

Specification:

**Transnet Engineering SAP
Technical upgrade and data base
preparation**

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1. PURPOSE OF THIS DOCUMENT

Transnet seeks to appoint a competent and qualified Service Provider for the provision of the following SAP technical services:

- Oracle upgrade
- Unicode conversion
- Archiving

for Transnet Engineering's Information, Communication and Technology (ICT) department.

The service provider should have deep technical knowledge of projects of this nature to produce the necessary artifacts required to deliver comprehensive project related documentation and requirements.

2. BACKGROUND

Transnet Engineering is a division of Transnet and focus on Manufacturing and Maintenance of Rolling Stock. There are six main manufacturing plants and several maintenance depots scattered all over South Africa, with the head office located in Pretoria, Gauteng.

Transnet has been making use of Enterprise Resource Planning (ERP) software since its first SAP ERP modules were implemented in 1997. Since the initial implementation, the organisation has continued to add ERP solutions to its landscape such that the ERP software is now pervasive in all areas of the organisation.

The ERP system at Transnet Engineering needs to be technically upgraded and prepared for the eventual migration from the current SAP ECC6 version to S/4 Hana.

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3. OVERVIEW

Technical environment

Below is an overview of the current SAP transport landscape and size:

SAP environment	Size	Infrastructure
Production	12TB	On-premises
Quality	12TB	On-premises
Development	12TB	On-premises

SAP sandboxes/test environments will be made available for the project.

Technical modules

Below are the SAP technical modules in the Transnet Engineering environment.

TECHNICAL MODULES
• ABAP • Basis • NetWeaver • Business Warehouse

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Functional modules

The following SAP functional modules were implemented in Transnet Engineering.

INBOUND DELIVERY MODULES	OUTBOUND DELIVERY MODULES	FINANCIAL MODULES
• MM : Material Management (Create POs, GRV etc) • SRM : Supplier, Relationship Management	• SD : Sales and Delivery • PP : Production Planning (Manufacturing orders) • CS : Customer Services (Maintenance orders) • PM : Plant Maintenance (Asset Maintenance) • QM : Quality Management • CRM: Customer Relationship Management • TM : Transport Management • MII : Manufacturing, Integration and Intelligence	• GL : General Ledger • AP : Accounts Payable • AR : Accounts Receivable • FA : Fixed Assets • PS : Project Systems (Capex management) • PL : Planning / Budgeting • Bank : Payments • BEST : Automated Vendor Reconciliation • PCC : Product Cost Controlling (WIP settlements)

There are other modules in use that are Transversal and on the Transnet Group environment. These functionalities include Human Resources Management, Contract Lifecycle Management and Governance, Risk and Compliance.

The table below depict the current Transnet Engineering SAP system landscapes.

Current TE Environment	Application	Net Weaver	Oracle Version	Operating System version	Unicode	Requirement
ERP (ECC6, EHP5)	SAP Logistics and Finance		19	AIX 7.2	No	Unicode conversion
TM	Transport Management	7.5	12	AIX 7.2	Yes	Oracle 19 upgrade
SRM	Supplier Relationship Management	7.4	12	AIX 7.2	Yes	Oracle 19 upgrade
Enterprise Portal	SAP Portal	7.5	12	AIX 7.2	Yes	Oracle 19 upgrade
PI	Process Integration	7.4	12	AIX 7.2	Yes	Oracle 19 upgrade

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Archiving

Archiving in Transnet Engineering was neglected. Some archiving activities took place on certain modules, but a total review and strategy will be required. The last time archiving was performed was in September 2018.

The following archiving objects were created.

Arch.Obj.	Description of the archiving object
CO_COPC	Archiving Product Costing Data
EC_PCA_ITM	Profit Center Acctg: Actual and Plan Line Items
FI_DOCUMNT	Financial Accounting Documents
MM_EBAN	Purchase Requisitions
MM_EINA	Purchasing Info Records
MM_EKKO	Purchasing Documents
MM_MATBEL	Materials management: Material documents
PCA_OBJECT	EC-PCA: Transaction Data, Obsolete, New EC_PCA_*
PP_ORDER	Production Order
RV_LIKP	Deliveries
SD_VBAK	Sales Documents
SD_VBRK	Billing Documents

4. SCOPE

Transnet Engineering, Information Communication and Technology Department, requires the services of an SAP-certified service provider that can provide the implementation of the following functionality according to Transnet Engineering's requirements and according to the technical specifications:

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Oracle upgrade

Perform Oracle upgrade in Transnet Engineering's test environment and then thereafter through the DEV, QA and PROD landscapes.

The activities to include:

- Oracle upgrade to version 19 for the following systems:
 - Transport Management
 - Supplier Relationship Management
 - SAP Portal
 - Process Integration
- Testing to ensure Oracle upgrade was successful.
- Testing of functionalities will be performed by internal resources.

Unicode conversion

Perform the required Unicode conversion activities in a test/sandbox environment and there after through the Transnet Engineering's DEV, QA and PROD landscapes.

Activities to include:

- Convert data base to Unicode.
- Perform data base corrections.
- Determine programmes with Unicode errors.
- Correct programmes with Unicode errors (These activities will be performed by internal Transnet Engineering resources)
- Test SAP functionalities and reports. (These activities will be performed by internal Transnet Engineering resources)
- The SAP Production cutover for the Unicode conversion will be dependent on the approval for downtime.

Archiving

Perform archiving of all the identified SAP modules. Activities to be performed:

- Determine and develop a Transnet Engineering archiving strategy.
- Perform an analysis of what was archived and review results.
- Configure modules for archiving and review current archiving configuration already performed.
- Test archiving in a SAP test system/sandbox
- Perform archiving in SAP Production
- On the job training for the SAP Technical and functional teams to perform archiving in future.

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The intention will be to run concurrently with the archiving and Unicode conversion activities, however the archiving activities will take preference to ensure a minimal downtime in Production.

5. EXPECTATIONS AND PROJECT DELIVERABLES

The Bidder will be required to have successfully completed the following;

- Understanding of the Transnet Engineering's requirements.
- Successful conclusion of all the project phases of the project.
- Knowledge and skill transfer to Transnet Engineering's SAP functional and technical team, to continue with archiving in future.
- Compiling the required deliverables and documentation per phase.
- Present and handover the system to Transnet Engineering.
- Successful (on time and with the required quality standards) project close-out.
- Quality management of all systems involved.
- Risk identification and management.
- Post go-live support.

6. PROJECT MANAGEMENT

The project is expected to commence after the award of the tender.

In Transnet, all projects are created, managed, governed, and audited via the PLP (Project Life-Cycle Process), which is a general methodology for all industries, based on the PMI's PMBOK (Project Management Body of Knowledge).

SAP on the other hand, as an OEM, has its specialist project process, which could be a condition for the OEM warranty, that Transnet Engineering does not want to risk. The SAP Activate Methodology for this project shall be utilised and fully adhered to, by the Bidder, while the translation into the PLP equivalent will be performed by Transnet Engineering, for internal governance and compliance purposes.

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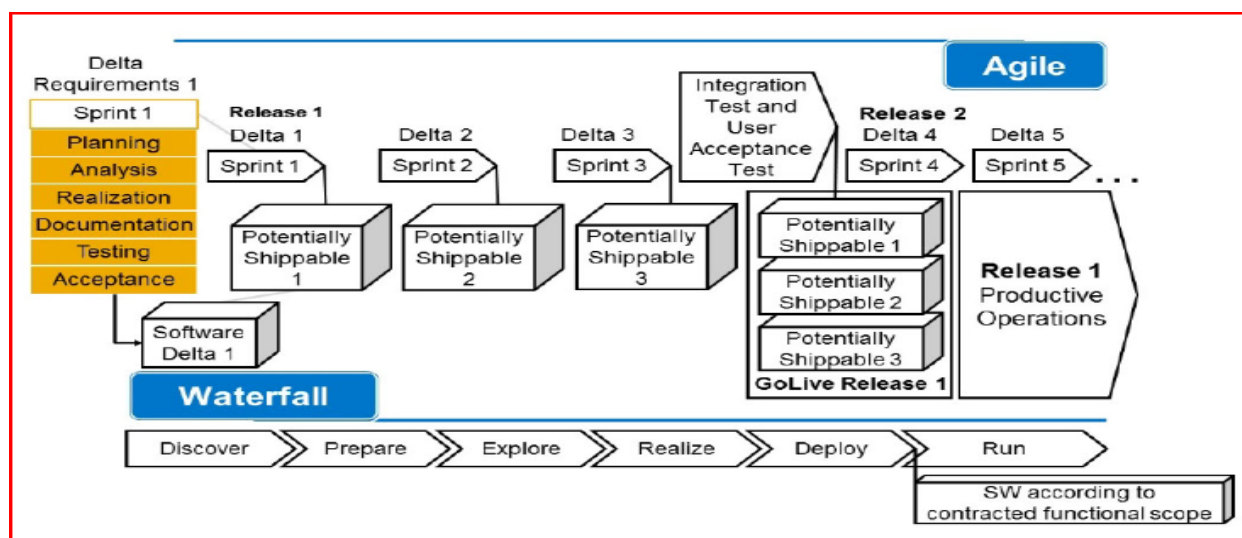


Figure above: A depiction of acceptable rollout methodologies, Agile and Waterfall (Predictive)
(Source: Google search)

Even though there are 2 preferred methods of rollout, preference will be given to the hybrid approach as it combines the best components of predictive and agile project management methodologies, if the quality, the scope, the cost, and the governance requirements are not compromised.

7. RESOURCE REQUIREMENTS

The Bidder's resources will be required with the following experience:

Bidder's responsibility

- Extensive SAP ERP experience is required for the Oracle upgrade, Unicode conversion and SAP Archiving
- The Project Manager should have experience of such SAP related projects.

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Bidder's document submission requirement

- A summary of the project team resources will be required indicating the role/function within the team with a summary of the resource's skills, experience, training and implementations that is relevant for this project.
- The summary must be supported by the detail curriculum vitae per person including verifiable references, qualifications and experience.
- Evidence in the form of training certificates or reports from SAP must be submitted as part of the bid required documentation. More qualified and trained consultants will be an advantage.

8. TECHNICAL REQUIREMENTS

The technical requirements consist of:

Bidder's responsibility

- Over and above the scope requirements, the Bidder will be responsible for any SAP ERP configuration.
- It is expected of the Bidder that after the required configuration, the SAP standard functionality must still remain intact.
- It will be the Bidder's responsibility to compile a configuration manual.

9. PROJECT REQUIREMENTS

The project and other requirements consist of:

General

- The project team will be based at the Transnet Engineering's office in Pretoria.
- The Bidder must, within reason comply with the working hours of Transnet Engineering.

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Bidder's responsibility

- It is required from the Bidder to follow Transnet Engineering's approved project methodology with an agile approach.
- Project management will be a joint responsibility between the Bidder and Transnet Engineering, however Transnet Engineering will provide a Project Administrator resource.
- The Bidder are required to perform training to the Transnet Engineering's ICT technical and functional teams. The training approach will be "on the job" training.
- After the last delivery of the project, a one month's post go-live support will be required from the Bidder. The monitoring of the systems can be performed off site, however if a support issue is experienced on site (Transnet Engineering's offices) support will be required.
- The upgrade plans and cut over requirements are the Bidder's responsibility.
- Quality and Risk management will be a joint responsibility between the Bidder and Transnet Engineering. However, the Bidder is required to develop and implement a quality and risk plan.

Transnet Engineering's responsibility

- Testing will be the responsibility of Transnet Engineering and to provide test scripts.
- Change Management will be Transnet Engineering's responsibility from inception until completion of the project.

Bidder's document submission requirements

- A high-level project plan with all the project phases and deliverables, will be required including timelines, dependencies, durations, etc.
- The project plan must address the Transnet Engineering scope requirements.
- The Bidders commitment to commence with the project immediately after the Bid was awarded.

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10. PRICE STRUCTURE

The following need to be included in the price structure by the Bidder:

General

- The price structure must include all the project deliveries as specified above.
- Transnet Engineering progress payments will only be after a delivery of an agreed successful project milestone.
- The Bidder's quoted price will be final, and no additional claims will be entertained within the scope of this project.

Bidder's document submission requirements

- The Bidder will be required to list key assumptions made during the preparation of the bid that might influence the price.
- The Bidder is required to submit a proposed payment schedule.

11. ADDITIONAL SUPPORTING INFORMATION

The Bidder is at liberty to supply any additional information which the Bidder believes is relevant to this tender's specification.

12. BIDDER SELECTION CRITERIA

Transnet Engineering will evaluate the Bid based on specific criteria. Below are the high-level criteria categories and the detail technical evaluation criteria please refer to the BID evaluation mythology section.

Criteria	Weighting
Bidder's SAP accreditation	15%
Bidder's experience.	40%
Bidder's methodology.	15%
Bidder's project management and resource experience	30%
Total	100%

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13. APPROVAL

The Transnet Engineering SAP technical upgrade and data base preparation specification was approved by:

Reviewed and supported by:

Name and Surname: Zinhle Nchoba

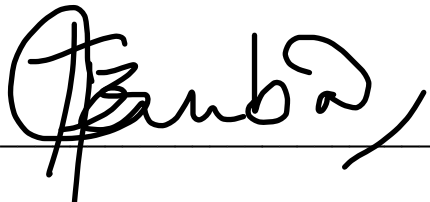
Job title: Acting Chief Information Officer

Signature  _____ Date 20/02/2024

Approved by:

Name and Surname: Themba Mlotsa

Job title: General Manager Facilities and Infra Structure Management

Signature  _____ Date 20/02/2024