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|   | **Group IT Scope of Work** **Request for Proposal (RFP) for Meter Asset Management Capability implemented on existing Asset Management Solution (Maximo)**  |

1. **Background Information**

The current Meter Asset Tracking Solution (MATS) in use at Eskom is a custom developed application with limited integration to Eskom’s enterprise applications. The application is a decentralized solution which has not been aligned with the 6 to 9 changes that were implemented with other applications. A demand was raised and project IT00410 approved to replace the current MATS system that only tracks meters with a system to manage meters from an asset management perspective.

1. **Motivation**
	1. **Business motivation:**

 Business requires a holistic Meter Asset Management solution (MAMS) to manage meters throughout its asset life cycle. Presently Distribution has approximately 5.5 million Pre-Paid customers (400190 small power users and 20050 large power users) each with a meter asset. Over the next few years, it is estimated that approximately 1.6 million customers’ smart prepaid meters will be added to the grid, with no credible system to manage the meters.

Currently an in-house developed Meter Asset Tracking system (MATS) exists with the challenges that there is very limited integration supporting source systems (i.e. Maximo and SAP) which limit the controls on the management of the metering assets. A holistic solution is required with proper integration and systematic controls to track meters through its life cycle with integration to relevant systems to achieve proper control of these revenue generating assets in the business.

* 1. **Benefits to Eskom**

 The proposed solution will fully track meters from purchase to installation through its life cycle to the end when it’s scrapped leading to the following benefits:

* Manage the loss of control of meters which is estimated at 11% of current meters procured. This loss of control leads to loss of the physical meters. 11% constitutes a possible saving of R 18 272 333.00 per year.
* Reduce unallocated meters per Operating unit (OU). Overall 16% of meters were unallocated across all OUs as per January 2017 numbers.
* Improve the meter tracking and registration process.
* Assist in clearing unallocated meter transactions.
* Accurate meter location tracking will reduce the loss of control.
* Improve meter quality by facilitating warranty meter repairs and tracking failure rates by manufacturer.
* Assist Energy Protection services investigations with meter movement history.
* Low voltage (LV) meter assets in source systems will improve dispatching location accuracy.
* Compliance with grid code. Auditing of meter installations and ensuring full compliance.

If this solution is not implemented the following risks shall remain:

* Eskom will not be able to fully comply with NERSA requirements.
* There will be no compliance with grid code – Audit finding.
* There will be no effective OU aligned Meter Asset Management capability – Audit finding.
* There is a possibility of loss of physical meters leading to financial loss. Estimated at R 18 272 333.00 per year.
1. **Scope of work/Business requirements**
	1. **Scope of work or Supply**

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| The project is mandated to go on open tender for professional services for the design, build, test, implementation, and stabilisation of the Meter Asset Management System. A suitable implementation partner must be able to implement the needed integrated meter asset management system in Eskom using the Maximo solution. The Tenderer shall deliver the project on a turn-key basis with fixed-cost delivery items. **The scope shall include:*** **Detailed Design**
	+ Deliver approved Detailed (Physical) design for the MAMS solution based on the exiting User Requirement Specification (URS) and Logical Design.
		1. Identifying and validate the meter by barcoded serial number
		2. Display meter history through life cycle
		3. Uniquely identify and differentiate system end user access profiles
		4. Identify meter status per location type and location name
		5. Creating and retrieve meters supporting information
		6. Identifying all possible entry points for meters entering the business from various systems integration.
		7. Link meters to customer locations making use of various meter movement types (electronic meter movement form)
		8. Record meters seals applied to keep meter installations secure
		9. Inventory control on all meters per storage location type/ name with integration to supporting systems
		10. Manage meter certification records
		11. Store smart metering digital signatures
		12. Mobile device application development for both store material management and electronic meter movement forms
		13. Reporting requirements
		14. Consider all user interface requirements
		15. Information and data requirements
	+ Facilitate review and approval of the design as required by Eskom methodology and governance. Ensure cyber security compliance of MAMS and its integration end points.
	+ Provide requirement traceability matrix for the detailed design requirements.

**Integration solution.*** Integration scope and deliverables is listed below
	+ Analyse, design, develop, test, and deploy integration solutions based on the logical design. External interfaces to integrate using Oracle Fusion 12c and IBM WebSphere (Data Power), thus the vendor should be well skilled to work with the mentioned technologies.
	+ The Integration Centre of Excellence (ICOE) governance process must be followed for all approvals. Kindly reference “SOA Workgroup artefacts”.  All diagrams and processes are to be captured in the Eskom Enterprise Architect (EA).
	+ All CIM message artefacts (including Mapping Document) to be placed in the Eskom defined CIM SVN. All code to be placed in Eskom defined Code SVN repository All artefacts to be placed in the Eskom share point.
* The following are the integration and Testing activities and artefacts to be produced and presented at the committee for approval and sign off:
	+ Business test case document.
	+ Integration specification document.
	+ Mapping Document.
	+ CIM message artefacts including WSDL’s and XSD’s.
	+ Code and unit testing review.
	+ Deployment Guide.
	+ SIT testing review of results in ALM.
	+ SIT test case sign-off.
	+ Performance testing review of results in ALM.
	+ Performance testing sign-off.
	+ Pre-transfer documents for go-live approval.
	+ Test requirements in ALM.
	+ Test cases and results in ALM. Defects managed in ALM.
	+ Test plan Document.
	+ Non-functional Test plan document.
	+ Test closure reports documents.
	+ Performance test scripts and results.
* Provide an Integration message modeller to complete the following
	+ Analysis of message requirements. Model or update integration message which follow a Common information model. Create payloads and envelopes. Generate xsd, message model and model dictionary.
* A signed off test closure report is required before a test milestone is completed. The following testing and testing milestones must be completed:
	+ Unit Testing – test results from the Tenderer’s team. System Integrated Testing, Functionality testing (in QA – end to end functional testing and integration testing. That means testing with other systems and ensuring that all requirements have been successfully configured). This testing must be driven & executed by the Vendor but must include Eskom staff for completeness & authenticity.
	+ Non-Functional Testing (performance testing and disaster recovery testing). This testing must be driven & executed by the Vendor but must include Eskom staff for completeness & authenticity. User Acceptance Testing (Testing by the Eskom customer team that the system is working and meets requirements). This testing must be driven by the Tenderer but must be executed by Eskom staff for completeness & authenticity.
* All testing requirements must cover all identified interfaces that have been identified. The testing team must adhere to the TCoE Turnkey Project Requirements Guideline provided as part of the RFP document.
* **Build the MAMS**
	+ Software solution, Data Structure, Master Data, Integration
	+ Test Cases
	+ Data transfer scripts to take on available asset data from the current MATS
	+ Mechanism/s to facilitate clean-up of data
	+ Training Material (for users and support personnel)
	+ Support material
	+ Unit Testing on the Development (DEV) environment
	+ Deploy base solution to the Development, Quality Assurance, Pre-Production, Production, and Disaster Recovery environments without going live.
	+ Update requirements traceability matrix.
* **Provide Change management**
	+ Compile and maintain stakeholder register.
	+ Provide change management plan including communication plan.
	+ Indicate types of communications and what will be communicated.
	+ Execute the change management and communication throughout the project.
	+ Train super users.
	+ Train support personnel and ensure sufficient knowledge transfer.
	+ Quality assure training material with Eskom Academy of Learning (EAL) and deploy training material.
	+ Train end users and facilitate training through train-the-trainer approach where super users train end users.
	+ Maintain register of all trained users and support personnel.
* **Testing**

Testing partner must be an independent partner from the development partner. Both companies will be evaluated and scored separately from each other as they will be performing two separate roles for the project. * + Complete System Integration Testing on the Quality Assurance and Pre-Production (QA and PPD) environment and test closure report.
	+ Complete User Acceptance Testing on the Pre-Production (PPD) environment and test closure report.
	+ Complete Performance Testing on the Pre-Production (PPD) environment and test closure report.
	+ Complete Penetration Testing on Pre-Production (PPD) environment and test closure report.
	+ Complete Disaster Recovery Testing on the Disaster Recovery (DR) environment.
	+ The testing team must align and adhere to the TCoE Turnkey Project Requirements Guideline to be provided as part of the RFP document.
	+ Update requirements traceability matrix.
* **Deploy the MAMS**
	+ Ensure all environments are updated following successful test conclusion.
	+ Compile go-live plan.
	+ Ensure the solution obtain the necessary governance approvals:
		1. Architecture Design Review Committee (ADRC) for pre-transfer
		2. Change Review Management Committee (CRMC)
		3. Go/No-Go pack and decision by Group IT General Manager
	+ Data take-on and Go-Live in PROD environment.
	+ Data migration, clean-up of data, delta data migration before switching over and going live.
* **Stabilise the MAMS and handover**
	+ Ensure adoption and good performance of the solution.
	+ Provide support to stabilise MAMS.
	+ Conclude handover to business.
	+ Conclude handover to support.
	+ No maintenance and support is required as this is catered for under the current IBM Maximo contract.
	+ Close-out MAMS project.
	+ Skill knowledge transfer will be included as part of deliverable sign-off. The vendor will be required to sign-off knowledge transfer acceptance certificate as part of every deliverable to ensure knowledge is transferred throughout the process and does not need to wait until the end of the project.
* **Other responsibilities:**
	+ Deliver project documentation required by the Eskom Group IT PMO. This includes but is not limited to:
		1. Detailed integrated schedule.
		2. Weekly progress reports.
		3. Payment schedule forecast and actuals tracking against it.
		4. Delivery Acceptance Certificates with supporting approved test details.
	+ The Tenderer is required to render solution architect services to this project which includes making sure (with the guidance of a lead architect from Eskom) that ADRC approval is gained before build and again before go-live.
	+ Provide information required by Eskom team members in order to facilitate governance of the project and its deliverables.
	+ Integrate the current application support teams into the project delivery team.

**The Tenderer shall provide the following as part of response to this request:*** Describe how each of the scope of work or supply requirements in this request shall be met.
* Specify infrastructure (hardware (memory, CPU, storage) & 3rd party software) that will be needed to deploy Development-, Quality Assurance-, Pre-production-, Production- and Disaster Recovery environments. This must include specification for any temporary infrastructure needed during delivery. Eskom’s preferred infrastructure standards must be taken into account. Indicate by when infrastructure must be configured in alignment to the schedule to be provided.
* Describe change management services that will be provided, its deliverables, and the outcomes envisaged that include time frames. These must be costed separately as fixed-cost deliverables.
* Deliverable Breakdown Structure indicating all fixed cost deliverables with the cost of each deliverable and the total cost of all deliverables.
* List of deliverables and responsibilities that the Tenderer view as being excluded from their scope of delivery.
* Payment schedule for all deliverables in the Deliverable Breakdown Structure. A payment schedule must be provided for all deliverables on a fixed-cost basis. During execution deliverables will be evaluated by Eskom and a Deliverable Acceptance Certificate issued when approved. Approved deliverables can then be invoiced.
* Projected monthly cash flow. Summarise the payment schedule provided per month.
* A Project schedule in MS Project format that contain all costed deliverables as milestones and also include activities to deliver such milestones. The top level work breakdown in the schedule must reflect the Software Delivery Life Cycle stages (Design; Build, Test, Train, Deploy, Stabilise – after go-live).
* Applicable buffer should be planned into the schedule to ensure milestones are met and public holidays should be taken into account.
* Dependencies and pre-requisites on Eskom must be clearly stipulated.
* Total man-hours and skill of all Tenderer resources combined.
* Proof of Tenderer’s applicable certification where commercial off-the-shelf products are included in the proposed solution.
* An organogram and a list of all the team members of the Tenderer that will deliver the proposed project including the following information for each and every team member:
	+ Name and surname
	+ Confirmation that person is a current employee of the Tenderer.
	+ Role of person on the proposed team
	+ Description of Education with supporting certificates as proof.
	+ Relevant Experience and Skills.
	+ Relevant product certification/s achieved with supporting certificates as proof.
* Explanation of Tenderer’s experience on Eskom’s current environment where relevant and motivation why Tenderer is best positioned to deliver on this project.
* Indicate all other pre-requisites and, or exclusions that must be addressed before the start of the project with clear timelines.
* The implementation partner must know and fully understand Maximo structure, how it integrates with other systems.

 **Additional constraints and assumptions:*** All overhead costs shall be included in the fixed-cost deliverables quoted and not be stated separately.
* Reasonable travel and subsistence expenses must be provided separately per deliverable.
* All deliverables produced on this contract shall become the property of Eskom with Eskom holding sole rights to it. This shall include but not be limited to software configuration; data; scripts; custom code; documents; and training material.
* All deliverables shall be provided in maintainable format for each evaluation (i.e. editable documents; source code and scripts.
* Project change control refers to the changes in project Scope, Time and Cost. Changes will follow the process below. Changes must be approved by the Requester, Business Owner, Impacted Project Manager, Project Delivery Portfolio Manager, and Project Sponsor. Depending on the scale of the change, other approvals external to the project may be required. Guidance in this regard will be provided by the Project Portfolio Manager. Approved changes must be noted in steering committee minutes. The Tenderer must include the response to this request the applicable resource cost rate/s that shall be used to calculate cost of such changes.
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1. **System Lifecycle Consideration**

MAMS is classified as a Line of Business application and is a System of Record. Development and implementation of the solution can be within 24 to 36 months and the solution can exist for 10 to 15 years in the organisation.



1. **Service Level Agreement requirements**

 Not applicable.

1. **PROJECT GOVERNANCE**

This project will follow the project governance as defined in the Group IT PLCM.

1. **DOCUMENT ACKNOWLEDGEMENT**

*By signing this document, the people listed record their agreement on the contents of this document.*

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| **Project Manager:**  | **Name:**   | Pontsho Ndaba |
|   | **Signature:**  | \_ |
|   | **Date:**  | 21/07/2022  |
|   |   |   |
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| **Project Delivery Manager:**  | **Name:**   | Lizle De Kock |
|   | **Signature:**  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
|   | **Date:**  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |