



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

TERMS OF REFERENCE

The SUPPLY A COMPUTER-AIDED DIAGNOSIS SOFTWARE FOR THE MOBILE CHEST X-RAY TB SCREENING, REAL-TIME M&E SYSTEM, CLOUD-BASED SOLUTION TO ARCHIVE X-RAY IMAGES AND CENTRAL RADIOLOGIST ON BEHALF OF THE NATIONAL DEPARTMENT OF HEALTH (NDOH) AS A PRINCIPAL RECIPIENT (PR) OF THE GLOBAL FUND (GF) GRANT

Acronyms

NDoH	National Department of Health
PR	Principal Recipient
SR	Sub – Recipient
CAD	Computer-Aided Diagnosis
CE	Conformite Europeenne – Mandatory conformity marking
AI	Artificial Intelligence
DICOM	Digital Imaging and Communications in Medicine images
CRRS	Central Radiologist Reporting Services
TB	Tuberculosis
CXR	Chest X-ray
HIV	Human Immunodeficiency Virus
SAHPRA	South African Health Products Regulatory Authority
MO	Medical Officer
GIS	Geographic Information System

1. Introduction

TB HIV Care is a registered non-profit organisation, established in March 1929, that puts integrated care at the heart of responding to TB, HIV and other major diseases. We work to prevent, find and treat TB and HIV in South Africa.

The first step in providing care for people with HIV or TB is to find them. For this reason, TB HIV Care is committed to a highly successful testing and screening programme.

TB HIV Care's strategy is to test and screen people where they are, whether at a clinic, taxi rank, workplace, farm, high school or university. TB HIV Care has both facility-based counsellors (i.e. in clinics or hospitals) and mobile teams that can move around in the community. The mobile teams use customised caravans, mobile units and gazebos to ensure a client's comfort and privacy.

The National Department of Health (NDoH) is one of the four Principal Recipients (PRs) appointed to implement Global Fund TB/HIV programmes from the 1st April 2019 to 31st March 2022. Therefore, the NDoH will be referred to as the 'contractor'. Through its Sub Recipients (SR), Aquity Innovations, Isibani Development and TB HIV Care, the contractor requires the services of a supplier who can supply the following services for the 16 X-Ray containers:

- A Computer-Aided Diagnosis (CAD) software for X-Ray TB screening using artificial intelligence (AI).
- Real-time electronic X-ray management system for collection and reporting of patient level data.
- Cloud-based solutions to store and archive Digital Imaging and Communications in Medicine (DICOM) chest X-Ray (DCXR) images.
- Central radiologist reporting service (CRRS).

The 16 mobile X-Ray Containers are estimated to reach 620 000 clients by the end of March 2022 in the six TB priority districts of the Global Fund: namely City of Cape Town, Ekurhuleni Health District, Johannesburg Health District, Ehlanzeni, eThekweni and OR Tambo.

2. Scope of work

The supplier will be expected to supply all of the following services in an integrated package:

No	Services Required	Description
1.	CAD software for X-Ray TB screening using AI	<ul style="list-style-type: none"> ▪ Automated chest X-ray (CXR) screening software that detects X-ray abnormalities consistent with pulmonary, hilar and pleural tuberculosis using AI algorithm ▪ Calculate an abnormality score or report whether the X-ray is suggestive of TB within one minute. ▪ Hardware-agnostic which works with X-rays of varying quality and exposure, from all X-ray machine models ▪ Certified for use with adults and children ▪ Upgrades to the latest available version shall be free of charge ▪ Data export capability for analysis ▪ The bidder shall provide CAD software which are CE certified and DICOM compatible with the imaging systems.
2.	Real-time electronic X-ray management system for collection and reporting of patient level data	<ul style="list-style-type: none"> ▪ Cloud-based healthcare management system to capture patient level data (e.g. demographic and GIS data) linked with the X-ray image ▪ Software should be able to work offline in the absence of internet connectivity with information stored on site for uploading onto the cloud when connectivity is available ▪ Provide real-time data and reports that are accessible from any location on a range of devices (web, mobile, tablets) by authorised users ▪ Customize according to needs of SRs
3.	Cloud-based solutions to store and archive digital chest X-Ray DICOM images	<ul style="list-style-type: none"> ▪ Cloud-based DICOM archive that provides effective and secure storage of clinical DICOM information of an estimated 620 000 CXR images

No	Services Required	Description
		<ul style="list-style-type: none"> ▪ Software should be able to work off line in the absence of internet connectivity with information stored on site for uploading onto the cloud when connectivity is available ▪ Provide a Radiological Reporting platform in instances where the reporting Radiologist or MO is remotely located from the actual physical imaging unit ▪ Provide effective and secure storage of clinical DICOM information for at least 7 years
4.	Central radiologist reporting service (CRRS)	<ul style="list-style-type: none"> ▪ Provide a continuous high quality radiology service - to provide radiological images/reports in sufficient time to positively influence patient management and treatment ▪ Radiology reports for approximately 5% of CXRs for quality assurance ▪ Radiology reports for all abnormal X-rays within 24 hours

3. Additional scope of work

- The supplier of the software shall provide training to staff and technical support.
- The supplier share provides user manuals and quick reference guide.
- It is expected of the supplier to be able to service equipment when required. It is expected of the supplier to provide warranties, maintenance and software updates when needed.

4. Mandatory administrative requirements

It is the responsibility of each supplier to ensure that complete documents are submitted on or before the closing date and time. The supplier must submit all required documents indicated hereunder:

- Technical proposal which include project cost and implementation plan
- Declaration of Interest.
- B-BBEE Status Level Verification Certificate (where preference points are claimed) (Original or Certified Copy).
- Certified copy of registration certificate with CIPC or proof of ownership/ shareholding.
- Valid SARS Tax Clearance Certificate for confirmation of Value Added Tax (VAT) registration and other Tax related matters.
- Latest updated company profile which includes but not limited to name of the company, organogram, strategies, names and identity numbers of all directors, chief operating officers, products and/or services which the entity is trading and risk management strategy to mitigate against any risk that might arise for the duration of the project.

- Three (3) latest testimonials or reference letters from previous contractors/client.
- Stamped **original** bank rating letter with finance grading (not bank confirmation letter).

Note: failure to submit these mandatory administrative requirements will result in automatic disqualification of the application.

5. Submission and Responsiveness

Suppliers must submit one electronic copy - PDF of bid documents according to the instructions below:

- The signed original soft copy of the bid document will serve as the legal bid document.
- All pages in the bid submission must be initialled.
- Where certified copies of documents are required, the person certifying such documents must not be associated with the bidder in any way.
- All bid documents must be submitted on or before the closing time of the bid (date and hour specified in the bidding documents).
- Incomplete bids will be deemed non-responsive.

6. Special conditions

- The contractor reserves the right to award according to the most economical service option submitted.
- The contractor reserves the right to stop the contract partly or as a whole, temporarily or indefinitely, in which event neither claim nor liability whatsoever shall lie against the contractor either due to non-compliance, non-performance, by the supplier.
- The contractor reserves the right to not make an award.
- The contractor reserves the right to conduct price negotiations, where deemed necessary.
- All suppliers are bound to protect the confidentiality of all data (including the protection of personal information) and information gathered and accessed through the work on assignment. Information and data received and accessed through this project may only be used to meet the objectives outlined in these specifications.
- The contractor reserves the right to request any relevant documentation at any stage of implementation.
- All records, data and information relating to the programme are owned by the contractor and remain the intellectual property of the contractor and as such must be treated as confidential by the supplier.
- At the end of the contract period, the supplier shall make available to contractor a record of all the data and information relating to the contractor to enable the new supplier to sufficiently and properly take on that data and information in a

manner which would enable the new supplier to commence delivering services to the contractor.

The contractor reserves the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include site visits if necessary.

7. Bid evaluation criteria

Evaluation phase 1: Mandatory requirements:

Bidders' must submit all required documents indicated hereunder with the bid documents at the closing date and time of the bid. During this evaluation phase, bidder's responses will be evaluated based on the documents submitted under mandatory requirements. This phase is not scored and bidders who fail to comply with all the mandatory criteria will be automatically be disqualified.

Evaluation phase 2: Competency and skills, previous experience and capabilities related requirements and financial capability.

COMPETENCY AND SKILLS (25%):

Criteria	Weighted %	Scoring Criteria
Supplier to provide: <ul style="list-style-type: none"> ▪ The technical expertise of the team regarding the supply of the tender requirements (software development, maintenance, repairs, training, skill transfer and radiologist services). ▪ Proposed project implementation plan which clearly demonstrates how the project will be executed. 	25%	Excellent = 5 Good = 4 Average = 3 Below average = 2 Poor = 1 No information = 0

PREVIOUS EXPERIENCE AND CAPABILITIES-RELATED REQUIREMENTS (40%):

Criteria	Weighted %	Scoring Criteria
Demonstrated supplier's experience in doing similar work for more than 3 years. Supplier to provide: <ul style="list-style-type: none"> ▪ At least 3 duly signed reference letters from previous or current clients for similar work done within the past years including details of the nature of the project. 	40%	Excellent = 5 Good = 4 Average = 3 Below average = 2 Poor = 1 No information = 0

FINANCIAL CAPABILITY (25%):

Criteria	Weighted %	Scoring Criteria
Supplier to provide: <ul style="list-style-type: none"> ▪ Original Bank Rating confirming financial capability from registered Financial Institution (Bank rating letter must be stamped by the bank after the bid advert date). ▪ Audited financial statements. 	25%	Category A = 5 Category B = 3 Category C = 2 No information = 0

Evaluation phase 3: Price schedule and B-BEEE (10%):

4	Bids evaluated in the 90/10 preference system
Substantiate or provide relevant documents	Quotation Supplied and B-BEEE certification.

8. Determination of evaluation threshold

NB: The bidders will be required to achieve a minimum threshold score of 70% out of 100% to be eligible for the next state of evaluation.

Scoring criteria for evaluation of functionality

Score	Classification	Definition
0	No response (complete non-compliance)	No response at all or insufficient information provided in the response such that the solution is totally inaccessible and/or incomprehensible.
1	Unsatisfactory response (potential for some compliance but very major areas of weakness)	Substantially unacceptable submission which fails in several significant areas to set out a solution that addresses and meets the requirements: little or no detail may (and, where evidence is required or necessary, no evidence) have been provided to support and demonstrate that the Supplier will be able to provide the services and/or considerable reservations as to the Supplier's proposals in respect of relevant ability, understanding, expertise, skills and/or resources to deliver the requirements.

Score	Classification	Definition
2	Partially acceptable response (one or more areas of major weakness)	Weak submission which does not set out a solution that fully addresses and meets the requirements: response may be basic/minimal with little or no detail (and, where evidence is required or necessary, with insufficient evidence) provided to support the solution and demonstrate that the Supplier will be able to provide the services and/or some reservations as to the Supplier's solution in respect of relevant ability, understanding, expertise, skills and/or resources to deliver the requirements.
3	Satisfactory and acceptable response (substantial compliance with no major concerns)	Submission sets out a solution that largely addresses and meets the requirements, with some detail (or, where evidence is required or necessary, some relevant evidence) provided to support the solution; minor reservations or weakness in a few areas of the solution in respect of relevant ability, understanding, expertise, skills and/or resources to deliver the requirements.
4	Fully satisfactory /very good response (fully compliant with requirements).	Submission sets out a robust solution that fully addresses and meets the requirements, with full details (and, where evidence is required or necessary, full and relevant evidence) provided to support the solution; provides full confidence as to the relevant ability, understanding, expertise, skills and/or resources to deliver the requirements.
5	Outstanding response (fully compliant, with some areas exceeding requirements)	Submission sets out a robust solution and, in addition, provides or proposes additional value and/or elements of the solution which exceed the requirements in substance and outcomes in a manner acceptable to the Department; provides full confidence as to the relevant ability, understanding, expertise, skills and/or resources not only to deliver the requirements, but also exceed it as described.