

## Iziko Scanning Electron Microscope Facility

Reference: R&E/SEMSystem/12/2017

### ***Tender request for bid to supply a Tabletop/Desktop Scanning Electron Microscope in the Iziko Microscopy Imaging Laboratory (iMiL)***

Iziko Museums of South Africa (Iziko) invites suitably experienced service providers to submit a tender proposal for the Supply and Installation of a *Tabletop/Desktop Scanning Electron Microscope* as per the required technical specifications, including value added products and services at the Iziko's South African Museum.

#### **1. BACKGROUND**

Iziko is a Declared Cultural Institution in terms of the Cultural Institution Act, Act 119 of 1998 (as amended). Iziko is a Schedule 3A public entity and non-profit organisation, partly subsidised by the National Department of Arts and Culture (DAC), bringing together the 11 national museums, Planetarium, Social History Centre (archive) and three collection-specific libraries under a single banner. Iziko was formed in 1999 when five clusters of established museums in and around Cape Town were merged.

#### **2. OVERVIEW**

The Natural Science Collections Facility (NSCF) is funded as part of the Department of Science & Technology's South African Research Infrastructure Roadmap (SARIR). The overall aim of the NSCF is to ensure that collections and associated data are used for high quality research and decision making to address issues of socio-economic importance. Iziko has successfully secured funding from the NSCF for its upgraded Scanning Electron Microscope (SEM) facility. This facility needs to be fitted with a Tabletop/Desktop Scanning Electron Microscope and associated peripherals, thereby augmenting exiting equipment, to enable microscopic research as well as teaching and training of a broad audience (from school children through to professional scientists). The facility will also balance the need for highest resolution to aid taxonomic diagnosis with high throughput processing of a diversity of animal taxa towards various collections-based research projects. The capability to scan uncoated and coated specimens is critical.

### 3. TECHNICAL SPECIFICATIONS

It is noted that the requirements specified are the result of in-depth research conducted prior to the compilation of the brief. A list of requirements and technical specifications has been compiled according to the projected future needs of the SEM facility.

Iziko requires one supplier with an established track record and service capability in the field of scanning electron microscopy and imaging.

**The requirements listed below are essential for bids to be considered**

#### Tabletop/Desktop Scanning Electron Microscope

Item	Minimum Specifications
SEM Main Unit	Direct Magnification range: anything within minimum 10x to maximum 200, 000x
	Digital zoom a minimum of 4x
	Backscattered Electron (BSE) Detector
	Secondary Electron (SE) Detectors
	Acceleration Voltage of a minimum of 5 kV and Maximum 15 kV
	Sample diameter of anything between 32mm and 80 mm
	Sample height should be anything between 50mm and 100mm.
	Stage control motorised or automatic
	Sample Tilt (-15 <sup>0</sup> & + 60 <sup>0</sup> )
	Stage 360 <sup>0</sup> rotate
	Stage must accommodate one to multiple standard pin stubs
	power supply and peripherals
User Interface Unit (e.g. Computer)	Either integrated processor with screen (as per product standard specification) or minimum of Windows 10 (64-bit), i5 (min) PC <b>with</b> FHD Monitor
Pump mechanism	Diaphragm or rotary pump
Upgradable	Upgradable to accommodate elemental analysis

#### Service level agreement for SEM

Service level agreement	5 year service level agreement for the microscopes
	Annual service included
	One emergency call out per year included (spare parts excluded).
	Company has support personnel and facilities in South Africa.

The required desktop SEM microscope will primarily be used for the following life science applications:

- Ultra-structural skeletal morphology of various marine invertebrates (e.g. sponge spicule preparations).
- Microfossils and subsampled fossil material (e.g. foraminifera)
- Entomology specimens (e.g. Collembola and other soil invertebrates)
- Osteology and hair preparations (e.g. terrestrial vertebrate bones and hair)

Secondarily it may also be used for:

- Archaeological artefacts of a wide variety (e.g. fibres and wood preparations).
- Micro samples from artworks (e.g. paint flakes)

#### 4. SCOPE OF WORK

The service provider shall supply a solution and quotation, as per the scope of work set out above.

**The Solution must include:**

- Five year service plan – yearly service of all microscopes as detailed above
- General support (including training for the use of equipment and software);

#### 5. BID DOCUMENTS REQUIRED

The service provider must abide by Iziko’s Supply Chain Management policies and procedures by submitting the following bid documents.

**The proposal should include the following mandatory documents:**

Order	Mandatory documents to be submitted <u>in the order as indicated below</u>
1.	<b>Index</b> confirming all contents
2.	<b>Cover Letter</b> with signed acceptance of our invitation and acknowledgement of our stated requirements and terms.
3.	<b>Company Profile and background</b>
4.	<b>Training programmes and call-out centres</b>
5.	<b>References of similar projects in the past 5 years</b>
6.	<b>Portfolio of Evidence</b> Specifications of the SEM proposed as indicated in <b>paragraph 3 (Technical Specifications)</b>

7.	<b>Detailed pricing structure</b> A cost schedule detailing the full cost breakdown, inclusive of VAT and any disbursement and escalations, if applicable, for the Scanning Electron Microscope. <b>(Refer to Appendix A)</b>
<b><u>STANDARD BIDDING DOCUMENTS:</u></b>	
8.	Valid BB-BEE Verification Certificate from a Verification Agency accredited by the South African National Accreditation Systems (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) confirming micro enterprise with annual turnover less than R10 million per annum.
9.	Occupational Health and Safety Agreement (Annexure B)
10.	Confidentiality and Non-Disclosure Agreement (Annexure C)
11.	Central Supplier Database Report – With supplier number and company details ( <a href="http://www.csd.gov.za">www.csd.gov.za</a> )
12.	SBD 1 - Invitation to submit a proposal
11.	SBD 3.1 - Pricing Schedule: Firm Prices
12.	SBD 4 - Declaration of Interest
13.	SBD 6.1 - Preference Points Claim
14.	SBD 8 - Declaration of bidder's past Supply Chain Management Practices
15.	SBD 9 - Certificate of Independent Bid Determination

**NOTE:**

- ***All documentation must be presented in the order specified above.***
- ***Each section must be clearly referenced using dividers, indicating sections 1 - 15.***
- **Failure to supply any of the documents stipulated above, in the format requested may lead to the proposal being disqualified.**

**6. EVALUATION OF PROPOSAL**

**6.1 Functionality Criteria**

A proposal that scores lower than the minimum overall percentage of 70% (350 out of 500) will be regarded as a non-responsive bid and will be disqualified. All bids that score 70% (350) and more for functionality will be eligible for further evaluation.

**Values for scoring:**

- 1:** One or more critical components have not been supplied, so the **service is incomplete.**

- 2: All critical components have been supplied but one or more do not measure up to critical requirements for operating the laboratory and thus the **service is sub-standard**.
- 3: All critical components have been supplied; functionality and quality of service **good and/or in the lower third** of the viable options presented by suppliers.
- 4: All critical components have been supplied; functionality and quality **very good and/or in the middle third** of the viable options presented by suppliers.
- 5: All critical components have been supplied; functionality and quality **excellent and the best, or matching the best**, of the viable options presented by suppliers.

	Functionality Criteria	Weight
1.	<b>Ability to provide the full system according to specifications:</b>	
	SEM Unit with Backscatter Electron Detector and meets magnification and acceleration voltage	<b>20</b>
	Secondary Electron Detector	<b>15</b>
	Stage Controls and functionality	<b>10</b>
	Computer and Image display	<b>10</b>
	Pump mechanism	<b>5</b>
	Upgradable	<b>5</b>
2.	Installation experience	<b>10</b>
3.	Ability to provide maintenance, call-out support and warranties	<b>15</b>
4.	Ability to provide training programmes/workshop/demonstration and transfer skills	<b>10</b>
	<b>TOTAL WEIGHTING</b>	<b>100</b>

## 6.2 Awarding of preference points

Only qualifying proposals will be evaluated for preference points in terms of the preference point system described in Preferential Procurement Regulations of 2011, after meeting the minimum stipulated threshold for functionality criteria, as follows:

Preference Point Criteria		Points Allocation
1.	Price	80
2.	Broad-Based Black Economic Empowerment (B-BBEE)	20
<b>TOTAL POINTS</b>		<b>100</b>

### 6.2.1 Price

Price is an important factor as it ensures optimum value for money and total cost to Iziko and should take into account all required elements of the Scanning Electron Microscope.

A cost schedule detailing the full cost breakdown, including VAT, any disbursements and escalations (if applicable) etc. for the Scanning Electron Microscope is conducted.

### **6.2.2 B-BBEE**

A B-BBEE Preference claim form (SBD 6.1) must be included in all bids submitted. This form serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) status level of contribution.

## **7. PRICING PROPOSAL**

- Pricing proposals must be cross referenced to the functional sections. Any options offered must be clearly indicated and separate pricing must be provided for each option offered to ensure that pricing comparisons are clear and unambiguous.
- Price must be stated in South African Rand (incl. VAT) with details on price elements that are subject to escalation and fluctuations clearly indicated.

## **8. VALIDITY PERIOD OF PROPOSAL**

The proposal shall be valid for a minimum period of three (3) months calculated from the closing date.

## **9. FORMAL CONTRACT**

- The proposal and appended documentation read together form the basis for an agreement to be negotiated and concluded in a formal contract between Iziko and the preferred service provider.
- A mere offer and acceptance shall not constitute a formal contract of any nature for any purpose between Iziko and the preferred service provider.

## **10. REASONS FOR DISQUALIFICATION**

Iziko reserves the right to disqualify any service provider on the following grounds, and any such disqualification may take place without prior notice:

- A service provider submits a proposal late;
- A service provider submits a proposal via fax or e-mail;
- A service provider submits incomplete documentation and/or information as per the requirements stipulated in this brief;
- A service provider submits information that is fraudulent, factually untrue or inaccurate;
- A proposal does not meet the required minimum stipulated threshold points.

## 11. GENERAL PRINCIPLES

The evaluation process is based on the following principles:

- Iziko will apply the 80/20 preferential points system.
- Iziko applies the provisions of the Preferential Procurement Policy Framework Act, Act No. 5 of 2000), the Preferential Procurement Regulation of 2017, the Public Finance Management Act (PFMA) and the Framework for Supply Chain Management.
- The lowest or only quotation received will not necessarily be accepted.
- Iziko reserves the right to accept or reject any quotation in response to the request for proposal and to withdraw its decision to seek the provision of these services at any time.

**Kindly note, correspondence will be entered into only at the discretion of Iziko.**

## 12. DELIVERY APPROACH

The successful applicant shall, on signing the agreement, commence with business on a date agreed to by both parties.

## 13. CLOSING DATE FOR SUBMISSIONS

Closing date and time: **Monday 15 January 2018 at 12h00.**

**WRITTEN OR TELEPHONIC QUERIES MUST BE DIRECTED TO:**

**Supply Chain Related:**

**Ms Noluyolo Ngwilikane**

**Supply Chain Manager**

Iziko Museums of South Africa

Switchboard: +27 (0) 21 481 3800

Direct Line: +27 (0) 21 481 3889

Fax: +27 (0) 21 481 3993

Email: [nngwilikane@iziko.org.za](mailto:nngwilikane@iziko.org.za)

**Technical Issues:**

**Wayne Florence**

**Curator: Marine Invertebrates**

Iziko Museums of South Africa

Switchboard: +27 21 481 3800

Direct Line; +27 21 481 3919

E-Mail: [wflorence@iziko.org.za](mailto:wflorence@iziko.org.za)

The submission(s) must be submitted in a **sealed** envelope in **three copy formats and pricing in a separate envelope**, clearly marked with the reference ***R&E/SEMSystem/12/2017***.

Documents must be placed in the box for tenders situated at the Iziko South African Museums' entrance/reception and it must be addressed to:

**Iziko Museums of South Africa**

**Chief Financial Officer, Ms Ronell Pedro**

**PO Box 61  
Cape Town  
8000**

**For all submissions a supplier must sign a register as proof of submission and ensure proposals are placed inside the tender box.**

**No late submissions or submissions via facsimile or e-mail will be accepted.**

Address: **Iziko South African Museum,  
25 Queen Victoria Street,  
Cape Town**

**All courier/posted tender proposals must reach Iziko Museums by the closing date and time as specified above.**

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