder(s) will be required to design, engineer, supply, install, test and commission an IP based CCTV Surveillance system and a License Plate Recognition system in order to provide SARS with scalable modernized system, that incorporates SARS stated devices, and further have functionality to integrate, unify and or share information with other SARS specified systems. Additionally, provide SARS with a maintenance and support proposal for a period of three (3) years from the expiry of the warranty.

For logistical reasons and management of the Services, SARS have the following Control Rooms

1. One (1) National Security Operations Centre (Head Office)
2. Five (5) Regional Security Control Rooms located at:
   1. Pretoria
   2. Durban, KZN
   3. Cape Town, Western Cape
   4. Bloemfontein, Free State
   5. Polokwane, Limpopo
3. Two (2) Compliance Monitoring Control Rooms
   1. Oliver Tambo International Airport
   2. Beit Bridge Port of Entry
4. Two (2) business command centres
   1. The Bridge
   2. Customs Command Centre

**Modernised CCTV System**

SARS seeks to procure a smart, efficient and reliable modernized CCTV and licence plate recognition system that has ability to integrate, unify and share information with other SARS systems such as access control, alarm, Human Resource, parking system, environmental systems like building management, evacuation and converge with security barriers such as boom gates, turnstiles.

In addition, SARS promotes agility between its facilities countrywide specifically in accessing physical spaces for staff members, contractors, visitors. The CCTV system is required to monitor the activities outside and inside SARS facilities. The system should have general wide range view from perimeter, view of all openings, identify persons, sequential format, view of approach from both sides. The system should have ability to generate a unique number for individual and vehicle tracing. The proposed CCTV systems will be deployed in the approximately 156 SARS facilities and the Licence Plate Recognition will be installed at South Africa’s Ports of Entry and some identified SARS facilities as defined by SARS.

to source a bidder to propose a market leading enterprise CCTV system. The bidder will be required to design, engineer, supply, install, test and commission the IP based CCTV Surveillance system and a Licence Plate Recognition system which must have the functionality to integrate, unify and or share information with other SARS specified systems. The scope of work includes:

* Design and engineer IP CCTV surveillance system and Licence Plate Recognition (LPR) system for all SARS identified facilities
* Testing and submit test / qualification certificates of performance of the system components in line with the technical specifications as per the OEM
* Supply and deliver CCTV and LPR components to the designated SARS facilities
* Install all CCTV and LPR system and its components in line with the SARS approve designs
* Manufacture and install Poles for CCTV and LPR, associated power supply adapters, CCTV cabling (Where necessary as most cable will be done by SARS IT), cameras, Network Switches (Where necessary as most network switches will be supplied and configured by SARS IT), cross-detection cameras, solar power for the CCTV and LPR, Point to Point Link Broadband system, triangular towers and other components connected to the system where there is no connectivity.
* Integrate components of the CCTV and LPR to ensure connectivity among all components of the system
* Test the Installed CCTV and LPR system and its components for performance for 120 hours in line with the SARS approved design
* Training of SARS users and supply manuals and certification where possible
  + System Admin
  + Maintenance team
  + System Operators
  + Management
* Prepare CCTV and LPR system commissioning plan for approval by SARS including the schedule indicating the dates of commissioning
* Commission the integrated system as per the SARS approved commissioning report.
* Hand over the system and warranty twelve (12 months) systems and its components in line with the OEM specifications.

**CCTV System should the following capabilities.**

* Have the ability to integrate into a 3rd party centralised Security system
* Support remote management and a centralised SQL and or DB2 Enterprise
* Support automated fault reporting on software and hardware
* Must provide for Audit trails on access logs, Remote diagnostics and single point access
* Adherence to SARS Enterprise IT architecture software standards
* Support network and cloud storage.
* Have the ability to back-up on IBM DS storage management drives or back up servers, regional storage and both centralised.
* Allow for video walls and multi viewers
* Protect sensitive data from tampering, malware
* Fully customizable capabilities
* Must allow multiple operators to view the same video and graphic feeds at the same moment, with no encoding delay or variation.
* Maintain an overview of the entire surveillance system with access to all cameras and locations.
* Scale the system to any size, from small 10 camera system to systems consisting of thousands of cameras.
* Redundancy capabilities to ensure the uninterrupted video recording in the event of component failure or network outage.
* Cameras shall be temper proof and shall log the event to the main database, send blocking and tempering alerts/ notifications to security system managers/ command centre, enabling them to proactively manage the system. CCTV events alarms should be classified in terms of categorisation, cause of alarm and action required drop downs and auto reset. This should be possible for each alarm
* Optimise the system performance while the system is operational without disrupting video surveillance and recording.
  + CCTV and LPR should allow different recording schedule for each camera. Where SARS provide a group of cameras for recording in similar facilities or areas, the bidder must have the capability to schedule the defined group accordingly
  + The bidder must provide the capability to ensure back up of all recorded video on a hourly, daily/ weekly basis as prescribed by SARS
* Smart search and sequence explorer to allow users to quickly sort through large amount of evidence.
* Multi-layered maps to display the location of every camera in the surveillance system.
* Customizable dashboard that gives a real –time overview of the systems status and predictive video retention, warning via email, alarm and dashboard notifications.
* CCTV and LPR systems must have the Machine Learning (ML) and Artificial Intelligence (AI) capability.
* CCTV system must have face detection capability
* CCTV system must have the people line crossing analytics functionality
* High picture quality in low light cameras at access points, reception, searching bays port of entry Gates, Warehouses, and parking bay overview
* Areas deemed by SARS as high, risk should be covered with CCTV system that must have Micro SD card and video recording capability to be able to record video that can be used in the case of NVR failure
* All outdoor cameras must have outdoor lights with 500w
* SARS defined cameras must be integratable to evacuation doors, facilities, and business systems
* CCTV and LPR System must have backup online Uninterrupted Power Supply and where defined by SARS as high-risk sites be solar powered
* Facility CCTV and LPR system must be linked to regional control rooms and National command centre and business control rooms as defined by SARS
* CCTV and LPR system must have waterproof cameras with solid motion picture
* The system should have administrator and end user profiles
* The electronic circuits shall be proven to have a failsafe mode including resistance to humidity, corrosion and impairment by dust and dirt
* The CCTV and LPR must have the capability to monitor the systems search and generate report as defined by SARS
  + The system should have the capability to be linked to physical security guarding system with a GPS
  + The CCTV and LPR should have the capability to monitor the status of each camera on the network and indicate when the device is online or offline
  + The CCTV and LPR must support graphical/geographical representation of alarms and storage status
  + The systems must allow for inbuilt graphical representations and allow for searches based on time, date, day or area
* The CCTV and LPR system must allow live view and playback
* The CCTV and LPR must provide a capability of generating incidents from various SARS define source like alarm, building management system, network or video loss failure
* The CCTV and LPR must allow pre-defined surveillance tasks to be invoked at pre-defined locations and times of the day
* The storage at a camera, NVR and serves should be 6months
* The archived video playback must be of the same quality as a live stream Normal playback, thumbnails
* The system must allow the operator to drag and drop a camera from a tree of available cameras into any video tile or analogue monitor icon for live viewing
* The CCTV and LPR systems must only allow configuration modification to be performed at a SARS defined control room and or National Command Centre
* The CCTV and LPR must have flexibility to be upgraded and expanded in all respects depending on SARS future business requirements
* The Video Management Software must be user friendly have that capability to conduct self-checks for integrity, functionality and performance
* All the software manuals, hardware manuals, user manuals, training manuals, and all manuals related to the system shall be delivered in hard copy and digital copy to SARS as part of the commissioning report
* The CCTV and LPR systems shall be installed and perform in the highest engineering design standards and workmanship. The system shall perform with the least degradation in line with its performance life expectancy
* The CCTV and LPR system must be capable of monitoring the status of network
* The CCTV and LPR must allow for multi-levels maps integrated with access control and alarm systems in order to ensure area location of facility, area floor
  + The CCTV and LPR system shall be capable of handling facility are maps, and provide a pop up for the monitor on receipt of an alarm
* The bidder shall provide training and development for:
  + Operation of the CCTV and LPR system
  + Configuration of the CCTV and LPR system
  + video monitoring software of the CCTV and LPR system
  + SARS technical experts of the CCTV and LPR system
  + Reports and management of the CCTV and LPR system

**Camera Specification**

**Indoor Cameras**

* + 4mp wide dynamic dome camera full HD behaviour analytics. (access points, reception, searching bays port of entry Gates and Warehouses)
  + 2mp wide dynamic dome camera full HD behaviour analytics. (corridors and general view areas)
  + Face detection capability
  + People line crossing analytics
  + 4mp Fish-eye camera for the counters
  + 360° thermal detection (inside state warehouse)
  + Should be able to detect individual when entering and leaving the premises, And also link individual’s profile with the expected appearance so that access control can block access if the appearance or dress coded is different from the expected

**Outdoor/perimeter cameras**

* 4mp wide dynamic bullet camera 4mm lens full HD behaviour analytics. (state warehouses and border post)
* People line crossing analytics
* Face Detection capability
* Thermal perimeter and fire protection cameras for state warehouse.
* Flexibility for parking management- Parking lot monitoring and incident Detection cameras
* 6mp PTZ (pan tilt zoom) camera.

**LPR Camera( SARS facilities)**

* Deep in view license plate recognition camera full HD wide dynamic bullet LPR
* High recognition efficiency
* Great capability round the clock recognition and minimally affected by weather.
* Support images, numerals and letter combination
* Should be able to integrate with access control system
* System should be able to link individual’s access profile to a car registration and notify the control room if a different person is exiting with the car and also block access.

**Network Video Recorders (NVR)**

**Provides Remote Access to Site:**

* The NVR must be remotely accessible to view sites and for footage extraction using desktop applications.

**High-Resolution Image Quality:**

* The NVR must provide a high degrees of resolution recording and streaming.

**Compatible with a wide range** [**IP Cameras**](https://info.verkada.com/security-cameras/ip-camera/) **manufactures:**

* The NVR must be compatible with a wide range of IP cameras and record high-quality visual and audio footage.

**Advanced Features and Security:**

* such as facial recognition,
* motion detection and night vision capabilities
* This technology can benefit many levels of enterprise business.
* Must support cloud storage solutions,
* Must have password protection, two-step verification and encryption to prevent unauthorized access.

**Storage Scalability**

* Must have the capability add IBM DS storage management or any other external data storage devices.

**Integration:**

* Must have the capability to integrate into a third-party unifying software platform

**Video Management System (VMS):**

* Must have an enterprise VMS platform that can be deployed in multiple facilities to enable local viewing on site, at regional control rooms and at SARS Control Room

**Automatic Fault Reporting:**

* Must be capable to send system heath information when there as potential faults detected to control room and the ability to send emails to responsible person/s

**Rugged:**

The NVR must be of an industrial standard that can be deployed in harsh conditions.

**Camera poles**

Where required SARS may request the Bidder to manufacture camera poles and/or brackets. The standard is as stated below:

* Hot Dip 50micron thick Galvanized Camera Poles of 5 meters height with necessary accessories for camera mounting.
* Thickness: 2 mm or bigger • Diameter : 2 inch or higher
* The material used shall be mild steel/HT steel as per IS 2062:2006
* All the steel fabrication parts shall be given two coats of approved epoxy painting.
* The foundation shall be of Reinforced Concrete. Backfilling should of well compacted.
* Concrete foundation of 350 X 350 X 900 mm shall be prepared with a mixture of concrete, pebbles and sand in 1:1:2 (M25) ratios by the supplier.
* Provision shall be made in the pole to route the cable inside the pole. Suitable GI conduit shall be placed inside the concrete foundation to route the cables.
* The poles shall be designed to experience a maximum wind speed of 180 Km/hr as per IS 875. The safe bearing capacity of the soil is assumed as 10 tons/sq. m