



South African Reserve Bank

INTEGRATED CROSS-BORDER FOREIGN EXCHANGE REPORTING SOLUTION

for The South African Reserve Bank

Schedule 1 - Implementation Services

1.0 Introduction

This is RFP Schedule 1 – Implementation Services Statement of Work (SOW). The Schedule contains the implementation services project scope and details the Service Provider's responsibilities and related SARB responsibilities. Changes to the SOW will be processed in accordance with the procedure described in RFP Schedule 3 – Governance and Relationship Management.

2.0 Implementation Services – Roles & Responsibilities

Table 3 set forth below in this section identify the roles and responsibilities associated with the Implementation Services. The table outlines the basic relationship model the SARB wants to maintain with the Service Provider in various activities of application implementation:

- Implementation Services
 - Application Strategy, Architecture and Planning;
 - Acquisition and Management;
 - IT Service Continuity and Disaster Recovery Planning;
 - Requirements Definition;
 - Design Specification;
 - Programming/Development;
 - Integration and Testing;
 - Implementation and Migration;
 - Programme Management;
 - Project Management;
 - Value Realisation Services;
 - Infrastructure and Solution System Administration Services.

Responsibilities are placed in the column under the party that will be responsible for performing the task:

- Service Provider responsibilities are indicated in the column labeled “Service Provider”
- SARB responsibilities (including responsibilities of the SARB contracted third parties) are indicated in the column labeled “SARB”.
- For tasks that are indicated under the “Service Provider”, it is assumed that the SARB staff will participate where needed based on the Service Provider’s direction. For competencies that are needed on a continual basis for SARB to operate the I-CFERS the Service Provider needs to ensure that the SARB's operational support staff are “trained on the job” by participating in the Support Services in adequate roles.

2.1 I-CFERS Implementation

C2S1 Table 3. I-CFERS Implementation Services Roles and Responsibilities

Service Category and Description	Service Entities	Responsibility	
		Service Provider	SARB
<p>2.1.1 Application Strategy, Architecture and Planning</p> <p>Application Strategy, Architecture Planning and Analysis Services are activities associated with the capturing and assessment of requirements that drive the definition of architectural, functional, performance, IT Service Continuity, and security requirements that also comply with regulatory and SARB policies.</p>	Application Architecture	<ul style="list-style-type: none"> Participate in Application Architecture planning and recommend Application Architecture design Assist in the defining of key functional, integration and data conversion architectures Where required provide architecture consulting expertise within the scope of the engagement Document Application Functional Architecture 	<ul style="list-style-type: none"> Maintain “End State” Application Architecture Develop and maintain Application Roadmap Develop and maintain release specific Application Architectures Provide Architecture consulting to and approval of proposed projects Govern compliance with the business architecture definition Review and approve Application Functional Architecture Definition
	Technology Standards	<ul style="list-style-type: none"> Recommend software technologies, packages, and tools within the framework of this SOW as required Conduct feasibility studies for the implementation of new technologies Document Technology Architecture 	<ul style="list-style-type: none"> Evaluate, recommend, and select software technologies, packages, and tools within the framework of this Schedule as required Manage SARB IT Standards Review Board Approve and govern IT standards Govern compliance with the technology architecture definition Review and approve Technology Architecture Definition
	Infrastructure Architecture Alignment	<ul style="list-style-type: none"> Collaborate with Infrastructure Architecture team 	<ul style="list-style-type: none"> Manage SARB Infrastructure Architecture team
	Business Architecture Development	<ul style="list-style-type: none"> Develop and maintain core business processes, activities, information and process flows Comply with the business architecture in the development and Implementation of the I-CFERS 	<ul style="list-style-type: none"> Develop and maintain Business conceptual architecture Ensure IT solutions are business focused and deliver value Formulate the business requirements that drive IT solution selection and implementation Govern compliance with the business architecture definition Review and approve Business Process Architecture Definition

Service Category and Description	Service Entities	Responsibility	
		Service Provider	SARB
	Data Architecture	<ul style="list-style-type: none"> • Develop Conceptual and Logical Data Models for Transactional requirements and document Data Architecture • Define Data Standards and Master Data • Conduct Data Quality Assessments • Document Information Architecture for reporting requirements • Comply with the Information and Data architecture in the development and Implementation of the I-CFERS • Recommend Data Conversion Architecture 	<ul style="list-style-type: none"> • Evaluate Application Package Data Models against SARB requirements • Govern compliance with the information and data architecture definition • Identify and approve Data Conversion Architecture • Review and approve Data and Information Architecture Definition
	Integration Architecture	<ul style="list-style-type: none"> • Provide B2B and Enterprise Application Integration (EAI) Consulting • Recommend interfaces to be developed between local systems, external systems and I-CFERS • Document Application Integration Architecture • Detailed design of approved interfaces • Configure and program interfaces based on detailed design 	<ul style="list-style-type: none"> • Identify and approve interfaces to be developed between local systems, external systems and I-CFERS • Maintain EAI Architecture • Govern compliance with the application integration architecture definition • Review and approve Application Integration Architecture Definition
	Security Architecture	<ul style="list-style-type: none"> • Perform application security development tasks • Recommend improvements to application security architecture • Document Application Security Architecture 	<ul style="list-style-type: none"> • Define security requirements, standards, procedures and policies including regulatory requirements • Perform application security planning • Govern compliance with the application security architecture definition • Review and approve Security Architecture Definition
	Architecture Deliverables	<ul style="list-style-type: none"> • All architecture artefact deliverables are to be provided 	<ul style="list-style-type: none"> • Provide modeling standards • Review, approve and incorporate EA artefact deliverables into the EA repository
2.1.2 Acquisition and Management The acquisition and management process includes the purchase of all service equipment, including new equipment, upgrades to existing equipment, or purchases resulting from a service or repair request. Also maintains buying catalogue, execution of purchase orders, provides quotations, deals with goods handling.	Policies and Process	<ul style="list-style-type: none"> • Develop, document and maintain in the Standards and Procedures Manual Acquisition and Management procedures that meet requirements and adhere to defined policies 	<ul style="list-style-type: none"> • Define Acquisition and Management requirements and policies • Establish audit procedures to ensure compliance with leading practices and best pricing • Review and approve acquisition Acceptance process and procedures
	Vendors Contract Management	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Develop and issue acquisition requests for SARB owned service components as required • Evaluate proposals against clearly defined objective criteria • Negotiate contracts for SARB-purchased/leased service components • Develop and maintain list of SARB preferred

Service Category and Description	Service Entities	Responsibility	
		Service Provider	SARB
			suppliers
	Procurement	<ul style="list-style-type: none"> Arrange for proper processing, logistics and replacement of items that are reasonably found by the Service Provider installation personnel to be "dead on arrival" or damaged subject to each OEM's policy and warranty guidelines. For the record, an item found to be "dead on arrival" or damaged will be excluded from Service Level achievement calculations but will receive priority attention in terms of resolving the problem or replacing the item. 	<ul style="list-style-type: none"> Manage the ordering, procurement, contract management, and delivery processes in compliance with SARB procurement and acceptance processes for SARB purchased/leased tower related components Manage and track SARB purchase orders and service orders Ensure that all new components and software provisioned are included in the asset management system Register Extended warranties with vendors as per the vendors process
	Standards Compliance	<ul style="list-style-type: none"> Ensure that new equipment/ hardware complies with established SARB IT standards List and architectures 	<ul style="list-style-type: none"> Ensure all procured hardware and software is listed as part of the SARB architecture technology standards.
	Goods Handling and Warehousing	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Provide secure facilities for SARB on-site storage if required
2.1.3 IT Service Continuity and Disaster Recovery Planning Provider shall provide prioritised IT continuity and DR services for I-CFERS application(s), and associated infrastructure (e.g., servers, network connection). I-CFERS applications and associated infrastructure will receive DR services according to the SARB recovery requirements.	DR Requirements	<ul style="list-style-type: none"> Recommend best practice IT Service Continuity and Disaster Recovery strategies, policies and procedures 	<ul style="list-style-type: none"> Define the SARB Service Continuity and Disaster Recovery Strategy, requirements and scenarios Establish DR test requirements Establish processes to ensure I-CFERS application suite DR plans are kept up to date and reflect changes in the SARB environment
	I-CFERS Planning DR	<ul style="list-style-type: none"> Develop and maintain the detailed DR I-CFERS application plan to achieve the I-CFERS application DR requirements. Plan shall include plans for data, back-ups, storage management, and contingency operations that provide for recovering the SARB's environment within established recovery requirement timeframes after a disaster affects the SARB's use of the Services. 	<ul style="list-style-type: none"> Define data replication, backup and retention requirements Review & approve Disaster Recovery plan

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		Service Provider	SARB
2.1.4 Requirements Definition Requirements definition services are the activities associated with the definition and assessment of user requirements that are used to determine detailed application design.	Requirement Development	<ul style="list-style-type: none"> Refining and detailing of stated business requirements Use the defined business requirements as input to establish trace-ability to I-CFERS development and customisation Conduct value assessments of functional requirements and generate an impact analysis, including affected systems, alternative design scenarios, etc. 	<ul style="list-style-type: none"> Act as primary point of contact with the business to define, gather, refine, and prioritise business requirements. Conduct SARB interviews, group workshops and surveys to determine technical, functional and end user requirements Document the business requirements Define local adaptation deployment criteria and delivery requirements (i.e. laws/regulations)
	Solution Impact	<ul style="list-style-type: none"> Identify need for software upgrade conversion requirements for Commercial Off-The-Shelf (COTS) hardware and software and execute based upon a service request from the SARB 	<ul style="list-style-type: none"> Approve software upgrade conversion requirements for COTS) hardware and software
2.1.5 Design Specifications Design specification services produce design specifications that meet the SARB architectural standards and identify and describe the most cost-effective solution to the implementation option under consideration. Application design process and specifications shall: a. Incorporate the SARB's architectural guidelines into the design, including application extensibility, maintainability, scalability, robustness and reliability b. Obtain SARB oversight and approval through coordination with the appropriate architectural or technical oversight authority.	I-CFERS High Level Design	<ul style="list-style-type: none"> Create the high-level Design Document (conceptual functional specification) from the Business Requirements Create the end to end detailed Design Document (logical functional specification) from the architecture definitions and detailed business requirements provide application development and implementation cost and schedule estimates Develop overall project cost and schedule estimate Document and present implementation options 	<ul style="list-style-type: none"> Evaluate and approve designs Review and negotiate solution proposed implementation costs Approve project cost and schedule estimate Review and approve functional specifications
	I-CFERS Detailed Design	<ul style="list-style-type: none"> Recommend design standards and documentation Create the Technical Specification Document Create design to contain security features in compliance with the SARB Security Policies, including external and SARB role based security models Provide planned technology design that specifies all components, program modules, data stores, interfaces, interface components and associated operations procedures for the solution Define implementation and deployment policies, project schedules and staffing requirements to meet deployment and delivery requirements Provide revised application development and implementation cost and schedule estimates 	<ul style="list-style-type: none"> Review and approve design standards and documentation Provide availability of SARB business and technical resources Approve planned technology to support application Approve implementation, deployment policies, schedules and deployment staffing levels Approve revised application development and implementation cost and schedule estimates Review and approve technical specifications

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		Service Provider	SARB
2.1.6 Programming/ Development Programming and/or development services are the activities associated with the programming, development, scripting, configuring or customising of the solution.	Standards, Policies and Procedures	<ul style="list-style-type: none"> Recommend programming, development, and technical documentation policies, procedures, and standards 	<ul style="list-style-type: none"> Establish, approve and review programming, development, and technical documentation policies, procedures, and standards
	Establish Development Environment	<ul style="list-style-type: none"> Deploy Development system hardware platform environments Install all software for establishing the development environment 	<ul style="list-style-type: none"> Define I-CFERS technical standards for environments (instance, client, database, interface, etc.) and deployment Procure hardware and software as per the Service Provider bill of materials
	Customise and Configure the I-CFERS	<ul style="list-style-type: none"> Code using best practices tools and techniques that are consistent with the SARB architecture and development standards Perform all necessary technical design, programming, development, factory testing, unit and string testing, scripting, configuring or customising of application modules as required to develop and implement the design plans and specifications 	<ul style="list-style-type: none"> Participate in software testing Ensure compliance with technical specifications
	Performance Management	<ul style="list-style-type: none"> Recommend modifications and performance-enhancement adjustments to the SARB system software and utilities 	<ul style="list-style-type: none"> Provide performance requirements for the system
	Project Management	<ul style="list-style-type: none"> Create and keep updated a detailed project plan covering all package configuration and development activities Plan, monitor and manage all activities related to package configuration and development Establish overall programming and development project schedule Provide overall programming and development module delivery schedule for the SARB acceptance 	<ul style="list-style-type: none"> Review programming and development plans and procedures where there is an impact on other the SARB entities/facilities Approve overall programming and development module delivery schedule
	Reporting	<ul style="list-style-type: none"> Coordinate configuration and development reviews, including unit test acceptance; monitor / track issues, providing written results 	<ul style="list-style-type: none"> Approve reporting

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2.1.7 Integration and Testing Integration and testing services are the activities associated with the confirmation that the individual program components work together properly and as a whole perform their specified functions. This includes application interfaces to other applications already in production at or being developed by the SARB or outside parties.	Define, Plan and Execute Activity Test	<ul style="list-style-type: none"> • Provide testing strategy • Provide test plans • Establish I-CFERS environment and tools for all testing activities • Recommend test tools • Create test cases, scripts and test data • Perform factory, unit and string testing using test tools • Facilitate and support all appropriate testing (e.g. software testing, end-to-end testing (system), market testing, stress testing, regression testing,) using test tools 	<ul style="list-style-type: none"> • Approve testing strategy and test plans • Approve recommendation on test tools • Create test scenarios • Approve test cases, test scripts test data • Govern testing and approve test results • Establish standards, methodologies and tools for testing activities Perform all appropriate testing(e.g. software testing, end-to-end testing (system), market testing, stress testing, regression testing,) using test tools
	Provide Test Environment	<ul style="list-style-type: none"> • Define number of test environments and technical specifications for each environment • Create I-CFERS technical test environments: install new or enhanced hardware items, software, components, peripherals, or configuration and system management tools for test environment • Install all software for establishing the development environment 	<ul style="list-style-type: none"> • Procure hardware and software as per the Service Provider bill of materials
	Organise User Acceptance Testing & Regression Testing	<ul style="list-style-type: none"> • Manage the SARB functional, integration, and regression test environments and associated test data including creation and maintenance during the testing period • Coordination of User Acceptance Testing (e.g. establish and define acceptance criteria, setting high-level test objectives, select high level test scenarios, etc.) • Lead, facilitate and support User Acceptance Testing (establishing adequate test environment based on User Acceptance Criteria, preparing data to support test scenarios within modified system as well as managing the relationship with all interfaced systems necessary to conduct test, troubleshooting, support users to progress through scenarios, simulating interfaces or working with integrated systems to conduct end-to-end tests, support batch processing, exercise functionality, and report results) as prescribed by SARB. • Coordinate regression testing 	<ul style="list-style-type: none"> • Conduct selective random independent testing, where the random selection includes some complex modules (i.e., independent verification and validation testing)
	Monitor Testing Results	<ul style="list-style-type: none"> • Correct defects found as a result of testing efforts 	<ul style="list-style-type: none"> • Review testing results for compliance with policies, procedures, plans, and test criteria and metrics (e.g. defect rates, progress against schedule, etc.) • Coordination of User acceptance and assurance testing (e.g., gain user involvement, establish and define acceptance criteria, setting high-level test

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		Service Provider	SARB
			<ul style="list-style-type: none"> objectives, establish high level test scenarios, etc.) Notify Service Provider in the event the SARB notices a discrepancy between the SARB's requirements and the requirements document or Service Provider deliverables Validate all new and upgraded software or services for compliance with the SARB Application Security Policies and Instructions
	Planning, Monitoring and Status Reporting	<ul style="list-style-type: none"> Create and keep updated a detailed project plan covering all testing activities Plan, monitor and manage all activities related to testing Report on progress, budget, issues, risks to programme management 	<ul style="list-style-type: none"> Review and action testing progress as required
2.1.8 Implementation and Migration Implementation and data migration services are the activities associated with the installation and migration of new or upgraded components to the production environment as well as services for providing support for development of localisation specific business practices and local, legal, regulatory and statutory needs.	Define and Plan Implementation	<ul style="list-style-type: none"> Define implementation approach, project schedule and staffing requirements to meet delivery requirements Create project plan for implementation providing detailed description of tasks, duration, persons responsible, dependencies and deliverables 	<ul style="list-style-type: none"> Review and approve implementation approach, project schedule and staffing requirements Designate and commit resources to participate in the I-CFERS project, assign a resource who will be responsible for the implementation
	Plan and Decide Cut-Over and Go-Live	<ul style="list-style-type: none"> Create detailed plan of cut-over and go-live activities Manage cut-over and go-live activities Execute cut-over and go-live activities 	<ul style="list-style-type: none"> Assist in create detailed plan of cut-over and go-live activities Assist in execute cut-over and go-live activities Create "go/no-go" checklist and conduct the "go/no-go" meetings Approve production implementation "go/no-go" decisions
	Preparation	<ul style="list-style-type: none"> Conduct pre-installation site surveys, Production and DR environments 	<ul style="list-style-type: none"> Assist the Service Provider with preparation activities
	Manage Implementation	<ul style="list-style-type: none"> Cooperatively manage all activities required for a successful implementation 	<ul style="list-style-type: none"> Cooperatively manage all activities required for a successful implementation Commit resources to participate in implementation activities
	Solution Implementation and Production Commissioning	<ul style="list-style-type: none"> Implement local adaptations to technical architecture or services provided Install new or enhanced hardware items, components, peripherals, or configuration and system management tools to operate with the support application environment (Production and DR) Provide support, implementation and deployment of the SARB's I-CFERS application and platform environment in all the SARB geographies as defined in the Requirements Document(s) or a Service Request 	<ul style="list-style-type: none"> Perform Quality Assurance activities to ensure the Implementation and migration deliverables meet contracted requirements Conduct post Implementation user acceptance Approve/reject Implementation signoff based on the success of the Implementation

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		Service Provider	SARB
		<ul style="list-style-type: none"> Coordinate deployment and support activities with the SARB's parties as directed by the SARB Project Manager Deploy I-CFERS as per detailed system design 	
	Data Conversion	<ul style="list-style-type: none"> Provide template in which the data to be uploaded should be provided Educate designated SARB personnel on the format, syntax, semantics and use of the template for uploading data in I-CFERS Define action plan to prepare for data migration Perform data migration from existing systems to new systems, by either electronic or manual methods Define test case, test data and perform all appropriate testing of data conversion activities 	<ul style="list-style-type: none"> Define the data conversion strategy Assist in defining an action plan to prepare for data conversion Lead, coordinate and track the data conversion activities Clean and provide the data to be uploaded in I-CFERS in the correct format Assist in testing of data conversion
	Validate Implementation and Prepare Transition to Support	<ul style="list-style-type: none"> Plan and execute handover to support activities (documentation, training, communication) 	<ul style="list-style-type: none"> Approve transition to support and review progress
	Documentation	<ul style="list-style-type: none"> Provide system and user documentation to include; <ul style="list-style-type: none"> End-User documentation Provide standard operating procedures Provide documented application disaster recovery process 	<ul style="list-style-type: none"> Review and approve documentation delivered
	Status Reporting	<ul style="list-style-type: none"> Create and keep updated a detailed project plan covering all Implementation activities Plan, monitor and manage all activities related to Implementation Report on progress, budget, issues, risks to program management 	<ul style="list-style-type: none"> Review and action Implementation progress as required
2.1.9 Programme Management Programme management Services are all activities associated with planning, executing, monitoring and controlling the overall I-CFERS projects.	Setup Programme Management	<ul style="list-style-type: none"> Propose I-CFERS programme management and configuration/development methodology Define and setup program management structures, organisation, processes and procedures Define programme management templates and tools (e.g. documentation and project management tool) 	<ul style="list-style-type: none"> Review and approve program management methodology, program management structures, organisation, process, procedures and templates
	Execute Programme Management	<ul style="list-style-type: none"> Cooperatively develop and provide the project definition and high level plan, identifying major critical milestones, overall budgets and project deliverables Define, monitor, manage and control overall Project Plan Issue / risk management: identify, monitor any risk and issues 	<ul style="list-style-type: none"> Cooperatively develop and provide the project definition and high level plan, identifying major critical milestones, overall budgets and project deliverables Take appropriate action to mitigate risks and issues assigned to the SARB Cooperatively manage the scope of the programme

Service Category and Description	Service Entities	Responsibility	
		Service Provider	SARB
		<ul style="list-style-type: none"> Take appropriate action to mitigate risks and issues assigned to the Service Provider Cooperatively manage the scope of the programme Resource management of the Service Provider and the Service Provider contracted resources Cooperatively manage the programme budget 	<ul style="list-style-type: none"> Manage programme quality Resource management of the SARB resources Cooperatively manage the programme budget
	Reporting	<ul style="list-style-type: none"> Regularly report on progress, budget, timelines, risk / issues, quality, resources to SARB 	<ul style="list-style-type: none"> Review and escalate any issues risks etc. for action to higher governance authorities as required
2.1.10 Project Management Services Project management Services are the activities associated with the management of Implementation Services.	Project Management Approach	<ul style="list-style-type: none"> Provide methods, standards and tools for project management in conformance with SARB's standards and practices 	<ul style="list-style-type: none"> Approve methods, standards and tools project management
	Define Project Plan	<ul style="list-style-type: none"> Provide project definition and plan, identify major critical milestones, overall budgets and project deliverables Provide, maintain and update detailed project planning, identify critical path dependencies. 	<ul style="list-style-type: none"> Approve project plan
	Manage Execution of the Project Plan	<ul style="list-style-type: none"> Manage, follow up and track execution of project plan. 	<ul style="list-style-type: none"> Perform project management review and oversight, and provide liaison function to SARB
	Monitor Project Progress	<ul style="list-style-type: none"> Report on project progress, budget, risk, issues 	<ul style="list-style-type: none"> Review and escalate any issues risks etc. for action to higher governance authorities as required
2.1.11 Value Realisation Services Value Realisation Services are the services related to planning for, execution of and harvesting of the benefits identified in the Business case. These services include clearly identifying the benefits that relate to unambiguous business objectives, and to assign ownership to those responsible for ensuring and managing benefit realisation. The focus should be firmly on business outcomes and measurements.	Planning	<ul style="list-style-type: none"> Develop work plan Recommend value realisation plan Recommend value measurement plan 	<ul style="list-style-type: none"> Approve plan for value realisation Approve plan for value measurement
	Execution	<ul style="list-style-type: none"> Creation of the value realisation model Finalise model projections 	<ul style="list-style-type: none"> Review and validation of the model Approve model and projections
	Harvesting	<ul style="list-style-type: none"> Manage and Measure Value Realisation 	<ul style="list-style-type: none"> Sign-off on Value Realisation Report

Service Category and Description	Service Entities	Responsibility	
		Service Provider	SARB
2.1.12 Infrastructure and I-CFERS Administration Services Infrastructure Services and I-CFERS system administration Services refer to the activities related with the management and operations of the SARB infrastructure and SARB I-CFERS systems. The Service Provider shall work directly with the SARB I-CFERS Infrastructure Provider on a daily operational level. This is for the duration of the I-CFERS development and implementation projects	Manage and Operate Infrastructure	<ul style="list-style-type: none"> • Manage and operate SARB I-CFERS infrastructure including network, servers, storage, databases, middleware 	<ul style="list-style-type: none"> • Monitor the managed services
	I-CFERS Systems Administration	<ul style="list-style-type: none"> • Perform I-CFERS system administration and monitoring of all I-CFERS environments • Propose installation of support packages & support notes • Plan and execute upgrades of I-CFERS components 	<ul style="list-style-type: none"> • Approve and install support packages & support notes
	Planning, Monitoring and Status Reporting	<ul style="list-style-type: none"> • Create and keep updated a detailed project plan covering all infrastructure and I-CFERS administration activities • Plan, monitor and manage all activities related to infrastructure and I-CFERS administration • Report on progress, budget, issues, risks to programme management 	<ul style="list-style-type: none"> • Review plans and reports during established performance and review meetings