

LABORATORY INFORMATION MANAGEMENT SYSTEM

Scope of Work

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Function/Business Unit: Laboratory Richards Bay and Phalaborwa

Executive Summary

Foskor (Pty) Ltd is a proudly South African producer of phosphates and phosphoric acid with international exposure. Foskor is the only vertically integrated phosphate producer in the South. Africa. From phosphate-bearing ores, the operations in the Phalaborwa mine and Richards Bay Acid Division process phosphate rock concentrate, which is crucial for stimulating and raising crop yields. The Richards Bay plant manufactures sulphuric acid, phosphoric acid, and phosphate-based granular fertilizers (MAP and DAP) by using phosphate rock as a raw material. The corporate office is situated in Midrand.

Further information about Foskor can be found at www.Foskor.co.za

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Version Control

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1 Approval

	Approval			
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2 Introduction / Project Background

LIMS is a laboratory information management system that supports laboratory operations. It is mainly used for tracking samples, workflows, and aggregating data for research or business intelligence purposes, as well as to ensure laboratory operations are compliant with various standards and regulations.

Foskor implemented the current LIMS system in 2006 and named it FOSLIMS due to how its specifications were customized to meet Foskor's Product specifications at the time. The evolving nature of customer requirements, which leads to changes in product specifications, required the LIMS system to adapt to these changes. The current LIMS system has limitations in accurately specifying the product specifications for sampling and testing purposes, amongst other requirements. Following ISO/IEC 17025, laboratories are required to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and globally. The new version of ISO/IEC 17025 covers technical changes, vocabulary, and developments in IT techniques. An alignment in the development of IT techniques is necessary for this aspect by upgrading FOSLIMS to ensure that laboratory operations are efficient and compliant with the various standards and regulations, as well as meet Foskor's Product specifications.

3 Invitation to Tender and Purpose of SOW document.

This Request for Proposal (the "RFP") is an invitation by Foskor (Pty) Ltd hereafter referred to as Foskor, to prospective Tenderers to submit proposals for the provision of Laboratory Information Management System (LIMS) for the Foskor Group. The locations or sites where this service is required include, Acid Division in Richards Bay, Mining Division at Phalaborwa,

This Scope of work amongst others seeks to deliver a Laboratory Information Management System. The purpose of this document is to describe the work and solution required from the Vendor to produce, implement, and support the Laboratory Information Management System. This may require integration with the existing solutions.

4 Business Information (Business Context of the Project)

4.1 Strategic Alignment

By addressing a specific problem or idea captured in this document there is alignment with the following business strategies and goals:

- Foskor is designed to optimize cost whilst at the same time enabling a high-performance culture and enhancing Foskor's change image, every aspect of our operations, facilities,

and premises is geared towards delivering an exceptional experience and service comparable with global leading practice.

- In line with the ICT strategy, a new system will provide more flexibility to users and reduce operational issues.

4.2 Current Foskor Laboratory Information Management System Application

The various production processes as operated by the relevant Foskor business units are monitored for integrity by taking samples of the intermediate and/or final product streams and analyzing these samples to establish conformity to specified product acceptance criteria.

Procedures, work instructions, analytical methods, product specifications, and sample schedules guide the monitoring and measurement activities to establish conformity to product acceptance criteria.

Work instructions describing calibration/verification procedures related to specific devices are available in the corresponding areas of responsibility.

Non-conforming products will result when measurement results do not conform to specified acceptance criteria (product/process specifications) related to the concerned product.

It is then the responsibility of the customer to control the non-conforming product according to customer-specific production procedures.

The laboratory keeps a record of the non-conforming measurement through the LIMS. Refer to SOP: Authorizations of out-of-specification results (new).

Verification of purchased product.

- a) All quality critical chemicals used in the Laboratory have a COA in the form of a label on the container, listing all relevant data.
- b) The COA is accepted on these criteria and raw material testing is therefore not required.
- c) Raw material testing will only be done as part of troubleshooting.

Control of measuring and monitoring devices

Various monitoring and measurement activities are done continuously within the Laboratory to provide evidence that final products conform to specified requirements and that processes operate within the specified parameters.

The devices used in the Laboratory environment to carry out these activities are identified, and the required control measures are described in detail in relevant documented analytical methods and supporting documented work instructions as developed in areas of responsibility.

All personnel who use measuring and monitoring devices are trained in their selection and use as well as their proper handling and storage, and personnel understands that they are not to adjust these instruments.

Where computer software is used in the monitoring and measurement of specified requirements, its ability to satisfy the intended application shall be confirmed before initial use, reconfirmed as necessary, and controlled as appropriate. (AA optimization)

If control of measuring and monitoring devices is not specified by relevant work instructions, personnel responsible for determining conformity will select and use measuring and monitoring equipment with the appropriate capability for the measurement requirement.

4.3 Target Stakeholders and Environment

Business interests of the system lie with the Laboratory department while ICT holds the plan, build and run interests.

4.4 Dependencies and Risks

- Sizanani: is a weighbridge system that collects and stores dispatched products or Raw materials. The Sizanani System integrates with FOSLIMS and the ERP system (JDE) to exchange information.
- MES: The MES system is the data repository that receives data from various production-related systems. FOSLIMS is integrated with MES to publish the released laboratory analysis. This allows production to process the raw material into a finished product according to specifications provided by FOSLIMS.
- JDE System: It is the organization's Enterprise and Resource Planning (ERP) system. JDE integrates with FOSLIMS. JDE receives the product potency after the analysis is released from FOSLIMS through the Sizanani upload process. The Potency information is linked to the dispatched product data to invoice customers.
- Weighbridge (RBY/PHB): The weighbridge system receives results from the LIMS system that get attached to the relevant loads/trucks/trains that get sent to the relevant customers.

4.5 Business Requirements

Foskor has implemented a laboratory information management system, henceforth referred to as FOSLIMS which is not designed to adequately address the requirements of managing a modern laboratory. ISO 17025 requires the laboratory to adopt appropriate technology that would eliminate data loss challenges experienced during unforeseen circumstances. It is for the mentioned reason that the laboratory is requesting improvements to the LIMS system.

4.5.1. Functional Requirements

- Technical Dashboards that show trends for decision-making.
- Plants and Lab personnel should be able to log NCR [Non-Conformance Reports] in LIMS and track all proceedings with that NCR until the closure of it.
- LIMS should interface with all lab instruments to decrease human interference with logging the analyses.
- LIMS interfacing with laboratory equipment will result in a decrease in manual data entry and workload.
- Integration to SPC charts [Statistical Process Control Charts] as a process control tool.
- The functionality of LIMS should be expanded to allow for the management of process control charts which could result in substantial benefits to quality assurance in the laboratory.
- Provide management with decision-making tools in the form of appropriate reports – Autogenerated.
- LIMS should be updated to allow plant sampling teams to log samples directly in the system and eliminate the current practice of a sample having double identification hence compromising the sample chain of custody.
- LIMS must have auto-release for all analyses that are within product specification and only leave the results for out of specification to be reviewed and released by the supervisor.
- Final product samples (sales) are to be created on LIMS using a loading number that shall be traceable throughout invoicing the customer.
- COA [Charts of Accounts] for sales must show the analyst that analyzed the sample and the supervisor that released the sample.
- Alerting when results are out of specification (highlight in red for out-of-specification results and green for in-specification results.)
- An online training module for new employees.
- Auto-generate a report of the user rights and only email it to senior management for better control of data access.
- Ability to catalog information on chemicals, chemical compounds, and chemical mixtures (MSDS / SDS).
- Ability to have a repository where external laboratories will upload their analysis certificates. The repository access should be restricted to only authorized external users.
- The system must allow analysts to initiate an email with a relevant report as an attachment.

4.5.2. Non-Functional Requirements

- Validated System – rapid implementation and regulatory compliance.
- Data Migration
- Data Integrity
- Flexible and able to configure for nonstandard requirements.
- Inbuild statical tool.
- Easy to search for historical data.
- Support Foskor's standard operating procedure.
- Audit trail.
- Electronic signature and delegation.
- Interact with Lab and/or plant equipment.
- Automatic reporting.
- Interface with the production reporting system.
- Accessible to electronic gadgets such as phones or tablets.
- Barcode scanning feature and its hardware.

4.6 Primary Objectives

The objective is to provide the compressive Laboratory Management System with modern technology that will streamline laboratory activities and promote effectiveness. A common system that will be used in all Foskor Divisions. An off-the-shelving system that will be customized to meet Foskor processes and requirements.

5 Enterprise Architecture

5.1 Enterprise Architecture framework to be used.

- The new solution will comply with internal governance and external laws and regulations and will be designed to maximize user efficiency.

Application standards:

A solution or application will need to meet the following Foskor integration standard.

- Application integration is business process based.
- Real-time integration is preferred over batch integration.

Integration standards and principles:

- The integration technology standard for Foskor (Microsoft Windows uses ODBC drivers to connect/ or interface different databases together and for JDE, JDBC drivers are used for connecting databases to the ERP database server). The current systems are connected with FOSLIMS using (web services and tags).

Security standards:

- The solution should comply with information security standards such as ISO 27001/2, Open Enterprise Security Architecture (O-ESA), or SABSA).

6 Scope of work

- Design the solution (architecture)
- Customize the solution to meet the requirements and processes. This includes enabling all LIMS integrations.
- Test the solution.
- Quality assures the solution.
- Train the users on using the solution.
- Deploy the solution.
- Support and maintenance of the software

6.1 General Scope and other non-functional Requirements

Requirement	Description
Price	Costing must detail the following: <ul style="list-style-type: none">• Software application cost (detailed per-use model)• Software license cost (detailed per-use model)• Implementation cost• Migration cost (indicate time and material rates per hour)• Customization cost (indicate time and material rates per hour)• Maintenance and support cost• Separate costs for barcode scanning hardware• Training cost (detail per training options available)

	<ul style="list-style-type: none"> • Include any costs related to deliverables that need to be submitted due to project governance – reference section 7.2. • A separate summary of costs
Software deployment and use of model	<p>Please provide information on available deployment and use models. Where available, please indicate if you can deliver the following options:</p> <ul style="list-style-type: none"> • On-premises • Software as a service/cloud solution • Other <p>Detail pricing as well as license models for each of the models, where available.</p>
License models	<p>Provide details on license models available, e.g., fixed/named licenses and/or floating or concurrent licenses.</p> <p>Provide costing for each of the license models.</p>
Customization	<p>Provide details on how the solution can be customized to meet the client's requirements without compromising the upgrade path.</p> <p>Describe how you would deal with requirements that are not inherently catered for as 'out-of-the-box' functionality.</p>
Implementation	<p>Please provide an overview (including high-level steps) of the intended project management approach that you would ideally like to apply to this implementation.</p> <p>Please provide the anticipated timeframe and sample project plan to implement the solution.</p> <p>Detail all assumptions that the timelines and implementation cost are based upon.</p>
Maintenance and Support	<p>Please describe the process that Foskor would follow to effect post-implementation support with your organization.</p> <p>Indicate the nature of your back-to-back agreement with the Original Equipment Manufacturer (OEM) if your organization is not the OEM.</p> <p>Indicate what is included in the Maintenance and Support costs.</p> <p>Indicate if you have a local support organization in RSA or whether you have a representative in RSA.</p>

	Provide information on your standard Service Level Agreements (particularly response and resolution times).
Training	Please provide an overview of the training approach and material that can be used to equip Foskor with the required knowledge to use, administer and support your solution.
Technology Roadmap	Frequency – Please provide (in table format) a list of product releases (both major and minor) over the past 3 years. Include dates, release descriptions, version numbers, and related additional functionality and benefits. Future – Please provide details of future releases, where available.
References	Please supply suitable references for similar implementations (International and local). Please include: <ul style="list-style-type: none"> • The company name. • Overview of the solution(s) and service(s) provided to the company. • How long have you served the company?

6.2 Organisational and Geographic Scope

The solution will be utilized and owned by the Laboratory department and operationally used to manage sample scientific test data and processes.

6.3 Functional Scope

The required functionality has been described in Section 4.5. The high-level scope is essential:

- Ease of use
- Enhanced reporting
- Customizable to fit requirements and processes.
- Ability to accommodate a high level of usage.

6.4 Technical Scope

The solution must:

- Have the ability to integrate with other systems, such as Sizanani, MES, JDE, and Weighbridge.
- Work on standard Foskor computer devices as well as Apple Mac devices
- Fully Validated System

- The shelving system will be configured to meet Foskor requirements and processes.
- The cloud solution is preferred over in-house hosting.

6.4.1 Availability, Accessibility, and Support

Availability

- It is expected that the LIMS system is available at 99.99%

Accessibility

- The system should be accessible to all types of people, including those with disabilities and impairments. The software should be usable by any type of person.
- The system should also be accessible anywhere, anytime, and via any device.

Support

- Technical support should meet Service Level Agreement [SLA], as stipulated in the contract.
- First-line support will be provided by Foskor ICT personnel and escalated to external support if the resolution is not found within the specified time frame.

6.4.2 Information Security

The application and/or service provider must provide for the protection, privacy, and confidentiality of Foskor's data:

- Protected – The information system and user's information and access privileges should be protected against abuse by other users or intruders. Refer to the Foskor Application Security Configuration framework for more details:
 - The application must allow for integration with Foskor's identity and access management processes and technologies.
 - The application must use encryption to implement key exchange and authenticate endpoints before establishing internal and external communication channels for key exchange.
 - Ensure that the new systems and/or upgraded systems have the latest malware protection installed and signature database, or it is a defined service for a Software as A Service (SaaS) solution.
 - Complete a security scan of the system and correct all significant vulnerabilities discovered before the system is delivered to the Foskor Group and before applications are accepted and the solution is put into production.
- Accessible - users must be able to access information at all times.
 - The application must use encryption to implement key exchange and authenticate endpoints before establishing internal and external communication channels for key exchange. It provides integrity, authentication, and confidentiality.

- The application must be configured to make use of secure communication protocols when communicating via internal and external networks.
- Accurate – The information system must have the latest & updated information.
 - Have a change/configuration management system in place that governs the integrity of its systems and software delivered to the Foskor Group
- Authenticated – all users must be authenticated to a central system.
 - The application must allow for integration with Foskor’s identity and access management processes and technologies.
- Account Management – Foskor manages information system accounts, including establishing, activating, modifying, reviewing, disabling, and removing accounts.
 - Obtain certifications or assurance that the systems are securely designed and configured before taking delivery for hosted solutions or cloud-based solutions.
- Recoverable – resources are put back in their initial states, as running before.
 - Consideration is to be given to ensure that adequate recovery procedures are in place to ensure the integrity and confidentiality of Foskor information and that Foskor data and systems configurations are backed up to Foskor dedicated tapes/drives.
- Confidential – The Confidentiality of Foskor information should be protected under the Foskor Information security policy. Unauthorized disclosure should be prevented.
 - Foskor data must be stored in a separate system or database instance from data belonging to or accessed by other companies.
- Duty segregated – System admins should not be allowed to process Foskor application data and have admin access at the same time. Additionally, Business app users should not be allowed access to change application system configurations.
 - The application must be configured to prevent general users from performing admin or privileged user functionality.
 - The Application’s service accounts must not be implemented with more privileges than necessary for proper operation.
- Regulatory and Legislative – Ensure that consideration is given to the various legislations for cross-border communications as well as the Protection of Personal Information.
 - The solution must meet the relevant legislation for transferring information between the varying regions that Foskor may operate within.
- Access Enforcement – The information system enforces assigned authorizations for controlling access to the system per applicable policy.
 - There will be adequate monitoring and controls to prevent external networks or systems from interfering with the operation of the service.
 - Any third-party gateway between the Foskor network and external systems will be adequately secured by the use of Foskor firewalls and IPsec tunnels.

- Auditing & Logging activity & transactions – Enable Audits and Logs based on Foskor policies and standards.
 - Ensure that there are adequate provisions for the logging of events on the service to record as a minimum:
 - Application audit and monitoring must be implemented.
 - The application must be configured to protect audit and log information from unauthorized access, modification, or deletion.
 - The application must be configured to log critical application events.
 - The application must automatically log critical user and administrator activity.
 - All authentication actions on the application (i.e., the process of authenticating) and events must be logged, including authentication failures.

6.4.3 Reliability

The solution is required to be reliable and stable to allow users to gain confidence in the application. This will facilitate the continued use of the solution.

6.4.4 Performance

The application performance must be adequate for the viewing of real-time updating of data with a concurrent user base of ± 80 users, from different geographical locations. This implies that, apart from a network or severe capacity constraints that may exist, the user should be able to work on the solution and experience similar response times as is the case with all other web-based solutions within his/her environment.

6.4.5 Maintenance and Support

The Vendor in supporting the service shall with regards to maintenance and support activities render as a minimum to Foskor the following:

- Implement industry-standard best practices to ensure that all software and hardware are correctly configured and installed. In cases where there is more than one way to configure the service, the Vendor will choose the configuration it determines to be most appropriate.
- Updating the Quality Assurance checklist about Foskor governance and best practices and obtaining approval from the Foskor ICT.
- Perform QA of application per installation.
- Repair and reload applications after critical hardware or software failure.
- Manage licenses used and ensure Foskor is within legal license usage.
- Optimise license usage and advise Foskor of opportunities to reduce license costs.

- Create and maintain appropriate documentation for the service including, but not limited, to architecture diagrams, service diagrams, procedures, operational guides, policies, ITSC plans, configuration settings, etc.
- Provide 1st, 2nd, and 3rd level end-user support for the service, where possible.
- Prioritise and investigate user escalation calls.
- Plan, implement, and test backups for this service.

6.4.6 Monitoring

The Vendor shall monitor the services in real-time to immediately identify incidents or pending incidents (both service outages and performance) with auto-call logging and notification to Foskor. The intention is to be aware of high-impacting outages and performance issues before user escalation of the incident.

6.4.7 Physical Security Management

The Vendor shall perform at a minimum the following security activity:

- Define and update operational physical security policies.
- Implement operational physical security policies.
- Audit operational physical security implementations as per policy.
- Perform Security Audits on infrastructure that forms part of this service.
- Identify physical security incidents via Incident Management.

6.4.8 ITSCM Activities

The Vendor shall perform at a minimum the following ITSCM activities:

- Conduct ITSCM tests where applicable.
- Partaking in Foskor's ITSCM forums as required.
- Develop ITSCM Procedures and Plans for the solution.
- Maintain existing ITSCM plans where applicable.
- Recommend and configure the technical architecture required to support Foskor's ITSCM requirements.
- Implement technical changes required to support Foskor's ITSCM requirements.

6.4.9 IMACD

The Vendor provides IMACD (Installation, Moves, Add, Change, and Dispose) services as part of an inclusive cost of the Service.

The Vendor shall install, move, add to, or change the configuration of the service at the request of Foskor at no additional cost to Foskor subject to the following clarification:

- A Foskor request for the installation or upgrade of third-party software or infrastructure that is not within the agreed scope of the service may attract a cost, and the Vendor may provide Foskor with a quotation for such cost for Foskor's prior approval.

6.5 Training Scope

The Vendor is accountable for creating training content. The content may be used by Foskor to create electronic training material, if relevant.

The Vendor is accountable for the training of five train-the-trainers, training of the end users of the solution, training for super users and administrators, and where necessary, training of technical support individuals.

The following training programs (Documentation) have been identified as being required:

- Training in the use/ functionality of each software solution
- Training in the use/functionality of the Control interface
- Training in the configuration of all software and interfaces if available
- Training in the use of each software solution, operational
- Training documents to be packaged.
- 1st and 2nd line support documents to be supplied.
- Knowledge transfer to the Service teams

All the above courses will contribute to the understanding of the integration capabilities.

6.6 Change Management Scope

The Vendor is accountable to give input into the change management approach and plan. The Vendor may be accountable for specific activities as per the change management plan.

6.7 Project Management scope

The Foskor project manager works closely with relevant stakeholders and the vendors' project manager to ensure that the relevant deliverables are identified and met. for each phase of the project. Where applicable, the Vendor's project team will interact and report to the Foskor project manager. The Foskor project manager reports to the relevant Foskor structures in Foskor.

6.8 Out of scope

When a solution is on-premises, Foskor will provide the infrastructure (servers, network, security). Specifications are to be provided by the Vendor. It must be understood that a cloud-based solution is highly preferred and data access should be granted to Foskor.

7 Project build approach

The delivery must align with Foskop software methodology.

The project deliverables will be defined after the selection of the solution, as this is dependent on the size and complexity of the solution implementation.

7.1 Project Management & Administrative

Foskop will appoint a Project Manager to manage the project. Foskop's project manager will work with the vendor's project manager or lead. A project manager will be Accountable for:

- Timekeeping, output management; completion of time sheets.
- Project scoping, planning, and resourcing.
- Project scheduling.
- Engineering and Business Track meetings.
- Risk and Issue assessment and tracking
- Lessons learned.
- Risk assessment
- Deliverables
- Liaise with vendor and Foskop Project Management Team to align and comply with Project governance.
- Accountable for the overall success of the project

7.2 Documentation Deliverables for this Scope of Work

The delivery must align with the Foskop methodology. The key additional consideration is the solutions document and quality requirements. These include but are not limited to, technical design, detailed functional and technical design, architecture, UAT, data validation, process validation, business sign, and acceptance. The delivery considerations are:

All required documents as per ICT governance.

RACI:

R - Responsible

A – Accountable

C – Consult

I – Inform

Phase	Deliverable/Activity	Foskor	Vendor
Feasibility	Enterprise Architecture Assessment	R	C
Feasibility	Conceptual Design	C	R
Feasibility	Project Charter Draft (Pending size and complexity of the project)	R	R
Feasibility	Risk Context	R	C
Feasibility	Change Management / Communication Approach	R	C
Feasibility	Milestone Project Plan (Flight Plan)	R	C
Basic Development	Update Project Charter (Finalized)	R	C
Basic Development	Functional Design Specification	C	R
Basic Development	Technical Design Specification	C	R
Basic Development	Testing Approach Definition (Unit, Integration, Regression, UATs, Negative)	C	R
Basic Development	Service Take On	C	R
Basic Development	Disaster Recovery Plan (if applicable)	C	R
Basic Development	Detailed Project Plan (baselined)	R	C
Basic Development	Create and maintain Risk Register	R	C
Basic Development	Create and maintain Issue Register	R	C
Basic Development	Create and maintain Deliverables Register	R	C
Basic Development	Create and maintain Decision Register (if applicable)	R	C
Basic Development	Create and maintain Scope Change Register (if applicable)	R	C
Basic Development	Change Management / Communication Plan	R	C
Basic Development	Training Strategy and Approach	C	R
Execution	Testing Plans (Unit, Stress, Integration, Regression, UATs, Negative)	C	R
Execution	Functional Design Specification (final)	C	R
Execution	Technical Design Specification (final)	C	R
Execution	Cutover/Deployment Plan	R	C

Execution	Testing Execution (Unit, Stress, Integration, Regression, Negative, UAT)	C	R
Execution	Training Plan	C	R
Execution	Training Material	C	R
Execution	Change Management / Communication Plan (finalized)	R	C
Start-Up	Testing Execution	C	R
Start-Up	Service Take On	R	C
Start-Up	Service Catalogue update	R	C
Start-Up	Project Close-Out Report	R	C
Start-Up	Finalize and Close Out the Decision Register	PM	PM
Start-Up	Intensive Care after Go-live concluded	R	C

8 Vendors Project proposal content

The vendor's response must be provided with the minimum items as follows:

- Section 1: Detailed design showing the architecture of the solution.
- Section 2: Detailed project schedule showing project duration, start date, critical dates, and milestones.
- Section 3: Detailed project approach
- Section 4: Fit to business/functional requirements.
- Section 5: Costing
- Section 6: Service and Maintenance Overview

8.1 Detailed delivery guidelines for this proposal (Implementation)

Project Phase	Cost (ZAR) Excl. VAT
Phase 1 - Project Planning and Initiation	
Phase 2 - Define the Test Scenario	
Phase 3 – Development	
Phase 4 - Internal System Test	
Phase 5 - Prepare Training Material	
Phase 6 - User Acceptance Testing	
Phase 7 - Cut Over and Go Live	
Phase 8 - Post Go Live Support	
Support/SLA (12 months)	

License and subscription (12 months)	
Total	

8.2 Project Plan

The Proposal must include a project plan showing the deliverables and major milestones.

This must include lead time for equipment, services, project commencement, etc.

8.3 Solution pricing (System Development)

The proposal is based on a fixed-price Turnkey project.

The Vendors are to base their pricing structure on:

onboarding

design

build and go-live preparation.

Go-live.

Support and project closure.

To perform an effective comparison, costs should be quoted for both on-site and hosted solutions (including any operational costs); should the vendor have more than one offering.

The proposal price must contain the following sections.

- The project's once-off costs
 - Software costs
 - License costs (including licensing model)
 - Resources costs/implementation costs
 - Rate per hour
 - Training costs
 - Documentation deliverables (as specified in Section 7.2)
 - Any other costs that are deemed necessary to complete the project successfully.
- Ongoing cost for 2 to 3 years
 - License fee
 - Support costs

8.4 Resource Allocation-Vendor

The associated resources to be provided by the vendor together with the time/financial implication must be incorporated in the proposal.

8.5 Resource required from Foskor.

The delivery would include the resources commitment required from Foskor. This would include resource skills level, time commitments, and prerequisites.

This includes hardware, software, and other requirements that Foskor will need to deliver to make this project a success.

8.6 Project Methodology

The proposal must include the overall approach and unpacking thereof, inclusive of measurable milestones. This methodology needs to be aligned with the Foskor ICT Project Management Framework or as decided by a steering committee.

8.7 Quality Plan

The design and implementation must include the following considerations to maintain the quality of the project and the required deliverables:

- Review Summaries per deliverable.
- Copies of approved documents, upon review completion.
- Non-conformance reports and corresponding corrective action summaries, as required.
- The Quality plan for a project is to be developed as part of the proposal.

N.B: The vendor must provide the acceptance criteria for all deliverables that they provide to Foskor.

8.8 Training Summary Requirements

Reference Section 6.8 and the requirements detailed within the Business Requirements section of this document.

8.9 Foskor Accountabilities

The Vendor needs to specify what the Foskor retained responsibilities are to ensure successful project delivery.

9 Document Rules and Administration

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10 Annexure A

10.1 Laboratory Instrument

10.1.1 ACID Division Instrument

The below reports are active reports for the Quality assurance and Process Control Labs. The report specification can be found in the appendices section.

Quality and Process Lab
3x Buchi K365
AA Varian(PC)
888 Metrohm
5x Balance Top(Mettler)
2x JENWAY PH
3x Balance(Mettler)
5x HACH DR3900
2x 859 Titro therm
2x Ohaus Defender 3000 15kg(top loading balance)
867 metrohm
AutoSampler (LAMBDA 365)
UV/VIS LAMBDA 365
904 Titrondo(Metrohm)
856 Conductivity Module
855 Robotic Titro sample
pH meter
pH meter – Crison
905 Titrand(Metrohm)
2x Moisture Balance OHAUS
5x ANALYTICAL BALANCE – OHAUS
4x Top Load BALANCE – OHAUS
Fat Extractor
2x Cary 60
Microwave Plasma 4210
TGM 800
SC832 Carbon and Sulphur Determinator

10.1.2 MINING Division Instrument

The below reports are active reports for the Chem and Cons Labs. The report specification can be found in the appendices section.

Conlab	ChemLab
2x Fritch Sieve Vibrators	XRF 2400W
2x AND Top Loading Balances	XRF Minipal
1x AND Analytical Balance	CP 7000 Series
1x Bell Analytical Balance	AA Spectrometer
7x AND MX50 Moisture Analysers	Auto Titrator
2x Lightwave 3 UV Spectrophotometers	Gas Pycnometer
	UV Spectrometer
	Conductivity meter
	Ph meter
	Ion selective meter
	Pellet press machine
	Muffle Furnace
	Slab furnace
	2 Ovens
	2 Pulverisers
	5 Analytical balances
	4 Top Pan balances

11 Annexure B

12 Abbreviations

Abbreviation	Description
BRS	Business Requirement Statement