

## IZIKO BIODIVERSITY LABORATORY MICROSCOPES

Reference: R&E/BIOLABSystem/10/2017

### *Tender request for bid to provide microscopes for the Biodiversity Laboratory in the Iziko South African Museum*

Iziko Museums of South Africa (Iziko) invites suitably experienced service providers to submit a tender proposal for the supply and installation of microscopes as per the required technical specifications, including value added products and services at 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 new Biodiversity Laboratory. This facility needs to be fitted with microscopes and associated peripherals to enable teaching and training for a broad audience (from school children through to professional scientists), high throughput processing of a diversity of animal taxa (wet samples, dry samples, fossils up to 10 cm length), and collaborative research involving imaging, measuring and accumulation of data in a central database.

#### **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 essential requirements and technical specifications has been compiled according to the projected future needs of the laboratory. Iziko requires one supplier with an established track record and service capability in the field of microscopy and imaging.

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

**Stereo microscopes (15 units)**

Specification	10x eyepieces, focus adjustable and adaptable for eyeglasses
	Supplied with the following lens objectives: 1x, 0.5X and either 1.6X or 2.0X.
	Minimum magnification of 5 x or less with 10x eyepieces and 1x objective.
	Maximum magnification 70 x or more
	Continuous zoom focus as well as calibrated notch increments
	Minimum of manual focus drive including both coarse and fine adjustment with a minimum column height of 450 mm. Do not want movable arm.
	Medium wide base (about 30 cm diameter) with anti-shock properties. Should also include transmitted light facility with Brightfield and Darkfield illumination built in.
	Magnification should be automatically detectable by software.
Camera	Minimum of 5 megapixel camera with live-view link through to associated computer and screen.
Gliding stage	Removable gliding stage supplied.
Additional light sources	Modular and removable LED-based light source designed to create a diffuse all-round ambient lighting environment by reflecting and diffusing the light off an enclosed surface, with only diffused, scattered light hitting the object. This is a critical type of light source that vastly improves the image, particularly of small, glossy specimens, and is used in most applications.
	Modular and removable LED ring light with separate controller with adjusting knobs for segment control, rotation and light intensity. Should also include darkfield ring illuminator.
	Modular and removable LED fibre-optic spot/gooseneck lighting.

**Mid-level compound microscopes (5 units)**

Specification	30 degree Binocular Tube
	10X focusing eyepieces with focusable eyepieces and eye guards
	12V 35W halogen transmitted light illumination
	Objectives: 4X/0.10; 10X/0.25; 40X/0.65; and 100X/1.25 OIL immersion
	PHASE capacity at 40X, 100X
	Condenser with 5X and 2.5X objectives, BF, DF, phase
	Controls to be switched over from the right- to the left-hand side of the microscope quickly and easily
	Magnification should be automatically detectable by software.
Camera	Minimum of 5 megapixel camera with live-view link to associated computer and screen.

### High-end compound microscope (1 unit)

Specification	30 degree Binocular Tube
	10X focusing eyepieces with eye guards
	12V 100W Halogen light illumination
	Stand should have motorized transmitted light illumination control.
	Objectives: 4X/0.10; 10X/0.25; 40X/0.65; 63X 1.25 OIL immersion and 100X/1.25 OIL immersion for viewing both cover slip mounted slides and concavity slides
	PHASE capacity at 40X, 63X and 100X
	DIC capacity at 40X, 63X and 100X
	Objectives should be separate for DIC and PH
	Condenser with 5x and 2.5x objectives, BF, DF, phase, DIC
	Controls to be switched over from the right- to the left-hand side of the microscope quickly and easily
	Magnification should be automatically detectable by software.
Camera	Minimum of 10 megapixel Camera with Wi-Fi and Ethernet capacity
Drawing capability	Physical drawing tube or alternative digital solution.

### Service level agreement for all 21 microscopes

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 Cape Town.

### Imaging and analytical software (22 copies, one installed on each computer)

Specification	Must be able to interact with the camera on the microscope, with live view and do basic imaging
	Changes in magnification on microscope due to changes in zoom or lens combination automatically monitored by software so that manual input of magnification not required for measuring and calculation of scale bar.
	Able to add scale bar to image.
	Measurement in live view.
	Measure length between two points in a straight or curved line.
	Measure perimeter of structure.
	Measure area of structure.
	Provide automated data capture into a matrix or data record.
	Central teaching computer needs to be able to display a live view from any one of the student microscopes.
	Extended manual focal imaging capacity using appropriate software containing algorithms for amalgamating a series of stacked images into a single in-focus image.
	Support for different file formats.
	Free software updates should be available online.

## Desktop computers, one for each microscope plus a central teaching computer (22 units)

Specifications for each computer	Windows 10, 64 bit Pro operating system
	Ethernet connection
	WiFi enabled
	At least 2 USB3 ports; at least 6 USB ports in total.
	16 GB RAM
	1 terabyte hard drive
	Solid-state drive for fast boot up, minimum 256 GB
	Intel Core i7 processor (Kaby Lake generation) 2017-generation graphics card, minimum 2 GB GDDR5.
Screen	Each computer with attached monitor: minimum 23 inch size; minimum 1920 x 1080p resolution.

### 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 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 proposal including the following documents:

Order	Documents to be submitted in the order as indicated below
1.	Index confirming all contents
2.	Cover Letter with signed acceptance of our invitation and acknowledgement of our stated requirements and terms
3.	Company Profile, background and References of projects completed
4.	Portfolio of Evidence for the specifications of the microscopes (as detailed in page 1-4)
5.	<b>Detailed pricing structure:</b> A cost schedule detailing the full cost breakdown, inclusive of VAT and any disbursement and escalations (as per the template provided – see Appendix A)
<b><u>STANDARD BIDDING DOCUMENTS:</u></b>	
6.	Original or Certified copy of Valid B-BBEE Certificate (from SANAS accredited Verification Agency) or from the Auditors approved by the Independent Regulatory Body of Auditors (IRBA); Any EME (Exempt Micro Enterprise) or QSE (Qualifying Small Enterprise) is only required to obtain a sworn affidavit on an annual basis, confirming the following; Annual Total Revenue of R10 Million or less (EME) or Revenue between R10 Million and R50 Million for QSE;Level
7.	Central Supplier Database Report – with supplier number and company details ( <a href="http://www.csd.gov.za">www.csd.gov.za</a> )
8.	Occupational Health and Safety Agreement (Annexure B)
9.	Confidentiality and Non-Disclosure Agreement (Annexure C)

10.	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) **AND/OR** which has any Functionality Criteria for which a score of 1 or 2 was given, will be regarded as a non-responsive bid and will be disqualified. All bids that score 70% (350) or more for functionality and which have no Functionality Criteria scores of 1 or 2 will be eligible for further evaluation.

#### Values for scoring:

- 1: One or more critical components have not been supplied, so the **service is incomplete**. The laboratory will not be able to function properly with the critical component(s) missing.
- 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**. The laboratory will not be able to function properly with under-delivery on the critical component(s).
- 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.

No.	Functionality Criteria	Weight
1.	<b>Ability to provide the full system according to specifications:</b>	
	Stereo microscopes (excluding additional light sources and cameras)	15
	Additional lighting sources for stereo microscopes	15
	Compound microscopes (excluding cameras)	10
	Cameras for microscopes	10
	Software (Imaging and analytical software)	15
	Computers	10
2.	Installation experience	5
3.	Ability to provide maintenance, call-out support and warranties	15
4.	Ability to provide training programmes/workshop/demonstration and transfer skills	5
	<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 2017, 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>

## 7. REASONS FOR DISQUALIFICATION:

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

- Submission of incomplete documentation and / or information as per the requirements.
- Failure to submit any of the documents stipulated.
- Submission of information that is fraudulent, factually untrue or inaccurate.

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

## 8. AWARDING OF PROPOSALS:

- As a public entity, Iziko complies with the Supply Chain Management Framework of National Treasury and is therefore responsible for ensuring a fair, equitable, transparent, competitive and cost effective procurement process for goods and services.
- All proposals will be considered by a bid evaluation committee, which will make a recommendation to the Bid Adjudication Committee.
- Iziko is not bound to accept any proposal and reserves the right to cancel, withdraw or not to award services, as well as to re-advertise at its sole discretion. Responding to the request does not automatically qualify the suppliers as registered or preferred service providers. Should you not receive a response within 3 (three) months of the closing date, please regard your proposal as unsuccessful.

## 9. DELIVERY APPROACH:

- The successful applicant shall, on signing the agreement, commence with business on a date agreed to by both parties. **Goods need to be delivered within one month (1) of placing the order.**

## 10. 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 tender invitation and not to appoint a service provider.

## 11. FORMAL CONTRACT

- All the appended documentation and the proposal read together, forms the basis for a formal agreement to be negotiated and concluded in a formal contract between Iziko and the Service Provider.
- A mere offer and acceptance shall not constitute a formal contract of any nature for any purpose between Iziko and any Service Provider.
- The successful bidder/s will be contracted to provide the goods/services for a period to be agreed after which Iziko reserves the right to review and extend the contract for further period/s at Iziko's discretion.

## 12. CLOSING DATE AND TIME

Closing date: 20 November 2017 at 12:00

### 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:

**Simon Van Noort PhD**

**Curator: Entomology**

Iziko Museums of South Africa

Switchboard: +27 21 481 3800

Direct Line; +27 21 481 3865

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

### SUBMISSIONS

The submission(s) must be submitted in a **sealed** envelope in **three copy formats**, it must be placed in the box for tenders situated at the Iziko South African Museums and it must be addressed to:

**Ms Ronell Pedro**

**Chief Financial Officer**

Iziko Museums of South Africa

25 Queen Victoria Street

Cape Town

8001

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

**Address:** Iziko Museums of South Africa,  
25 Queen Victoria Street,  
Cape Town