



ANNEXURE A: SCOPE OF WORK

1. PURPOSE

CEF requires the services of a consultancy firm with a proven record of accomplishment in major IT transformations to develop the detailed design of Target IT Architecture that is in line with the business and operational requirements of the SANPC while being an enabling platform for Group Shared Services where SANPC is the first tenant.

2. BACKGROUND

CEF (SOC) Ltd is the holding company for several subsidiaries comprising the CEF Group of companies. These subsidiaries also operate in the energy sector with commercial, strategic, regulatory, and developmental roles. CEF (SOC) Ltd's focus is to provide oversight, strategic direction and guidance to its subsidiaries regarding growth, commercial viability, sustainability, synergy optimisation, developmental objectives, governance and overall business performance improvement.

The Mandate of CEF is derived from the CEF Act (No 38 of 1977) and its articles, decreeing that CEF Group is required to contribute to the security of energy supply for South Africa. For more information on the company, visit our current website: www.cefgroup.co.za.

CEF Corporate Strategy seeks to reposition its role to that of parenting, strategic investor and development agent for its subsidiaries, listed in Table 2.1 below

Table 2.1: Entities that make up the CEF Group

Subsidiary	Business Focus	Location
The Petroleum Oil and Gas Corporation of South Africa "PetroSA"	Oil and Gas, National Oil Company	Cape Town and Mosselbay
The Strategic Fuel Fund Association "SFF"	Strategic stock and pollution control	Cape Town
Petroleum Agency SA "PASA"	Promotion, Licensing and Regulating the exploration	Cape Town



	and production of the country's natural oil and gas resources.	
African Exploration Mining and Finance Corporation, also known as "AEMFC"	Mining and supply of Coal	Waterfall and Mpumalanga
The South African Gas Development Company "iGas"	Gas and Gas Infrastructure	Sandton, Johannesburg and Mozambique
The South African National Petroleum Company	Oil, Gas and Strategic Fuel Investment, National Oil Company <i>Established from the ongoing merger of SFF, PetroSA and iGas</i>	Waterfall
CEF SOC Ltd "CEF"	Holding Company	Sandton, Johannesburg

As the Holding Company, CEF SOC must provide strategic direction and guidance to the operating entities to achieve long-term growth and create shareholder value.

To succeed in implementing its strategy, CEF (SOC) Ltd is currently exploring Group Shared Services to remove inefficiencies and cost duplications and enable Group synergies to be realised, among other benefits. Critical to delivering a Group Shared Services model is establishing an IT platform that aligns with and is responsive to the changing business needs and digital transformation requirements of CEF (SOC) Ltd and its subsidiaries.

Furthermore, a key enabler of CEF's strategy is the merger of three of its subsidiaries, namely, SFF, PetroSA and iGas, to establish the South African National Petroleum Company (SANPC) and enable commercial stabilisation by unlocking synergies and setting up an attractive vehicle for growth.



Phase 1 of the merger has been concluded, with key IT outputs including a Baseline IT Assessment, High-level Target IT Architecture, and High-level Roadmap, which have all been approved by the Phase 1 Merger Project Steering Committee. With Phase 2 of the merger underway, the enablement of the SANPC's target IT architecture is critical to driving stabilisation. This will be enabled by establishing a platform for Group IT Services, wherein SANPC will be the first tenant.

To enable the above strategic objectives, CEF IT requires a service provider to design the target IT architecture, leveraging the Merger Transition Phase 1 IT outputs.

The objective of this process is, therefore, for the service provider to assist CEF (SOC) Ltd with (1) detailing the target IT architecture design of the SANPC based on a multi-company IT environment in which the SANPC is the first tenant, (2) scoping implementation requirements and a potential high-level implementation roadmap.

3. SCOPE OF WORK AND DELIVERABLES

3.1. Scope of work

CEF requires a service provider with core offerings including large-scale IT architecture design. In partnership with CEF Group, the SANPC Merger Transformation Project team, and the Group Shared Services Project team, the service provider will undertake the detailed design of the Target IT Architecture of a Group Shared Services IT platform for CEF Group, wherein the SANPC is the first tenant. This target IT architecture must not only focus on the Shared Services, but also include the IT services that support the core business operations.

Leveraging the Merger Transformation Phase 1 IT outputs, the architecture should be fit for the envisioned end-state, which is the establishment of a best-in-class IT landscape through consolidation and rationalisation of the existing applications of SFF, iGas and PetroSA and incorporation of best practices (e.g., use of cloud technologies, supporting cross-group synergies, driving user-centricity and management of IT risks) across the following IT domains:

- **Business Architecture**

Analysis of the business value chains, business capabilities, value streams and business services, both internal and external, including the stakeholders, to determine areas of improvement to optimise operations.

Moreover, this will include mapping the business services offered at each location to specific stakeholders.

- **Data Architecture**

Data and Business Intelligence Reference Architecture organised in the following process:

- o Acquire - identify existing and new data sources in alignment
- o Organise – define the logical data models
- o Analyse - define the business intelligence approach, processes and tools to support strategic business goals and objectives and promote for data-driven decision-making.
- o Delivery – define the process, systems and tools to deliver provision data to both internal and external user groups
- o Define a data management and governance strategy to ensure compliance with data privacy, data protection, data retention and access policies.

- **Data Management**

Data management platform focussed on how data is stored and accessed

- **Business Applications**

Critical business and ICT applications that enable business requirements and operational activities. These will include business applications supporting both Group Shared Services and SANPC core business operations.

- **IT Infrastructure**

Composite hardware infrastructure, devices and network resources required for the existence, operation and management of the IT environment.

- **Engagement Channels**

Engagement channels required to visualise, access and consume the business services per user group

- **IT Security**

Programmes and protocols that ensure data safety and continuity of the SANPC and other tenants on the IT platform.



- **Integration**

Platform enabling communication between different systems, allowing for collaboration between internal and external applications.

The success of the execution will be heavily dependent on a detailed design and customised methodology, which must take the critical aspects of the CEF Group strategic context into account, including the urgent need for stabilisation and operationalisation of the SANPC, realisation of potential Group synergies, and reduction of cost inefficiencies for CEF (SOC) Ltd and its subsidiaries.

The scope of work for designing the Target IT Architecture has been defined with key activities including, but not limited to, analysis, planning and detailed design of the Target IT Architecture as per the high-level requirements outlined in Table 3.1 below.

Table 3.1: Scope of Work for Detailed Design

Activity	Scope area	High-level requirements
	Business Architecture	<ul style="list-style-type: none"> – Understand the business landscape, including review of the business processes required by the SANPC, differences to Legacy and potential areas of improvement to define business requirements. – Ensure alignment to the strategic objectives and goals required in defining business requirements. – Leverage the organisation's business functions and processes to deliver the business architecture.
Analysis	Confirm entire application landscape	<ul style="list-style-type: none"> – Leverage Phase 1 inputs to confirm entire application landscape, migration strategy and application rationalisation (where required)
	Baseline analysis	<ul style="list-style-type: none"> – Identify servers to be migrated – Identify IP addresses of all equipment – Identify all applications/data utilising shared servers – Confirm licensing end-date – Detailed review and baseline assessment of the SANPC's IT landscape and key contracts to enable future optimisation
	Architecture framework and reference model	<ul style="list-style-type: none"> – Development of technology principles – Review and update the Target IT Architecture framework to enable a Shared Services model – Develop master data framework, data governance approach and requirements – Outline security framework

	Other	<ul style="list-style-type: none"> – Conduct other critical technical analyses required to enable best-in-class detailed design
Planning	Design planning	<ul style="list-style-type: none"> – Leverage baseline assessment (Phase 1) to detail key design milestones – Outline key project risks and dependencies
	ERP and application migration planning	<ul style="list-style-type: none"> – Develop the ERP migration plan for a multi-company setup in a Shared Services environment – Provide necessary implementation scoping inputs, including infrastructure and migration requirements, data mapping approach and license transfer requirements, among others.
	Infrastructure and network consolidation strategy	<ul style="list-style-type: none"> – Detailed plan and requirements for the consolidation of infrastructure, including consolidation of servers that host the same applications/application types, test environments or others, virtualising where required and consolidating storage, network and data centres
	Testing approach and plan	<ul style="list-style-type: none"> – Outline key testing to be done per application, including basic navigation, authentication, data connectivity, integration, security and acceptance testing, among others – Define testing approach/methodology per application – Outline testing milestones
	Other	<ul style="list-style-type: none"> – Conduct other critical planning activities required to manage design risks and scope implementation requirements. – Outline high-level potential implementation roadmap.
Design	Detailed design of IT Target Architecture and application phase-out plan	<ul style="list-style-type: none"> – Detailed design of target ERP system for a multi-company setup, including technical specifications, integration requirements and data migration requirements – Detailed design of target applications and application phase-out plan, including identification of transferrable licenses – Detailed design of target architecture across data management, integration, user interface, infrastructure and security
	Systems Development Life Cycle framework	<ul style="list-style-type: none"> – Develop a model outlining the guiding principles and stages for the development of systems for the SANPC
	Disaster recovery and business continuity strategy	<ul style="list-style-type: none"> – Draft disaster recovery and business continuity policies – Detail disaster recovery and business continuity requirements, including server, cloud and other technology enablers – Develop archiving strategy
	Other	<ul style="list-style-type: none"> – Conduct other critical technical design activities required to enable a best-in-class detailed design that will allow seamless Target IT Architecture Implementation



Please note that the above-outlined scope is not prescriptive, and the bidder must provide a customised methodology and plan, highlighting where their service offers a differentiated proposition. Additionally, if the bidder's service does not currently include certain capabilities, they are required to indicate whether enabling these capabilities is in their future roadmap or whether sub-contractors will be leveraged to enable execution.

3.2 IT Design Outputs

There are essentially three key deliverables that the Service Provider will need to complete:

- a) Baseline assessment of the current IT Architecture
- b) Developing a detailed Target IT Architecture design for the SANPC in the context of Group Shared Services. This architecture must meet the business requirements of the SANPC across the six (6) major IT domains (please refer to Section 3.1 for further detail) as a priority while enabling a platform for Shared IT Services for CEF Group as well as SANPC's core operations.
- c) Technical requirements and a high-level roadmap for the implementation of the target IT architecture.
- d) Migration plan outlining how the entities' business applications and data will be migrated into the target architecture. This needs to cater for a scenario in which multiple environments are maintained. The plan should establish how data integrity will be established to support business operations during the migration period.

3.3. Resources and expectations

The Architecture Design Authority stream needs to be headed by a strong architect backed by a competent and versatile architecture team. The lead architect must have experience in SAP implementation and migration services within the Oil and Gas environment and integration experience with other systems and must have executed projects in environments with a focus on Data Analytics and Cyber Security.

The Architecture Design Authority should include, but not be limited to, domain architects for each Enterprise Architecture layer, such as Business, Applications, Data, Security, Infrastructure, Engagement Channels and Integration. These domain experts



will be required to analyse and define each Enterprise Architecture layer according to Architecture guidelines as detailed below.

Architecture Guidelines

The prospective bidders are expected to deliver the artefacts following the “4+1 Architecture Views” Guidelines, as per the below:

- **Business Architecture, Functions and Process Views**

Show the structure of the business functions, business value streams, business capabilities and business processes.

- **Logical view**

- Show the components of the solution and how these components correlate and interact together (i.e. components diagram)
- Show the main technology stack for each component in the architecture diagram.

- **Physical view**

Show the physical components of the solution and how they are connected.

They must encompass and demonstrate how the following will be achieved:

- System availability and reliability
- Scalability
- Backup
- Security
- Detail the underlying technology components lifecycle, including the End of Support (EOS) and End of Life (EOL) dates for each.

- **Data flow diagrams**

- Show how the data flows between interconnected components.
- Show the data flows from the engagement channels to the backend applications and vice versa.
- Development, Implementation and Migration views

To achieve the above-mentioned deliverables, bidders are expected to, at a minimum, perform the below activities:

- Perform a fitness analysis across the following layers to determine CEF's readiness for the consolidation/ migration and, where possible, eliminate



redundant business functions/ services, technologies, and infrastructure components:

- Business Architecture, including business functions and business processes.
 - Blueprint solution stack fitment into SAP (the target solution)
 - Existing solution stack readiness to be migrated into SAP
- Assess if the SAP application blueprint and integrations are mature and aligned with the envisaged target architecture.
- Identify and define the solution architecture across all layers per the guidelines.
- Form part of the CEF's Architecture Governance Committee/ Design Authority. The prospective vendor, through the assigned Lead Architect, will be responsible for:
 - Assessing the architecture state.
 - Contributing towards defining the Enterprise Architecture guidelines and principles for assessing the various solution architectures.
 - Determining solution improvement opportunities and enhancements.
 - Supporting and endorsing solution architecture adoption.
 - Participating in the design and architecture and advising on the best practices and standards.

Note: *Considering the complexity and nature of this programme, CEF and the prospective bidder will, during the initial phase of the project, work together to further elaborate and finalise the project expectation through the definition of a Project Charter to ensure a common understanding of the project activities, deliverables and define the criteria for success.*

4.3 Timing

It is envisaged that the contracted consultancy will be appointed **by October 2023**. The design stage duration is over three (3) months. The consultancy, in collaboration with CEF IT and the SANPC Merger Transition Project team, will develop the suggested work package and related activities.



4.4 Reporting and final deliverable format

It is expected that there will be a contractual agreement on the various deliverable forms and regularity reporting requirements, which will include, but not be limited to, the following:

- Project Status Reporting,
- Project Steering Committee Reporting
- Board Reporting
- Architecture Design Authority