



TENDER NO: 8/2024

TERMS OF REFERENCE

**FOR PURCHASE OF FOUR (4) X-RAY
MACHINES**

**THREE (3) FOR NADI INTERNATIONAL
AIRPORT**

AND (1) FOR NAUSORI AIRPORT

CLOSING DATE AND TIME: 23/12/2024– 5pm

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SECTION A

COMPANY BACKGROUND

The Biosecurity Authority of Fiji (“**BAF**”) was established under the Biosecurity Act 2008. It is designated a Public Enterprise as per the Public Enterprise Act 2019.

BAF’s mandated responsibilities as per the Biosecurity Act 2008 are:

1. to protect the Fiji Islands against the entry of regulated pests and diseases affecting animals, plants, human beings and the environment;
2. to carry out surveillance and monitoring of pests and diseases in the Fiji Islands and assess the status of regulated pests and diseases;
3. to prevent the establishment and spread of regulated pests and diseases and the release of organisms that might adversely affect animals, plants, human beings and the environment in the Fiji Islands;
4. to eradicate, contain or control the movement of regulated pests and diseases that are already present in the Fiji Islands;
5. to prevent the introduction and spread of regulated pests and diseases not already present in the Fiji Islands;
6. to facilitate the safe importation of animals and plants and their products, and related equipment and technology;
7. to facilitate the export of animals and plants and their products in accordance with the biosecurity requirements of the receiving countries;
8. to facilitate international cooperation to prevent the spread of pests and diseases affecting plants, animals, human beings and the environment.

The Biosecurity Act 2008 is the primary legislation that provides for the regulation and control of the movement of animal and plants into, out of and within Fiji and for the facilitation of Trade.

SECTION B

TENDER INVITATION AND SUBMISSION

1. The purpose of this document is:
 - To provide prospective Vendors with sufficient information to understand the business operations of BAF and to respond to the specific tender requirements;
 - To ensure that a consistent level of information is obtained from each prospective Vendor; and
 - To provide a structured framework for the subsequent evaluation of the proposed solutions.
2. This document is an official Request for Tender (“RFT”) for the goods or services as specified for BAF. Vendors are required to respond to this RFT demonstrating that their offers are a probable fit to BAF’s overall requirements.
3. Submissions must be clearly marked “**Tender No: 08/2024” - PURCHASE OF FOUR (4) XRAY MACHINES - THREE (3) FOR NADI INTERNATIONAL AIRPORT AND ONE (1) FOR NAUSORI AIRPORT**” and submitted into the Tender Box situated at BAF HQ Reception Entrance, addressed as follows:

The Tender Committee
Biosecurity Authority of Fiji
Level 3, FNPF Building
Ellery Street
Suva

4. For those bidders applying from Overseas, you may send your applications via email on tender@baf.com.fj; Electronic Applications are to be clearly marked with the Tender Name and Number.
5. Bidders who will hand deliver their applications, are required to complete the tender submission register at the reception area where the tender box is located before depositing their proposals into the tender box.
6. All proposals documents must be submitted before or on the closing date and time as indicated in the RFT document. Late, proposals will not be accepted. BAF reserves the right change the closing date and any other dates that may appear in this RFT. Such changes will be communicated as soon as they are made.
7. In the event of any problems with the delivery of the proposals, vendors should please contact the Secretary to Tender Committee on **8919734**.
8. If the envelopes are not sealed and marked as required, BAF will assume no responsibility for the tender’s misplacement or premature opening.
9. All enquiries relating to the RFT should be submitted in writing to the Secretary TenderCommittee or emailed to lvacereivalu@baf.com.fj or Mr. Kalivati Ratucivivi on email: kratucivivi@baf.com.fj no later than **23/12/24 - 5pm**

SECTION C

SCOPE/SPECIFICATIONS OF TENDER

Purpose

Biosecurity Authority of Fiji (BAF) invites tenders for the supply of two X-Ray Machines by renowned service providers in Fiji or Abroad.

Eligibility Criteria/ Pre-qualification of the Bidder

The bidder should be an authorized X- Ray Machine Supplier in Fiji or Abroad, providing high quality Rapiscan latest x-ray unit series.

The service provider must demonstrate proven capability and experience in the industry.

Specifications:

1. High algorithm that detect and process quality images of organic and inorganic materials.
2. To be configured for detection of plant and animal materials substances and related to firearms, drugs, currency notes. New machines to have networking TCP/IP capabilities for remote monitoring of images and archiving.
3. Bottom loader, or Conveyor height of 800mm with incliner of 2.5mtrs.
4. **The SYSTEM shall include the following components:**
 - The system shall have capabilities to network and interface:
 - With work stations located at local and/or remote offices for monitoring images processed on any x-ray machine;
 - With external hard drives and/or servers for archiving
 - Be able to view from two direction (top & side view) Dual view
 - Vertically upward (Recommended) if single view

5. FUNCTIONAL REQUIREMENTS

GENERAL:

- The x-ray machines shall be designed for continuous 24-hour operations and shall be capable to support remote system management workstations via TCP/IP interface.
- The x-ray machines shall comply with ICAO SARPS, relevant Australian, FAA, and New Zealand standards.
- The x-ray machines shall be configured for detection of organic and inorganic materials, including detection of substances related to drugs, currency notes, and similar stringent capabilities as demanded at port of entries

6. OPERATION CAPABILITIES - X-RAY MACHINES:

- The x-ray machines shall be capable of providing the following minimal operational requirements:
- Forward and/or reverse operation.
- Operating temperature, 0oC to 50oC, relative humidity 95%, non-condensing. Tropical climate condition
- The conveyor belt must be designed for 24-hour heavy duty operation.
- Maximum permissible height and width of the objects that can enter the tunnel.
- Digital archiving and retrieval of image data.
- A robust, RED, emergency stop push button, fitted in a prominent position on the keyboard, as well as on the x-ray unit.
- The machine shall also have a duress alarm interface so that a remote office is alerted in cases of a threat.
- A push button switch to alert remote offices in cases of emergency and or threats.
- Application of Threat Image Projection (TIP) with configuration capabilities.
- Conveyor belt speed 0.2M/sec 40ft/min
- Tunnel size:950mm(w) x 780mm (H)

7. Image Presentation:

- The images shall be presented on two LCD monitors.
- Zoom facility with at least 9 levels
- Be capable of more than two monitors operating simultaneously.
- The image on the monitor screen must be flicker free.
- Full scan volume must be seen on the screen, without any corner cut-off or distortion.
- The selected sector must be identified by light frame before zoom is activated.
- Control of brightness and of contrast must be provided on the front panel of the monitor.
- Switching over from POSITIVE to NEGATIVE images must be available.
- Any alerts or threats on any image to be visibly displayed for operator or remote monitoring.

8. Operator Console:

- A mains key switch for 240V main power supply is required.
- Push button - power "ON"
- Keyboard or touch screen selections for conveyor control "GO", "STOP", and "REVERSE".
- As a minimum, 9 selections of zoom sector selection, and a separate selection for zoom activation is required.
- Light symbols indicating "X-ray on".

- User-friendly and ease of operation of the Operator Console is essential.

9. Passage of Luggage through X-ray Unit:

- Objects must be able to be conveyed through the unit and screened in any orientation.
- The conveyor belt speed should enable the object to be viewed for at least five seconds.

10. TECHNICAL CAPABILITIES - X-RAY MACHINES:

- The x-ray machines shall be capable of providing the following minimal technical requirements:
- MTBF of not less than 2160hrs.
- Less than minus 80 dB noise level.
- Be of sturdy design to operate in controlled and non-controlled environments.
- Adjustable load and discharge rollers to ease loading and discharge of bags.
- Sensitivity of 40 AWG or better.
- Dual energy transmission and a Z backscatter source.
- The x-ray unit shall have swivel castors to allow portability.
- The x-ray unit must have incliner or ramp attached to the main x-ray cabinet,

11. Power ratings:

- **The machines shall operate from 240V \pm 5%, 50Hz, single phase uninterrupted power supply.**
- **The supplier shall state the total power requirement for each machine.**

12. Resolution and Penetration:

- A minimum contrast sensitivity of 24 contrast levels and 16000 grey level is required.
- The machines shall be able to distinguish 30-gauge wire over the 10th step and confirm to detection tests from a ASTM F792 step wedge.
- The image quality on the monitor must be uniform, without distortion in the center or edges.
- Penetration of 30mm steel minimum must be guaranteed.

13. OPERATION CAPABILITIES - CONVEYOR BELT:

Loading

- The supplier shall state the maximum loading of the conveyor at any one time.

14. Operation

Normal: Continuous operation in forward direction.

- Stop function.
- Reverse: Intermitted operation by pressing the reverse button.
- Duty cycle: no warm-up period will be accepted.
- The supplier shall indicate the system throughput.

15. SAFETY:

X-ray dose: Less than 1 micro seivert

- Screened object Standard dose rate shall be indicated.
- Radiation Leakage to Surrounding

SECTION D TENDER EVALUATION CRITERIA

The following documents are compulsory and not part of the scalingsystem:

- Valid Business Company Registration Certificate
- Tax Compliance Certificate

The following table highlights the evaluation criteria:

	DESCRIPTION	POINTS
1.	Administration	10 Points
	<ul style="list-style-type: none"> - Background/ History of the Company - Reference Letters- (at least 3) - Supplier Reputation with List of major Clients of the company 	
2.	Technical	50 points
	<p>Describe the ability to meet the following requirements:-</p> <ul style="list-style-type: none"> a) Operational Capabilities as per the specifications b) Image Quality and Resolution c) Operator Console d) Passage of Luggage through X-ray unit/Throughput and Speed e) Technical Capabilities as per the specifications f) Power ratings g) Resolution and Penetration h) Operation Capabilities - Conveyor Belt Safety and Compliance i) Maintenance & Support j) Installation and Commissioning k) Training and Documentation l) Delivery and Timelines m) Warranty and Service Support n) Legal and Regulatory Compliance 	
3.	Cost	40 Points
	<ul style="list-style-type: none"> - Purchase Cost - Breakdown of the cost of each X-Ray Machine including taxes and delivery charges - Service and Maintenance Costs - Optional extended warranty, ongoing maintenance, and service costs - Training Costs - Spare Parts and Consumables - cost of spare parts, consumables and any additional accessories needed - Price Validity 	