

## ANNEXURE A:

### SCOPE OF WORK FOR THE MIGRATION TO SAP S/4HANA

#### 1. Background

Transnet has been making use of Enterprise Resource Planning (ERP) software since its first SAP ERP modules were purchased in 1995. Over the last 28 years, the organisation has continued to enhance its ERP environment to such an extent that the ERP software now permeates all areas of the organisation. All Transnet Operating Divisions (ODs), as well as the Transnet Corporate Centre (TCC), and Human Capital (HC), have current standalone deployments of **SAP ECC6** installed and management in on-premise environments.

SAP is primarily used as an ERP platform and forms the bedrock of the organization's, financial, Asset Management, Procurement and People Management systems. Any enhancements to systems of this nature must be carefully planned to ensure that there are minimal disruptions to the functioning of the organization. The current version of SAP running on SAP ECC6 requires an upgrade to the **latest version** of SAP referred to as SAP S/4 HANA. This upgrade is essential to support the organisation's objective to digitalise all its core processes. This version provides a highly scalable solution that will help making enhancements and movement to cloud easier. Furthermore, the upgrade improves the user interface for better user experience whilst it supports the organisations' objective to digitalise all its core processes.

In addition, standard maintenance, and support for SAP ECC6 ceases from January 2028 and will require maintenance and support at a premium price should Transnet wish to extend its maintenance and support period beyond 2028. It therefore becomes a priority to start the programme to transition to S/4HANA as soon as possible to prevent the possibility of the organisation requiring ongoing maintenance and support for SAP ECC6 beyond 2028.

#### 2. RFP Purpose

Transnet seeks to appoint a competent and qualified Service Provider for the provision of technical services for the migration from SAP ECC6 to the latest version of SAP S4/HANA. The purpose of the RFP is to obtain responses from the market for a technical migration from SAP ECC6 to S/4HANA for Transnet Corporate Centre (TCC)

**Table 1** outlines the technical environment of the operating divisions that form part of this scope of work.

<b>Operating Division</b>	<b>S4/HANA Readiness</b>	<b>Database</b>	<b>Infrastructure</b>	<b>SAP Version</b>	<b>Data Centre</b>
Corporate Centre	Unicode compliant	Oracle	On-premise	ECC6.8	MSoft-Azure (Johannesburg)

*Table 1*

**Table 2** is a summary view of OD specific SAP modules that are in production and actively used as well as a view of the single instance SAP modules deployed across the organization. Please note the list of modules are not exhaustive but is merely a reflection of common and OD specific modules used across the environment.

<b>TCC ECC6 specific implementations</b>							<b>Transversal For integration</b>				
<b>FI</b>	<b>CO</b>	<b>PM</b>	<b>MM</b>	<b>RE</b>	<b>IM/PS</b>	<b>PI/PO</b>	<b>HCM</b>	<b>CLM</b>	<b>FAS</b>	<b>GRC</b>	<b>SRM</b>

*Table 2*

The appointed service provider will be responsible for the technical migration of the TCC SAP modules listed above and will work with the respective internal Transnet teams to ensure Transnet is able to move these modules from SAP ECC6 to SAP S/4HANA.

### **3. SAP Activate Methodology**

To have assurance in the S/4 HANA Implementation project, the principles of SAP's agile project methodology, SAP Activate will be used to execute this project. The SAP methodology follows a phased approach comprising of the Discover, Prepare, Explore, Realize, Deploy and Run phases. The Service Provider is expected to be familiar with the SAP Activate Methodology of implementing S/4 HANA and execute the project with adherence to the SAP Activate phases.

**Discover phase:** *Discover the value of S/4 HANA*

SAP Best Practices recommends creating a value-based and company-specific implementation strategy, which includes deciding on the implementation scenario and creating a high-level roadmap that sequences the innovation steps related to SAP S/4 HANA on a timeline. The high-level areas of the existing solution landscape that can benefit from a move to SAP S/4 HANA are identified. Lastly, the impact on the technical architecture and IT infrastructure is evaluated for capability and readiness.

The preferred Service Provider will be expected to execute all activities that will result in the implementation strategy, detailing the implementation plan with the implementation scenarios best suited for the target system being migrated to S/4HANA.

**Prepare phase:** *Plan, prepare and start the implementation project*

The project is officially initiated in the "Prepare" phase. A first version of an implementation plan includes the findings from the "Discover" phase and sets the stage for the entire project. Depending on the scenario, there could be additional preparation activities (e.g. the "Customer Vendor Integration" in system conversion) which are planned in detail, and ideally completed at an early point in time, to keep the downtime during cutover short. Finally, general project preparation, such as staffing, governance, and reporting requirements, is also carried out in this phase.

The Prepare Phase will see the Service Provider perform activities involved in officially initiating the project, planning and executing activities aligned to the implementation plan and set up of the Sandbox system with best SAP practices to be used in the Explore Phase. The Service Provider will also be required to perform a detailed risk analysis as well as share lessons learnt from previous implementations in order to mitigate identified risks and ensure a successful implementation with minimal disruptions.

**Explore phase:** *Define all details*

The TO-BE design of the SAP S/4 HANA solution is defined and documented in the "Explore" phase. Functional gaps are documented, prioritized and validated as well. Ideally those "Fit-Gap-Workshops" are performed with the help of pre-configured sandbox systems which represent SAP's Best Practice solutions. In case of a system conversion,

existing custom code needs to be analysed with respect to SAP S/4 HANA readiness. On the technical layer, a technical design of the to-be solution needs to be designed and documented. This is the pre-condition to a technical setup of sandbox and the development environment. Both systems need to be integrated into the solution landscape based on functional requirements. By the end of the "Explore" phase, all technical and functional aspects of the implementation project (for example, solution scoping and content activation, TO-BE design, functional gaps, etc.) are fully planned, documented in detail, and ready to be executed by the Service Provider.

**Realize phase:** *Implement technical and functional changes*

In the "Realize" phase, the Service Provider will prepare and set up the technical architecture and infrastructure for SAP S/4 HANA. Supporting systems are either set up or converted according to Best Practices and the implementation plan. Custom code is adjusted for SAP S/4 HANA. Application and analytic functions are implemented, configured, integrated and tested. Finally, end-user training, including project-specific training material, team setup, and enabling Key/ Super Users to perform end-user training will be prepared by the Service Provider.

**Deploy phase:** *Prepare to go live*

The Deploy Phase will see the Service Provider finalize the readiness for SAP S/4 HANA and business processes for production go-live. This includes final testing, rehearsing the cut-over, and finalizing the IT infrastructure and operations. End-user training sessions are delivered by the enabled Key/Super users and by the Service Provider's SAP trainers. Finally, and depending on the scenario, the production instance of SAP S/4 HANA is implemented or converted on the Go-Live weekend. After going live, SAP S/4 HANA is available for business users to log in and for productive use. IT operations are further optimized (for example, bug fixing, system availability, and performance) with the help of the project team. This phase is referred to as "hyper care" and occurs before operational responsibility is fully transferred to the production support team.

**Run phase:** *Optimize the operability of SAP S/4 HANA*

Operations is further stabilized and optimized in the Run phase with the help of the Service Provider.

#### 4. Transitioning Transnet's ECC6 environment to S\4HANA

The following RACI outlines the proposed responsibility between Transnet and the appointed Service Provider\ and forms part of the core activities required to transition to S/4HANA. The activities are not listed in any order and will be informed by a detailed plan to be provided by the Service Provider.

Task	Transnet	Service Provider
Scoping and Planning	Accountable	Responsible
Detailed requirements analysis	Accountable	Responsible
Sandbox Conversion	Accountable	Responsible
Interface Analysis	Accountable	Responsible
Abap Analysis and modifications	Accountable	Responsible
SAP Module checks	Accountable	Responsible
Fiori Enablement	Accountable	Responsible
System Testing	Accountable Responsible	Responsible
User Acceptance Testing	Accountable Responsible	Responsible
Quality Assurance Conversion	Accountable	Responsible
Production Conversion	Accountable	Responsible
Support post go-live	Accountable	Responsible
Project Management	Accountable	Responsible
Change Management and training	Accountable	Responsible

Table 3

#### 5. Readiness Assessments for the specified environments

Readiness assessments have been conducted on the environments that form part of the technical migration scope of the tender and will be provided as per the following annexure:

- a) Annexure B: TCC readiness assessment

## 6. Exclusions

The following exclusion are noted and does not form part of the scope of this RFP:

- a) The provision of SAP specific infrastructure is outside the scope of the RFP.
- b) The provision of SAP S/4HANA licences are outside the scope of the RFP.

## 7. Prequalification

The following criteria is mandatory and will be required before bidders can proceed to the technical evaluation phase of the tender.

Bidder has submitted SAP competency and specialisation certification in Enterprise Resource Planning (SAP S/4HANA Cloud Private Edition) – Minimum Essential Competency tier or  
The bidder is the Original Equipment Manufacturer of the Software with the necessary evidence provided stating its ownership and associated competencies.

## 8. Transnet Corporate Centre (TCC) Detailed Scope Requirements

This transition is expected to take place over a **12-month** period and will involve extensive architectural and technical services to migrate from existing SAP ECC6 environments to S4\HANA on Azure infrastructure. The table below highlights the services required.

Environment	Unicode Compliant	Current DB	Target Infra	Migration Approach	Services Required
SAP ECC6 EHP 8  <b>Modules In use</b> MM SD FI (AP,AR,FAR) CO PM RE IM/PS Funds Mngt	YES	Oracle	Azure	<b>Brown Fields</b> Approach (Migrate As Is Processes to S4/HANA)	Scoping and Planning Sandbox conversion. Development box conversion <b>FAS</b> Dev box conversion Quality Client conversion Production Box conversion Custom code analysis Interface analysis and checks Module checks

ABAP Banking					Fiori enablement System Testing User Acceptance Testing Data Archiving Go live migration and support Post implementation support (2months)
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Table 4

## 8.1 TCC SAP ECC AS-IS integration diagram

The diagram below serves to provide an overview of the current TCC SAP ECC6 landscape integration.

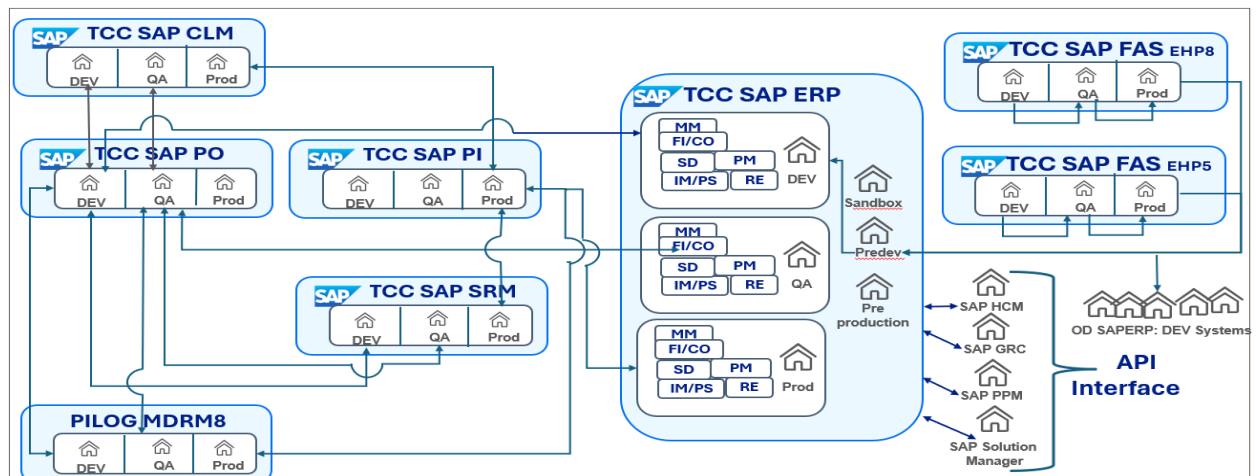


Figure 1

## 8.2 TCC SAP ECC6 AS-IS Assessment

Transnet Corporate centre has recently performed a system readiness assessment with the OEM and provided reports for the various environments that have been summarised in **Annexure B – TCC Readiness Assessment**.

High level indication of object table sizes and system properties are shown in the tables below.

Document Type	DB Size in GB
FI NewGL: Totals	0.68
FI NewGL: Accounting Documents	84.79
Intermediate Documents	176.86
Application Logs	5.34
Profit Center Accounting Documents	14.42
Work Items	46.54
Table Change Protocols	26.47

Table 5

TCC Total **Custom code** summary as shown below.

Custom Object Type	Object Name	No of objects
FAS Objects	/TRNF/*	4 034
Non-FAS	Y* and Z*	5 724
<b>Total</b>		<b>9 758</b>

Table 6

### 8.3 TCC SAP FAS ECC6 background

The FAS (Fixed Asset Stabilization) solution consists of a collection of custom objects rolled to all ODs to ensure standardization of FI-Asset Management, PM, and PS processes for the purposes of tax compliance.

#### FAS Landscape

There are 2 support tracks.

- EHP5. This support track caters for EHP5 and EHP6 OD environments. Developments originate in FSD, move to FSQ and then to ODs.



- EHP8. This is for the Group environment as it is on EHP8 environment. Developments originate in FRD, move to FRQ then to ODs.

### **Object Categories**

FAS objects are grouped into two broad categories

- Template objects: These are objects that are maintained centrally in the FAS development system and are created in the /TRNF namespace. These are only maintainable in in the FSD/FRD but transportable to OD development system where they then follow the OD change process until they reach the OD Production system.
- Localization objects: These are SAP objects that have been enhanced in the OD environment, but in a uniform manner across ODs.

### **Object Types**

- ABAP Programs Objects (Reports, include files, Function Modules, Classes, etc)
- ABAP Dictionary Objects (Tables, Views, Domains, Data Elements, etc)
- Custom Config (SM30 and custom t-codes)

### **FAS Releases**

Transports to ODs are managed by way of FAS Releases. A release comprises of a collection of transports for a particular functionality and documentation.

## **8.4 In Scope Items**

The TCC scope of work entails the technical migration from SAP ECC6 to S/4HANA, including the migration of data and the customisation of all custom code to ensure a working S/4HANA ERP system. Success will be measured by the effective transition from the current ECC6 eco-system and the associated standalone SAP installations to that of S/4 HANA, as experienced from an end-user perspective (end-to-end integration and functionality). All core processes in the current operational system are part of the scope of work including Fixed Asset Stabilization (FAS) as described in the previous sections.

The service provider will also be required to comply with the necessary Transnet policies, procedures and standards as part of the S/4 implementation, which will be made available to the successful bidder.

The following is a non-exhaustive guide of expected deliverables/tasks to be completed within the scope of this bid. These should be aligned with the SAP Activate Methodology, to successfully migrate TCC from ECC6 to S/4HANA:

### **System Assessment and Planning**

- **Current System Evaluation:** Conduct a detailed analysis of the existing SAP ECC environment as part of the project Discovery phase. A detailed technical migration roadmap is required supported by a detailed implementation plan.
- **Readiness Assessment:** Use tools like SAP Readiness Check to identify areas requiring attention for the system conversion.
- **Project Planning:** Develop a comprehensive project plan outlining timelines, milestones, resources, and risk management strategies.

### **Infrastructure Preparation**

- **System Sizing and Infrastructure Planning:** Assess and verify the required hardware and infrastructure changes, including adopting the SAP HANA database.
- **Technical Architecture Design:** Design the target architecture for the SAP S/4HANA environment

### **Custom Code and Data Preparation**

- **Custom Code Analysis and Remediation:** Identify custom code needing adaptation and perform necessary adjustments to ensure compatibility with S/4HANA.
- **Data Cleansing:** Identify and clean obsolete or redundant data to streamline the migration process.

### **Technical Execution**

- **System Upgrade:** Utilize SAP's Software Update Manager (SUM) and Database Migration Option (DMO) to upgrade the existing SAP ECC system to SAP S/4HANA.

- Data Migration: Execute data migration ensuring integrity, completeness, and accuracy.
- Deployment, Configuration and Customization: Ensure that system configurations and customizations are carried over and adjusted as necessary.
- Authorisations: Ensure that authorisations are appropriately configured and mapped both on S/4 and Fiori.

## **Testing**

- Technical Testing: Conduct comprehensive technical testing to ensure system stability, performance, and functionality.
- Business Process Testing: Validate business processes through integration testing and user acceptance testing (UAT).

## **Training and Change Management**

- End-User Training: Provide training sessions and relevant training materials for end-users and administrators on the new system functionality.
- SAP Technical Team Training: Provide detailed technical training sessions for new the new technologies and S/4 conversion to the TCC SAP team.
- Change Management: Develop and implement a change management plan to ensure smooth adoption of SAP S/4HANA.

## **Backup and Recovery**

- Rollback strategy: Develop and document a comprehensive rollback strategy to be followed in the event of any scenario requiring TCC to roll back to ECC (revert back to the previous functioning state). This will include the various areas such as data quality and integrity issues, S/4 and HANA application issues, system configuration issues, Fiori, system interface/integration issues. At any point where the rollback is invoked, there should be transactional consistency in the legacy system. The strategy should also include a verification matrix which helps inform the various scenarios under which a rollback will become applicable.
- Disaster recovery strategy: Develop and document a comprehensive disaster recovery strategy to followed in the event of a disaster.

- Backup strategy: Develop and document a comprehensive backup strategy aligned to best practice for the TCC SAP environment.

### **Go-Live and Post-Go-Live Support**

- Cutover Planning and Execution: Develop and execute a detailed cutover plan to transition from SAP ECC to SAP S/4HANA with minimal disruption.
- Post-Go-Live Monitoring and Support: Monitor system performance and provide support to resolve any immediate post-go-live issues.
- Ongoing Optimization: Identify and implement continuous improvements based on user feedback and system performance.

### **Documentation and Reporting**

- Documentation: Provide detailed documentation of the entire system conversion process, including system configurations, custom code adaptations, data migration steps, and test results.
- Status Reporting: Regularly update project stakeholders on progress, risks, and issues through status reports and meetings.

## **9.5 Project Location**

The project team will be located in Transnet's Johannesburg (Carlton Centre) offices for the duration of the project with any project related flights covered under disbursement costs.