

SARS RFP 17/2012

NON-INTRUSIVE INSPECTION, SCANNING AND DETECTION SOLUTIONS

BUSINESS REQUIREMENTS SPECIFICATION

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Business Requirements Specification

This document forms part of the RFP 17/2012 pack. The document sets out the business requirements that SARS has for Non-intrusive Inspection, Scanning and Detection Solutions (NISD Solutions) and the RFP model under which the solutions are to be proposed.

1 CONSTRUCTION

In this document, a reference to:

- the singular includes the plural and vice versa, unless the context otherwise requires;
- capitalised terms that are not defined within this document have the meaning assigned to them in Schedule A to the NISDS Agreement. Capitalised terms that are neither defined in this document nor in the Glossary (Schedule A) to the NISDS Agreement have their generally understood meanings, or if the terms are technical in nature they will have their generally understood meanings in the security, scanner and information technology industries;
- the words "include" and "including" mean "include without limitation" and "including without limitation". The use of the words "include" and "including" followed by a specific example or examples will not be construed as limiting the meaning of the general wording preceding it.

Important note to Bidder:

- the specifications set out in this document contain mandatory and directory requirements. Where a mandatory requirement is set out in this document (indicated by 'must' in the stated requirement) the Bidder's Proposal must address such requirement. If a Proposal fails to meet or does not address a mandatory requirement, the Proposal may, at SARS's sole discretion, be disqualified at any stage of the evaluation process as being a non-responsive Proposal.
- directory requirements are requirements that serve to guide the Bidder in proposing a solution and consequently may improve a Bidder's score in evaluation.

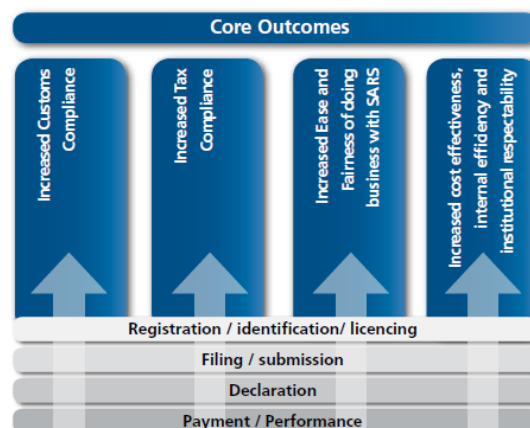
2 BACKGROUND

1.1 Mandate

In terms of the South African Revenue Service Act (No. 34 of 1997), SARS is mandated to:

- Collect all revenue due;
- Ensure maximum compliance with tax and customs legislation; and
- Provide a customs service that will maximise revenue collection, protect the borders of the Republic and facilitate trade

Given these objectives, SARS has established four core outcomes for the organisation that



will serve as the foundation for all current and future strategies. The four core outcomes of SARS are to increase customs compliance, to increase tax compliance, to increase the ease and fairness of doing business with SARS and to increase the cost effectiveness, internal efficiency and institutional respectability of its operations.

All four outcomes are interdependent, as the pursuit of achieving one outcome frequently enables achieving another outcome.

Modernisation has enabled SARS to re-engineer key processes in the tax and customs environment, enabling SARS to put in place more resilient, efficient and effective solutions that will ensure future productivity increases and sustainability.

The modernisation of tax and customs systems and processes at offices and ports of entry offer trade the benefits of greater ease of movement of goods, faster turnaround times and cost savings. This has included the introduction of an advanced case management system; an enhanced inspection process; the electronic submission of supporting documents; and an electronic release system. SARS now also has a centralised enterprise view of risk which has positively impacted on our ability to effectively mitigate risks.

The increase in compliance over the past few years was underpinned by improvements to the risk engine which has allowed SARS to focus its attention on higher risk consignments while allowing legitimate and lower risk imports and exports to move quickly through the Republic's borders.

The implementation of the risk engine has enabled SARS to pre-identify risk and initiate the performance of targeted manual acquittal / inspection of cargo and passenger luggage using an integrated case management approach. Given the manpower demands associated with inspections, strategic investments in non-intrusive inspection solutions will be evaluated and deployed based on their effectiveness.

1.2 Current Scanner Initiatives

Over the past ten years SARS has deployed 17 baggage scanners at various border posts and a motorised container scanner that is being utilised at the Durban harbour. The experience gained from these deployments has shown that the full potential of the scanner solutions can only be realised when it is based upon a standardised and integrated declaration processing and inspection process.

SARS is currently rolling out container scanners to the Cape Town and Durban harbours as well as the Beit Bridge border post and a pallet scanner to the Durban harbour. In the next 36 months SARS intends to roll out additional NISD Solutions to border posts; ports and other SARS sites where the effectiveness of such deployments can be shown.

SARS intends to: centralise the scanning solutions' output; integrate scanner systems with complementary SARS systems; and remotely access scanners for utilisation statistics, backup and administration purposes.

1.3 Objectives of this Procurement Initiative

The main aims of the acquisition of NISD Solutions are to:

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- increase successful detection of undeclared, mis-declared, restricted and prohibited goods through the utilisation of scanner solutions.
- avoid unnecessary manual inspections which will reduce the impact on trade.
- ensure greater operational efficiency by reducing dependency on human resources for inspections.
- store and retrieve scanned images thus being able to conduct audits on the inspection process.
- link scanned images to a case as part of the case management processes.
- provide operations and management with comprehensive reporting.

Additionally SARS is seeking specific solutions to provide the ability to:

- deploy a scanning, inspection and detection capability rapidly at any geographic location as required by business, including remote locations with little or no infrastructure.
- relocate a scanning, inspection and detection capability easily to accommodate changing business priorities.

As such SARS seeks to build a partnership with successful Bidders to ensure the delivery of best in class solutions, including solutions that will facilitate the non-intrusive:

- inspections of mail; parcels; hand luggage; baggage; palletised cargo, ULDs, vehicles (including busses); trucks; containers; containerised cargo; people; rail stock and general object surfaces;
- detection of restricted and prohibited goods by the recognition of organic versus inorganic items; displaying the shape of the item; and the chemical make-up of an item to assist in the identification of narcotics; dutiable goods; tobacco products; currency; trafficked humans and animals; weapons; explosives; and sources of radiation; amongst others; and
- automated identification of as broad a range of restricted and prohibited items as possible.

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In order to attract the best solutions from the market, SARS has divided the RFP into 4 (four) demarcations of scope, each called a “Scanner Tower”. The definitions of the scope of each Scanner Tower are mainly differentiated by the category of objects to be scanned (Inspection Capabilities) as set out below in Table 1.

Table 1

Scanner Tower	Inspection capabilities	Detection capabilities
Scanner Tower 1	<p>Solutions incorporating the scanning of objects including:</p> <ul style="list-style-type: none"> ○ Mail ○ Parcels ○ Hand luggage ○ Baggage <p>Different solutions may be sought in Scanner Tower 1 but in no event would a particular business requirement be for the scanning of objects weighing more than 250kg.</p>	<ul style="list-style-type: none"> ○ detection of restricted and prohibited goods by the recognition of organic versus inorganic items; displaying the shape of the item; and the chemical make-up of an item to assist in the identification of, amongst others,; narcotics; dutiable goods; tobacco products; currency; trafficked humans and animals; weapons; explosives; and sources of radiation ○ automated identification of as broad a range of restricted and prohibited items as possible
Scanner Tower 2	<p>Solutions incorporating the scanning of objects including:</p> <ul style="list-style-type: none"> ○ Heavy parcels ○ Palletised cargo ○ Air cargo (ULDs) 	
Scanner Tower 3	<p>Solutions incorporating the scanning of objects including:</p> <ul style="list-style-type: none"> ○ Vehicles (including cars; trailers; busses; and trucks) ○ Containerised cargo 	
Scanner Tower 4	<p>Any solution satisfying SARS’s potential business requirements for non-intrusive inspection, scanning or detection solutions not specifically provided for in Scanner Towers 1, 2 or 3 in the following categories of requirements:</p> <ul style="list-style-type: none"> ○ People scanners ○ Rail and portal scanners ○ Contraband detection devices ○ Particle scanners, trace detection devices, ionising sniffers ○ Peripheral devices to enhance scanning solutions (e.g. CCTV cameras) ○ Non-product specific services related to the implementation or operation of scanning solutions (e.g. training; projects; project management; construction works), planning, delivery and commissioning of the in scope equipment scanners ○ Scanner solutions with specialised capabilities (e.g. multi-dimensional scanning, backscatter x-ray solutions) which are not found in Towers 1, 2 or 3 or those that do not fall into one of the other categories of requirements <p>Solutions sought in Scanner Tower 4 may overlap with the scope of solutions in Scanner Towers 1; 2 or 3.</p>	

3 SCANNER TOWER 1

3.1 Categories of Devices

SARS has identified 3 (three) categories of scanning devices within Scanner Tower 1 in which SARS's business requirements are anticipated to fall. The specification of these categories is set out in Table 2 below:

Table 2: Scanner Tower 1 Solution Specifications

Category	Small	Medium	Large
Tunnel Opening	Min: 300mmx300mm	Min:700mmx700mm	Min:1000mmx1000mm
Conveyor Capacity (Weight)	Max:140kg	Max:160kg	Max:250kg
Conveyor Belt speed	Minimum of 0.22 meters/second		
Steel Penetration	Min:21mm	Min:21mm	Min:21mm
Required minimum features	<ul style="list-style-type: none"> Integration capability (see paragraph 7.1) Threat image projection (see paragraph 7.2) Automatic threat detection (see paragraph 7.3) 100% Duty cycle (see paragraph 7.4) Image archiving (see paragraph 7.5) Backup functionality (see paragraph 7.6) Compliance with health and safety regulations (see paragraph 7.7) Maintenance and support (see paragraph 7.8) 		

3.2 Bidder's Proposal

The categories: Small; Medium; and Large will be used to evaluate the Bidder's Proposal for Scanner Tower 1. The Bidder must propose a scanning solution in each category which meets the minimum specification in Table 2.

3.3 Further Solution Options

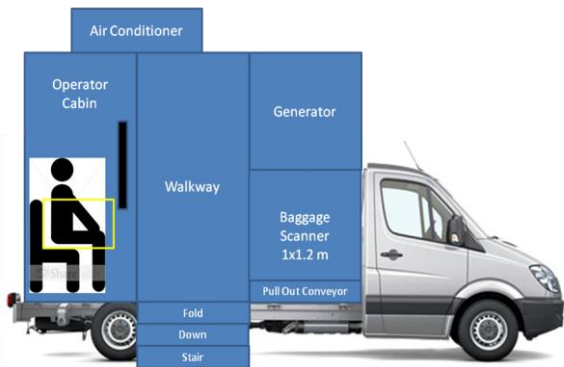
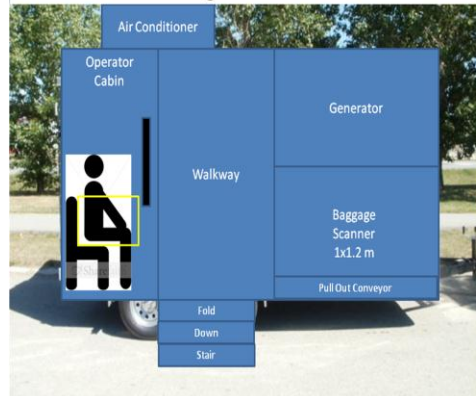
When procuring a solution in Scanner Tower 1, SARS may specify that a solution incorporating scanning devices is to be of a type detailed in Table 3 below:

Table 3: Scanner Tower 1 Types

Category	Small	Medium	Large
Static	<ul style="list-style-type: none"> designed to be deployed in a static location 		
Containerised	<ul style="list-style-type: none"> designed to be deployed in a location but is designed to be transportable, e.g. in a container. 		
Vehicle-mounted	<ul style="list-style-type: none"> designed to be moved on a regular basis: trailer-mounted or vehicle-mounted 		

Business requirements may also require solutions which incorporate integrated environmental features, such as uninterruptible power supplies(UPS); air-conditioning; and/or generators.

Figure 1 is a depiction of some conceptual examples of possible mobile baggage scanner solutions incorporating a scanner housed in a vehicle and/or in a trailer.

Figure 1: Possible baggage scanner mobile Solutions**Possible Mobile Configuration****Possible Trailer Configuration**

3.4 Optional Scanning Device Features, Functions and Accessories

The Bidder is required to propose and provide pricing for each of the following optional features, functions and accessories. The Bidder may also propose and provide pricing for further optional features, functions and accessories not appearing in Table 4 below.

Table 4:Scanner Tower 1 Optional features

Category	Small	Medium	Large
Optional scanning solution features	<ul style="list-style-type: none"> Roller bed Conveyor extension Second monitor 		

The Bidder is requested to propose solutions and to provide budgetary pricing for the options set out in Table 4. Bidders who do not propose and/or do not provide pricing for these options may be excluded, at SARS's sole discretion, from participating in a future RFQ for such options.

4 SCANNER TOWER 2

4.1 Categories of Devices

SARS has identified 3 (three) categories of scanning devices within Scanner Tower 2 within which SARS's business requirement are anticipated to fall. The specification of these categories is set out in Table 5 below:

Table 5: Scanner Tower 2 Solution Specifications

Category	Small	Medium	Large
Tunnel Opening	Min :1000mm x1000mm	Min: 1500mm x 1500mm	Min:2500mm x 2500mm
Conveyor Capacity (Weight)	Max:3000kg	Max:3500kg	Max:5000kg
Steel Penetration	Min: 27mm	Min: 27mm	Min: 27mm
Conveyor Belt speed	Minimum of 0.20 meters/second		
Required minimum features	<ul style="list-style-type: none"> Integration capability (see paragraph 7.1) Threat image projection (see paragraph 7.2) Automatic threat detection (see paragraph 7.3) 100% Duty cycle (see paragraph 7.4) Image archiving (see paragraph 7.4) 		

	<ul style="list-style-type: none"> • Backup functionality (see paragraph 7.6) • Compliance with health and safety regulations (see paragraph 7.7) • Maintenance and support (see paragraph 7.8)
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4.2 Bidder's Proposal

The categories: Small; Medium; and Large will be used to evaluate the Bidder's Proposal for Scanner Tower 2. The Bidder must propose a scanning solution in each category which meets the minimum specification in Table 5.

4.3 Further Solution Options

When procuring a solution in Scanner Tower 2, SARS may specify that a solution incorporating scanning devices is to be Static, Containerised or Vehicle-mounted:

Table 6: Scanner Tower 2 Types

Category	Small	Medium	Large
Static	<ul style="list-style-type: none"> • is a scanner unit which is designed to remain in one physical location for its useful life 		The large scanner solution in this Scanner Tower must be designed to scan Universal Load Devices (ULDs) and is not required to be Re-locatable or Mobile
Containerised	<ul style="list-style-type: none"> • designed to be deployed in a location but is transportable, e.g. in a container. 		
Vehicle-mounted	<ul style="list-style-type: none"> • designed to be moved on a regular basis: trailer-mounted or vehicle-mounted 		

Business requirements may also require that solutions may incorporate integrated environmental facilities, such as uninterruptible power supplies, air-conditioning, and/or generators.

4.4 Optional Scanning Device Features, Functions and Accessories

The Bidder is required to propose and provide pricing for each of the following optional features, functions and accessories. The Bidder may also propose and provide pricing for further optional features, functions and accessories not appearing in the table below.

Table 7: Scanner Tower 2 Optional features

Category	Small	Medium	Large
Optional scanning solution features	<ul style="list-style-type: none"> • Roller bed • Conveyor extension • Second monitor 		

The Bidder is requested to propose solutions and to provide pricing for these options in Table 7 above. Bidders who do not propose and/or do not provide pricing for these options may be excluded, at SARS's sole discretion, from participating in a future RFQ for such options.

5 SCANNER TOWER 3

5.1 Categories of Devices

SARS has identified 3 (three) categories of scanning devices within Scanner Tower 3 within which SARS's business requirements are anticipated to fall. All three of the categories of container scanner must be suitable for scanning containerised cargo transported by road, vehicles, busses and other cargo carriers.

Table 8 below sets out the minimum specifications for the container scanner solutions

Business requirements may also require that solutions may incorporate integrated environmental facilities, such as uninterruptible power supplies, air-conditioning, and/or generators.

Table 8: Scanner Tower 3 Solution specifications

Category	Fixed	Re-locatable	Mobile
Description	A scanner solution which is designed to remain in one physical location for its useful life	A scanner solution requiring limited infrastructure and shielding, which is designed, manufactured and installed in such manner as to allow the unit to be moved by means of a suitable heavy vehicle, from one physical location to another suitably prepared physical location	A self-contained scanner solution together with a heavy-duty vehicle (e.g., a vehicle that weights between twenty and twenty-five tons) to which it is attached.
General	Must be compliant to South African regulatory requirements regarding radiation, electricity and safety	<ul style="list-style-type: none"> It should be possible to install the scanner as a permanent inspection site or moved with minimal effort to another site The scanner must allow for easy dismantling and packing for transportation to new site. Must be compliant to South African regulatory requirements regarding radiation, electricity and safety 	<ul style="list-style-type: none"> The scanner must be a self-powered cargo inspection and screening system that allows for fast and easy deployment to any location. Must be compliant to South African regulatory requirements regarding radiation, electricity and safety. Should allow for engine-off scanning operations. The vehicle must be fully compliant with all South African road regulations. Compatible with South Africa Diesel fuel.
Tunnel Opening	The scanner must be able to scan containerised cargo for trucks ranging from 5 to 24 meters with variable scan length and should be able to accommodate multi-axle tractor-trailers.		
Throughput	Must scan a minimum of 20 trucks / busses per hour .		
Steel Penetration	Steel penetration must be a minimum of 200mm for high radiation devices.		
Required minimum features	<ul style="list-style-type: none"> Integration capability (see paragraph 7.1) Threat image projection (see paragraph 7.2) Automatic threat detection (see paragraph 7.3) 100% Duty cycle (see paragraph 7.4) Image archiving (see paragraph 7.5) Error! Reference source not found.) Backup functionality (see paragraph 7.6) Compliance with health and safety regulations (see paragraph 7.7) Maintenance and support (see paragraph 7.8) 		

6 SCANNER TOWER 4

6.1 Description

The process of selecting Preferred Suppliers in Scanner Tower 4 differs from the process of the other Scanner Towers. SARS has identified a number of potential business

requirements that may be satisfied by scanner solutions that do not clearly fall within the ambit of Scanner Towers 1, 2 or 3. Unlike Scanner Towers 1, 2 and 3 SARS has not specified minimum technical specifications, but rather is seeking to appoint Preferred Suppliers who can demonstrate they have solutions in the categories of requirements set out in Table 9.

Preferred Suppliers may be invited to participate in an RFQ process as and when the detailed business requirements have been determined during the Term. Bidders submitting Proposals for Scanner Tower 4 solutions must indicate in their Proposal precisely in which of the given categories of requirements they are capable of providing solutions and their Proposals must provide details of the solution(s), including specification of hardware make and models; software; implementations; optional features; references which can demonstrate the value of such solutions to SARS. Solutions proposed that do not disclose an effective solution in a category of requirement will be rejected by SARS and the Bidder will not be invited to participate in future RFQ's for that category of requirement under Scanner Tower 4.

SARS will indicate to a Bidder appointed as Preferred Suppliers in Scanner Tower 4 the precise range of solutions for which the Bidder may be invited to participate in the RFQ process.

Table 9 : Scanner Tower 4 Potential Business Requirements

Categories of requirement	Description
People scanners	<ul style="list-style-type: none"> • Detects objects concealed internally or externally on the body • Contraband and threat detection including weapons, explosives, narcotics, etc. • High throughput – scan time less than 7 seconds • Complete head to toe inspection even if shoes are worn • Very low radiation dose <0.1 µSv/scan
Rail and portal scanners	<ul style="list-style-type: none"> • Scanning of moving rail carriages and of the rail cargo container
Contraband detection devices	<ul style="list-style-type: none"> • Handheld devices for the scanning of baggage
Particle scanners, trace detection devices, ionising sniffers	<ul style="list-style-type: none"> • Surface scanning • Surface sample analysis
Scanners with specialised capabilities	<ul style="list-style-type: none"> • Multi-dimensional scanning; automated detection • Backscatter X-ray solutions
Peripheral devices to enhance scanning solutions (e.g. CCTV cameras)	<ul style="list-style-type: none"> • CCTV cameras • Automated feed and carriage equipment
Services related to the implementation or operation of all scanning solutions	<ul style="list-style-type: none"> • Specialist skills (consulting, project deployment) • Design • Training • Construction works

7 MINIMUM REQUIRED FEATURES

7.1 Scanner and Inspection System Integration Requirements

As a minimum the following data should be available for import into SARS case management applications system in a non-proprietary format:

- Operator details
- Data and time stamp of image
- Marked up image
- Management and daily reports

SARS intends integrating and centralising the scanning solutions output, image artefacts and specifically the results of inspection “hits” for evidence in further actions. SARS also intends remotely interrogating the scanner management systems for utilisation statistics, backup and other administrative purposes.

SARS does not intend to be prescriptive with regard to the equipment proposed and is expecting the Supplier to advise and motivate the integration of equipment and optional components that will modernise and enhance SARS’s detection and enforcement efforts.

A mandatory compliance criterion is that a solution proposed must be capable of connecting to SARS network and SARS must be able to integrate the scanners transparently into SARS network, systems and processes. The integration work itself, however, will be done at the sole discretion of SARS and will not necessarily coincide with the initial installation of the equipment.

All scan images and related metadata must be able to be extracted in industry standard formats and data structures and be transmittable through the SARS network. SARS must be able to import and manage the images and inspection results with SARS applications and SARS’s enterprise document solution (Documentum).

Further detailed information on SARS integration requirements and applicable standards are described in Appendix 1 to this document.

7.2 Threat Image Projection

SARS requires that the Supplier has sophisticated software accompanying the scanner solution capable of threat image projection. Threat Image Projection (TIP) must enable SARS to improve operator proficiency by inserting fictional threat images at configurable intervals.

7.3 Automatic Threat Object Detection

The software must be capable of the highest level possible of automatic threat object detection and be capable of issuing an appropriate alert to the operator. Automatic threat object detection functionality, capable of distinguishing organic from inorganic objects is required for all proposed devices in Scanner Towers 1, 2 and 3.

7.4 Device Duty Cycle

SARS requires that all scanner devices be capable of 24x7 operations, interrupted only for required maintenance and possible break-fix incidents. This must not be confused with the service coverage period requirement set out in paragraph 7.8.2. The device duty cycle refers to the minimum capability of the device whereas the service coverage period refers to the required hours of service support.

7.5 Image Archiving

SARS requires that proposed scanning solutions have the ability to archive images and related data. On demand de-archiving must also be supplied as part of the scanning solution

7.6 Backup/Recovery Functionality

SARS requires that all scanner solution must provide backup and restore capability taken into account the sensitive nature of scanned data (images) as well as all other operational data residing on the device.

7.7 Health, Safety and Security Requirements

A license for the X-ray machine, issued in terms of the Hazardous Substances Act (Act 15 of 1973), must be submitted with the Bidder's Proposal, failing which the response will not be considered. The identity numbers and SABS BIN No. of the Bidder's service technicians registered to carry out the servicing of the X-ray machines in accordance with the requirements of the South African Bureau of Standards must also be submitted as part of the Bidder's Proposal

SARS prefers that the scanner devices have the option of being equipped with CCTV camera facility for observation of operator activity.

7.8 Maintenance and Support Requirements – (Service Level and Coverage Requirements)

In addition to the best in class scanner technologies SARS requires the provision of maintenance, support and project management services to ensure the investment delivers optimum business value. The Supplier must provide the required services in any of the geographic regions and sites as specified by SARS (see Appendix 2). The services to be provided include the following main activities:

- The planning, provision, delivery, installation, commissioning and decommissioning of the scanner solution and infrastructure as well as moves, additions and changes.
- Maintenance: Regular and scheduled inspections and maintenance in accordance the manufacturer's specifications of scanners and associated infrastructure for the life-span of the equipment.
- Break-fix: all activities necessary to restore the full functionality of the scanning solution after the occurrence of an incident or to rectify a problem in accordance with the service levels.
- Incident, problem and operational change management relating to the scanner solution.
- The timeous supply of up to date configuration information to SARS
- Adherence to the applicable SARS IT policies processes procedures standards & guidelines. These will be advised at the time that an RFQ is issued by SARS for a specific solution acquisition. In addition all outages and maintenance will be centrally reported and managed by SARS central incident management systems based on Remedy.
- Reporting to SARS representatives.

In addition to the requirements set out in this Business Requirement Specification, all scanner services must be provided in terms of the specific terms and conditions and metrics set out in the NISDS Agreement. The Bidder is required to read all terms

contained in the proposed NISDS Agreement and to respond in the format set out in the RFP Main Document.

7.8.1 Service Levels

SARS has designated three separate Support Levels of the SARS sites. These are “Bronze”, “Silver” and “Gold”. SARS may change the designation of a SARS site at SARS’s sole discretion upon no less than 30 (thirty) days prior written notice to Supplier.

An incident will be deemed to begin at the time that it is first reported to, or otherwise when discovered by Supplier. Supplier shall ensure that all incidents are recorded on SARS’s IT Service Desk system (BMC Remedy) as soon as the Supplier becomes aware of such incidents.

Supplier must respond to and resolve an incident affecting a NISD Solution within the period set out in Table 10 that corresponds to the classification of the site (“Gold”, “Silver” or “Bronze”) where the NISD Solution is located.

Table 10: Support Levels

Support Level	Service Level Target	
	Time to Respond	Time to Resolve
Bronze	4 hours	8 hours
Silver	2 hours	4 hours
Gold	1 hour	2 hours

7.8.2 Service Coverage Periods

Each SARS site is assigned one of two service coverage periods (each, a “Service Coverage Period”) which is the period of time during which Service Levels are to be measured against Supplier’s provision of the Deliverables. Each NISD solution maintained at a SARS site will be assigned the Service Coverage Period of that SARS site. For example if a NISD Solution at a SARS site that has been assigned a Service Coverage Period of Standard and a Support Level of Silver. The four hours Time to Resolve requirement will only be measured during the hours of 06h00 to 22h00.

If no Service Coverage Period is specified for any SARS site, its Service Coverage Period shall be deemed to be “Standard” (see table below). SARS may change such designations at SARS’ sole discretion upon no less than 30 (thirty) days prior written notice to Supplier. The Service Coverage Periods are set out in Table 11 below:

Table 11: Service Coverage Periods

Service Coverage Period	Time to Respond
Standard	06h00 to 22h00 (7 days a week)
Premium	24 X 7 x 365

8 FEATURES THAT MAY BE REQUIRED AS PART OF FUTURE RFQS

8.1 Enhancement, Customisation, Development and Integration Services relating to the Software and Systems.

The Supplier must assist and provide SARS with enhancement, customisation, development and integration services during the lifespan use of the various scanner products, software and systems. All modifications to systems hardware and software will be tested in advance and deployed using SARS's change management process.

8.2 Infrastructure Requirements

In addition to providing scanning solutions within the four Scanner Towers, Suppliers may be requested to construct customised building structures suitable for housing the scanner solutions as part of their overall solution in compliance with all applicable building, health, fire and safety regulations. The details of construction would depend on the solution, selected site and existing infrastructure and would be specified in any future RFQ issued within a Scanner Tower.

These requirements, if any, will form part of an RFQ specification subsequent to the appointment of Preferred Suppliers. Suppliers will be expected to respond to such an RFQ requirement with an installation specification/report, including details of all manpower, materials and transportation requirements. The CIDB registration certificate of the Supplier and/or its Subcontractor(s) must be submitted as part of the RFQ process for all construction work quoted on.

8.3 Training

The Supplier must provide training in the operation of the provided scanner solution for 5 (five) SARS staff, and unless requested otherwise by SARS, must include the price for the training in the implementation cost when responding to an RFQ. The Supplier must also provide training on request by SARS in the operation of the scanner solution during the life of the scanner solution. Such training must be provided on a time and materials basis. The price for training on a time and materials basis must be specified accordingly in the time and material portion of the Pricing Template under personnel rates (Hardware Operations). The content of such operational training must include

- Archiving and retrieval of images
- Quality Management
- Scanner Operating Procedures
- Health and Safety Compliance

The Supplier may be expected to provide generic image recognition training to SARS staff on request by SARS. The Bidder must provide details of the training that it offers in this regard and the pricing of such training in the time and material portion of the Pricing Templates under personnel rates (Image Recognition)

8.4 Reporting

Management and operational reporting is essential for effective and efficient operation of the scanning facilities. Bidders must have the capability to develop at least the initial set of reports set out in Table 12 in collaboration with SARS for use by SARS supervisors and management. Where possible the use of, and integration to, SARS security systems

(Active Directory) and logging for reports to Microsoft SQL server is encouraged to simplify the reporting requirements across Supplier and SARS systems. Sample productivity reports in Table 12 below show a consolidated view of reporting data across both Supplier and SARS systems and the Bidder should include sample reports demonstrating its compliance to these requirements.

Table 12: Reports

Report Name	Description	Frequency
Individual Operator Performance Report	A summary report on the detailed performance of each individual Operator. This includes: <ul style="list-style-type: none"> • Bag count • Released • Anomalies detected (Automatic /Operator) • Number of cases (once integration is in place) 	Daily
Individual Image Interpreter Performance Report	A summary report on the detailed performance of each individual image interpreter, including: <ul style="list-style-type: none"> • Bag count • Number released • Physically searched • Number of cases (once integration is in place) 	Daily
Baggage Counter Report	Total number of baggage item scanned: <ul style="list-style-type: none"> • Released • Physical searched • Detained/seized 	Weekly
Pallet Counter Report	Total number of palletised cargo scanned: <ul style="list-style-type: none"> • Released • Physical searched • Detained/seized 	Weekly

8.5 Additional Equipment

Associated with each scanner category SARS may procure additional equipment to enhance a specified solution. Bidders should include specifications and pricing information on all additional available equipment that may enhance their solution as part of their Proposal.

8.6 Perspectives on Future Technological Developments

Bidders are invited to offer their perspectives on the future evolution of the inspection scanner technologies and detection mechanisms and should seek to inform SARS of their current and future research and development interests. These perspectives must be provided in the format requested in the Technical Template – Scanner Tower t.

APPENDIX 1 – INTEGRATION REQUIREMENTS AND APPLICABLE STANDARDS

1 SCANNER AND INSPECTION SYSTEM INTEGRATION REQUIREMENTS

This section has been prepared to provide guidance to the objective of integration of scanners and inspection equipment to SARS systems where this integration is possible and supported.

In simple terms the requirement is, wherever possible devices and specifically the inspection artefacts produced by these NISD Solutions must be available for inclusion in the SARS Inspection Case Management solution described above. Ideally this should be on SARS network and the artefacts should be in a standard format that SARS can readily consume either as files or through an API.

SARS has a country wide Wide Area Network (WAN) to all significant ports of entry with other agency sites and smaller SARS sites covered by VSAT. SARS has rolled out significant enhancements to its customs systems including a single risk engine approach (CRE) that assesses, on a case by case basis, the risk of every movement of people and cargo and the central delivery of a case management system. This has led to an increase in the requirement for targeted inspections and interventions and hence there is a requirement for scanner solutions to support the effective application of case management in SARS.

To achieve the integration of the scanner solutions with SARS systems, SARS seeks to utilise existing hardware, software, standards and infrastructure.

All scanner equipment and software will be tested for compatibility with SARS systems and networks by SARS before acquisition or acceptance. In order to assess compatibility testing, all Bidders must provide SARS with the following information to be provided in the Technical Template – Scanner Tower t. :

- The full specification of integration capability
- Examples of how the integration capability works.
- Customer references and how these interfaces have achieved integration between the customer's systems and inspection devices
- Examples screens of the API, File Transmit (XML) mode functionality and HTTP Request Transmit mode functionality in use.
- Sample programmes where API, File Transmit (XML) mode functionality and HTTP Request Transmit mode functionality are used to integrate with the scanner operating system

In addition, Preferred Suppliers may be requested to provide a working copy of the software that SARS can utilise to verify the capability of the proposed integration interface as part of due diligence or as part of the RFQ process.

Any guidelines in this document detailing SARS's physical infrastructure and software is accurate at the time of publication and may change over time. From time to time the Supplier will be required to work with SARS to ensure the supplied software remains compatible to SARS standards.

The cost for this effort must be included in the Bidder's pricing for maintenance of proposed solutions and systems. Any enhancements, patches and fixes by the Supplier to software and hardware must and will be pre tested by SARS before deployment.

2 GENERAL DESIGN PRINCIPLES REQUIRED FOR EVERY MODEL AND SCANNER TYPE PROPOSED

Specification
All scanners and devices should be network enabled where possible
Integration must be performed over SARS's Ethernet network
SARS standards as to operational changes, security, version control, change, and release management, impact and compatibility testing (RTR) relating to software will apply to all scanners deployed.
The SARS support desk will act as a centralised support centre for all technical support for scanners and will liaise (manage and co-ordinate) with the Supplier in the event of the scanners requiring support. Outages for maintenance must also be co-ordinated through this centre.

2.1 SARS Standards

Wherever required, equipment and systems must be compatible to SARS standards. SARS will supply and support hardware and software which is not directly related to the specialised scanning system to achieve the integration to SARS's systems. This includes:

- Server Hardware and Software;
- Workstation Hardware and Software;
- Application Integration; and
- Image and file.

2.1.1 SARS Current Server Hardware and Software Standards

Server Hardware Specification
<ul style="list-style-type: none"> • Dell Servers <ul style="list-style-type: none"> ○ PowerEdge 2950 Rack Servers ○ PowerEdge 1955 Blade Servers • Storage of data - internal server storage or EMC Storage Array

Server Software Specification
<ul style="list-style-type: none"> • Windows Server 2008 • SQL Server 2008 • Any Microsoft server software as needed • Symantec anti-Virus software

- Active Directory to SARS security Standard
- Any other software required to maintain and manage the server

2.1.2 Workstation Hardware and Software Standards

Workstation Hardware Specification

- Dell Workstation
- Minimum Specification
 - Intel® Core™i5 or i7
 - 4 Gig RAM
 - 160 Gb (7,200 rpm) SATA Hard Drive
 - 16X DVD +/-RW

Workstation Software Specification

- Microsoft Windows 2007
- Microsoft Office 2010
- Microsoft Outlook 2010
- Symantec Antivirus V11.0
- Microsoft Internet Explorer V8
- Active Directory to SARS security Standard
- Any other software required to maintain and manage the workstation

2.1.3 Application Integration Standards

Specification
<p>SARS can support the following application integration methodologies and standards:</p> <ul style="list-style-type: none"> • XML – Extensible Mark-up Language • Direct application to application integration – Simple Object Access Protocol (SOAP) / Simple Query Language (SQL), Others • Enterprise Service Bus (ESB) – Websphere and BizTalk • Electronic Data Interchange - EDI • Permissible Services (ESB's)– Web Services Definition Language (WSDL) / Java Beans / MQ Websphere • File Transfer Protocol (FTP) – batch interfaces – IBM MQFTE can also be utilised • Where possible World Customs Organisation data standards will be applied

2.1.4 Image Standards

- SARS's requirement is for the images to be made available in a non-proprietary format such as JPG, TIFF, PNG, GIF bmp, etc.. If proprietary formats are required for image processing reasons it must be possible to export images to industry standard formats. The conversion to industry standard format must be lossless i.e. high quality and no notations or colour should be lost.
- Operator must not be able to modify, delete or tamper with, in any way, images stored in the specialised scanning system.

APPENDIX 2 – DIAGRAM OF SARS PORTS OF ENTRY

