

REQUEST FOR TENDER

Terms of Reference for:

Appointment of a service provider for systems hosting and administration for databases, images, digitized documents and associated applications for the Natural Science Collections Facility (NSCF) for a three-year period

Tender Number: SANB: NSCF416/2022

Closing date: 08 March 2022

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1. Introduction and background

The Natural Science Collections Facility (NSCF) is one of the projects selected by the Department of Science & Innovation (DSI) for implementation as part of the South African Research Infrastructure Roadmap (SARIR).

The NSCF comprises a network of 16 institutions (universities, museums, science councils) that hold preserved natural science collections, with a Co-ordinating Hub at the South African National Biodiversity Institute (SANBI). Over 20 million specimens are held, representing mammals, birds, reptiles, frogs, fish, insects and other invertebrates, plants and fossils. Further information is available at <https://nscf.org.za/>.

The NSCF Business Plan includes objectives related to specimen databases, imaging of specimens and digitization of archival documents, and increasing access to and use of collections by making these three forms of digital assets accessible online. These objectives are the joint responsibility of the NSCF Lead and the NSCF Data Co-ordinator, who are employed through SANBI, and who will be responsible for managing this contract and working with the appointed service provider.

Some of the institutions participating in the NSCF have their own IT systems that allow storage of databases, images and archival documents, but in other cases, the NSCF is required to assist with provision of this service. The goal is to have one location where institutions can have their specimen databases hosted, as well as their images of specimens and digitised archival documents managed in a way that these can be easily accessed and updated by staff, and verified by managers and auditors, as required. The technical support for setting up and maintaining systems will also be provided. SANBI, on behalf of the NSCF, therefore requires the services of a suitably equipped and capacitated contractor to provide systems hosting and administration for databases, images, digitized documents and associated applications for a period of three years, from 1 April 2022 to 31 March 2025.

The software used for collections data management used by the institutions is Specify, which is open source software currently used by over 500 natural science collections in 44 countries around the world (www.specifysoftware.org). It managed an inventory of the specimens held in a collection, and provides functionality for bulk import of new specimen records, tracking specimen condition and storage location in the collection, managing loans of specimens to external parties, generating specimen labels, and publishing specimen data online through platforms such as GBIF. Specify 7 is a web version of the collections data management platform. Specify 7 server code is open source and available from GitHub, and there is an extensive set of documents and videos to assist users with set-up and operations of the software. The NSCF is a full member of the Specify Consortium, which enables access to technical support services.

The Living Atlases software is also open source, with a global community of developers and users. It allows for the development of a web portal for data aggregated from a number of different sources, essentially providing a 'one stop shop' for data users. This software will allow online access to the different digital assets in a meaningful way, including specimen records, specimen images, and digitized documents. Further information and links to examples where this platform is available at <https://living-atlases.gbif.org/>.

2. Invitation for tender

Tenders are hereby invited for **systems hosting and administration for databases, images, digitized documents and associated applications for the Natural Science Collections Facility (NSCF) for a three-year period**. The tender process will be co-ordinated by SANBI Supply Chain Management (SCM) section at the following address:

Deputy Director: Supply Chain Management (SCM).

The South African National Biodiversity Institute (SANBI)

Private Bag X101, Silverton, 0184

The tender closes on: **8 March 2022**

3. Tender specifications/ Scope of work

A three-year contract is offered for systems hosting and administration for databases, images, digitized documents and associated applications for the Natural Science Collections Facility (NSCF).

Note that for this tender the following pre-qualification criterion for preferential procurement will be applied:

- **Section 4(1) (a) a Tenderer having a minimum B-BBEE status level of contributor; level 1 (A certified copy or original valid B-BBEE Status Level Certificate or sworn affidavit is required).**

Only service providers that are B-BBEE level 1 are eligible to tender for this contract.

The following deliverables are required for this contract:

3.1 Specify Database Instance set-up, hosting and administrative support

Provide a hosting platform, set-up and systems administration support for 10-20 Specify instances. A Specify instance requires the following:

- Server specifications for hosting databases: Virtual server with minimum 32GB RAM, 4CPUs and 25GB storage (but see additional storage requirements below).
- Ubuntu ~Version 20.04 LTS.
- A MySQL 5.7 (not higher) database server.
- Java Runtime Environment and Specify 6 software installation (see www.specifysoftware.org/support/documentation).
- Specify 7 web application (Python/Django application, see www.specifysoftware.org/support/7-documentation/ for requirements).
- Nginx may be required to manage https traffic across the 10-20 instances.
- File storage starting at 1TB with capacity to increase over time (years) according to needs to a maximum of 5TB.
- Specify attachment server (github.com/specify/web-asset-server).
- Node, Visual Studio Code, git, MySQL Workbench, Google Chrome.
- Custom domains and security certificates for each Specify instance.
- Remote access for Specify admin users (3-5), including access permissions for the filesystem, and use of various other software on the platform for various administration and maintenance tasks, file downloads/uploads, access to Github.
- Docker instances meeting these requirements, excluding file storage, are acceptable/preferred to save on server space required.
- An automated backup system to make daily, off-site backups of the Specify (MySQL)

database and stored files (approximately 5TB).

- Systems administration support to ensure uptime, update certificates, fix system errors, etc.

Note that the user community for each Specify instance is typically small (<10 people) and their use of their database is typically only sporadic, e.g. a few hours per week.

3.2 Hosting for a Living Atlases instance

(For more information see

<https://github.com/AtlasOfLivingAustralia/documentation/wiki/Infrastructure-Requirements>):

- The following modules are required: collectory, biocache-hub, biocache-service, biocache-store, image-service, authentication, logger.
- Virtual server requirements: Two servers or equivalent each with 8CPUs, 32GB RAM and 25GB SSD disk space.
- Ubuntu 18.04
- Apache/Nginx
- Java Runtime Environment and Groovy, Grails and Scala.
- Apache SOLR
- Apache Cassandra
- MySQL and PostgreSQL
- MongoDB
- Elasticsearch
- An automated backup system to make daily off-site backups of the LA data.
- We estimate the LA platform hosting will require the equivalent of two dedicated servers to begin with, increasing to three during the contract period.
- Systems administration support for maintenance and updates, ensuring uptime, security certificates, fix any system errors. This is open source software, with a good international support community.

3.3 File storage for digital images (primarily TIFF) and documents (primarily PDF)

- Capacity in Year 1 of 5TB and increasing to 30TB by Year 3. **Note this is additional to the file storage requirements for Specify above.** This is in part to serve the file storage requirements of the Living Atlas instance indicated but will also be managed as an archive in its own right.
- Access control to the storage must allow users from different institutions to access their own directories and files, but not those of other departments or institutions, for direct file management.
- A basic web server will also be required to serve files from storage to web applications such as the LA instance, GBIF, etc.
- Backup of this file storage system is not required as backups will be managed in-house.

3.4 Systems administration support for hosting the systems specified above

This includes set-up, routine maintenance and trouble shooting. We estimate a maximum of four hours per week needed for support after systems set-up is completed. Set-up of each system (Specify and Living Atlas) is expected to be 1-2 weeks. The service provider will be expected to respond to requests for assistance at any time during standard working hours.

3.5 Technical support for transfer of the above systems to a new service provider at the end of the 3-year contract period.

The service provider will be expected to provide technical support for the transfer of

the systems to another service provider at the end of the contract.

All relevant information required for a new service provider to set up and take over technical support of the systems must be documented, and submitted for approval by the NSCF Data Co-ordinator.

4. Minimum resource requirements to qualify for this contract

In order to qualify for this contract, service providers are required to meet the following minimum specifications:

4.1. Staffing: at least **two qualified system administrators, with a minimum of 5 years working experience each, including experience in the software listed in 3.1 and 3.2 above.** We require two systems administrators allocated to this contract for a total of 4 hours per week so that they become familiar with the systems and are able to provide timely support. The expectation is that the two systems administrators allocated to this contract will be consistent so that there is continuity for the contract period. There should be one primary administrator who is mainly responsible for the services required for the contract, but a secondary administrator familiar with the work should be able to step in when the primary administrator is off on leave or away from work for some other reason.

4.2. Infrastructure: the service provider must have access to **cloud-based infrastructure** that meets the requirements indicated in Section 3 above.

Note that a service level agreement stipulating required system uptime and -response times for support requests and resolution will be compiled on awarding the contract and after discussion with the successful service provider.

5. Documents required

Mandatory documents required:

Tenders must include the following documentation (**Failure to submit this required documentation WILL lead to disqualification**):

- A letter of Good Standing from the office of the Compensation Commissioner as required by the Compensation for Occupational Injuries and Diseases Act (COIDA), if applicable. The letter should be issued by the Department of Labour.
- A copy of the Central Suppliers Database (CSD) registration report.
- Fully completed SBD forms.
- UIF compliance demonstrated by submission of one of the following:
 - A valid copy of the UIF Letter of Compliance issued by the Department of Labour, or
 - Labour uFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or
 - SARS eFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or
 - Valid proof of exemption for UIF.
- In the case of service providers who have employees (i.e. a company rather than an individual consultant), a UIF Compliance Certificate and COIDA Letter of Good Standing must be submitted as requested above.
- Sworn Affidavit for EMEs and QSEs verification.

- Fee/cost structure as specified in Table 1 below **to be submitted with “original” tender document only.** Inclusion of pricing in any ‘copy’ will result in the tender being rejected.

Table 1: Costing template for completion and submission with the original documents only:

Item	Specification	Price	Price – Year 1	Price – Year 2	Price – Year 3
Hosting cost	32GB RAM, 8CPUs 25GB SSD storage; Ubuntu OS and additional software x 3	Monthly cost per server: Total monthly cost (for 3 servers):			
File Storage*	Anticipated Storage Year 1 16TB Year 2 – 15 TB Year 3 – 30TB Backup storage for Specify– 5TB per year	Cost per TB storage space Year 1 (11TB): Year 2 (20TB) Year 3 (35TB)			
Install and configure 10-20 Specify instances	For year 1 only: 80 hours	Cost per hour:	Total for 80 hours =	_____	_____
Install and configure Living Atlas instance	For year 1 only: 80 hours	Cost per hour:	Total for 80 hours =	_____	_____
Systems administrative and database administrative support – routine maintenance and troubleshooting; backups, security updates, software version upgrades on instance and all open source system software monthly report compilation	4 hours / week x 52 weeks = 208 hours / year + 42 hour / year contingency = 250 hour / year total time	Cost per hour:	Total for 250 hours =	Total for 250 hours =	Total for 250 hours =
Technical support for transfer to systems at end of contract period Provision of documented relevant information required	Year 3 only: 80 hours	Cost per hour:	_____	_____	Total for 80 hours =

for a new service provider to set up and take over technical support of the systems					
Totals (excl. VAT)		-----	R	R	R
VAT			R	R	R
Totals incl. VAT		-----	R	R	R
TOTAL VALUE	(Total for Year 1 + Year 2 + Year 3 (incl. VAT))				

*Note that the service provider will bill SANBI according to the actual amount of server space and hours of support time used by the NSCF. The values stated here are indicative of the upper limit. The cost per unit (hour or TB) quoted in the submission will be the rate used in the contract. The total value of the contract will be determined from the values in this table and may not be exceeded.

The pricing quoted here must include all overheads.

Note that any travel arrangements that may be required for this contract will be made by SANBI and should not be costed here.

Other documents for evaluation:

Each tender document should also include the following documentation, although failure to submit these documents will not result in disqualification. However, the information contained in them is required for evaluation purposes:

- A proposal detailing the approach to be used for the set-up, hosting and system administration and transfer at the end of the contract period. This should include the roles and responsibilities of the staff assigned to the contract.
- CVs of the staff to be involved in this contract, detailing qualifications, training and relevant experience.
- A summary of similar projects carried out over the last five years, and two positive reference letters for these contracts.
- Details of the facilities, equipment and infrastructure available in line with the requirements for this contract.

6. Compulsory online briefing session

A virtual compulsory briefing session will take place on **18 February 2022** from **09:00 to 10:30** on Microsoft Teams.

Meeting Link: https://teams.microsoft.com/l/meetup-join/19%3ameeting_Yjk4NWFhMTAtMjlmNy00Mm11LWJhYTQtNTUxNjA1OTI4Y2My%40thread.v2/0?context=%7b%22Tid%22%3a%220b847c5e-73e2-4441-8789-9c092d2dd489%22%2c%22Oid%22%3a%229a6b09ef-333e-49a9-910a-f4bb699ee430%22%7d

7. General terms

- All documents submitted in response to this Terms of Reference (ToR) must be written in English. All tenders will be valid for a period of four months (120 days) calculated from the closing date of this tender.
- Bidders may direct technical and bidding procedure enquiries to the email addresses below.

For bidding procedure enquires: sanbi.tenders@sanbi.org.za.

For technical enquires: I.Engelbrecht@sanbi.org.za.

- SANBI will not respond to any technical questions or requests for clarification if received after 25 February 2022. All questions submitted by prospective bidders and responses to these questions by SANBI will be forwarded to all bidders who attended the briefing session.
- The appointment as a successful service provider shall be subject to all parties agreeing to mutually acceptable contractual terms and conditions. In the event of all parties failing to reach an agreement within 30 days from the appointment date, SANBI reserves the right and shall be entitled to appoint the second highest bidder, or to re-advertise should that Service Provider not be acceptable.

8. Responsibilities of the service provider

The service provider will be responsible for:

- Providing appropriate cloud server space.
- Set-up of the Specify instances and the Living Atlas instance.
- System administration, including daily, off-site backups, routine maintenance and trouble shooting.
- Being available to respond to requests for assistance relating to the scope of work within a day of the request being submitted.
- Providing technical support for the transfer of the Specify and Living Atlas instances and the images and documents stored to a new service provider in the last month of the contract.
- Issuing invoices to SANBI according to the milestones that will be detailed in the contract.

9. Responsibilities of SANBI

SANBI will be responsible for:

- Facilitating the transfer of the Specify databases to the service provider.
- Facilitate communication with the Living Atlas staff.
- Upload and manage the images and archival documents on the server.
- Payment of invoices from the service provider within 30 days of receipt.

10. Functionality evaluation criteria and PPPFA requirements

In accordance with the National Treasury Instruction Note on the Amended Guidelines in Respect of Bids that include Functionality as a Criterion for Evaluation (issued 3 September 2010), this tender will be evaluated in two stages:

The first stage will evaluate functionality according to the criteria listed in the table below:

Table 2: CRITERIA FOR EVALUATING FUNCTIONALITY	WEIGHT
<i>Past Experience:</i> This refers to the experience of the Tenderer to undertake the scope of work involved in this Tender. (a) Description of projects similar in scope to this tender carried out in the last five years (1-2 relevant projects = 1 point; 3-4 relevant projects = 10 points; 5 relevant projects = 15 points; >5 relevant projects = 20 points) (b) Two positive reference letters for work previously completed (5 points each)	30 (20) (10)
<i>Team Capacity:</i> The Tenderer should demonstrate the capacity of the team to carry out the work required in this Tender. (b) CVs for the two staff who will be responsible for managing and implementing this contract. The following will be assessed: (i) qualifications, training received, skills relative to the requirements listed in points 3.1 and 3.2 (ii) years of experience of the staff relevant to this Tender and especially in terms of the software listed in points 3.1 and 3.2 (total for two staff members: 8+ years = 10 points; 4-8 years = 5 points; <4 years = 1)	30 (15) (15)
<i>Proposed approach and technical merit of the proposal:</i> (d) Proposal presentation (spelling, grammar, layout, completeness) (e) Extent to which the proposal addresses the specific brief for the services required, including proposed mitigation should infrastructure fail, staff involved leave the company or be incapacitated in any way, or for any other major risk.	40 (10) (30)
TOTAL	100

Bids that fail to score a minimum of 70 points out of 100 points for functionality will not be eligible for further consideration.

The second stage will evaluate the price and Broad-Based Black Economic Empowerment (B-BBEE) preference points of those bids which meet the minimum threshold for functionality. In accordance with the Preferential Procurement Regulations, 2011 pertaining to the Preferential Procurement Policy Framework Act (No. 5 of 2000), the 80/20 point system will be applied in evaluating proposals that qualify for further consideration, where price constitutes 80 points and 20 points will be awarded based on the bidder's B-BBEE Status Level Certificate.

Sufficient information must be provided to allow the Bid Evaluation Committee to score bids against all these criteria.

11. Confidentiality

Any or all information made available to the service provider by SANBI shall be regarded as confidential and shall not be made available to third parties without the prior written consent of SANBI.

12. Preparation of proposal

SANBI shall not be held liable for any cost that has been incurred by the service provider in the preparation of the proposal, the obtaining of certificates or any other cost that might be incurred in submitting the proposal.

13. Tender documentation availability

Bidders are requested to download the tender documents from the SANBI website www.sanbi.org.

14. Contract and contract period

The service provider will be required to sign a contract with SANBI and this will be performance based.

The contract period is for 36 months, with the implementation dates anticipated to be from 1 May 2022 to 30 April 2025.

15. Pricing specifications

The following costing information must be provided **only in the envelope with the original documents**.

- A budget for the proposed work as specified in Table 1. This costing should include all costs associated with the scope of work.

16. Compliance reports and meetings

The service provider will be expected to provide reports in writing at agreed on intervals as well as a final report that outlines details of all information of relevance for the handover of the content to a new service provider at the end of the 3-year contract.

17. Safety, health and environmental requirements

All service providers entering into a contract with the South African National Biodiversity Institute (SANBI) shall, as a minimum, comply with the following requirements, if applicable:

- The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1996): The service providers will be required to submit a letter of good standing from the office of the Compensation Commissioner as required by the Compensation for Occupational Injuries and Diseases. The letter should be issued by the Department of Labour.
A current, up-to-date copy of the Compensation for Occupational Injury and Diseases Act (COIDA) shall be available on site at all times.
- National Environmental Management Act (Act No. 107 of 1998). The South African National Biodiversity Institute Health and Safety specification and relevant policies, including SANBI Covid-19 protocols.

18. Exclusivity

The successful service provider is not guaranteed of any business from SANBI that may be arising from time to time pertaining to similar or other services. The service provider will be entitled to compete on an equitable basis for any such business on a quotation or tender basis.

19. Fraud and Corruption

- Any effort by a Bidder to influence the bid evaluation, bid comparisons or bid award decisions in any matter, may result in rejection of the bid concerned.
- The SANBI shall reject a submission if the Bidder has committed a proven corrupt or fraudulent act, or any other improper conduct in bidding for any other work.
- The SANBI may disregard any submission if that Bidder, or any of its directors -
 - have abused the Supply Chain Management (SCM) system of any Government Department/ institution;
 - have committed proven fraud, corruption or any other improper conduct in relation to such system;
 - have failed to perform on any previous contract and the proof thereof exists; and/or is restricted from doing business with the public sector if such a bidder obtained preferences fraudulently or if such bidder failed to perform on a contract based on the specific goals.

20. Submission of tender

Service providers are to submit (1) printed document **with pricing** included in an envelope, marked 'ORIGINAL', and in a separate envelope provide a copy of the document **without pricing** as a PDF file on a memory stick.

NB: Failure to submit one printed document with pricing in one envelope, and a document without pricing on a memory stick will lead to your bid being disqualified.

Tenders can be submitted in the tender box located in the Biodiversity Building at the Pretoria National Botanical Garden, 2 Cussonia Avenue, Brummeria, Pretoria, during office hours (08:00 – 16:00). Tenders may also be submitted by post, addressed to:

Deputy Director: Supply Chain Management.

The South African National Biodiversity Institute (SANBI)

Private Bag X101, Silverton, 0184

Tender Number: **SANBI: NSCF416/2022**

NB. All documents must be clearly labelled.

Closing date for submissions is: 11:00 on 8 March 2022.

Note: E-mailed and faxed submissions will not be accepted. Late submissions will be disqualified.
