

Central Securities Clearing System PLC

Request for Proposal:

Implementation of an Enterprise Data Warehouse

REFERENCE NO: CSCS/TECHSOL/DWH/08/2019

The return date for responses against this RFP is **13th September 2019** delivered in the requested manner and to the address advised. Late responses will not be considered. Note that proposals submitted that does not meet stipulated criteria shall be considered non-responsive.

19 August 2019

Dear Sir,

TITLE: Implementation of an Enterprise Data Warehouse

Ref: CSCS/TECHSOL/DWH/08/2019

You are invited to submit your proposal against the requirements detailed in the Request for Proposal (RFP) attached. The information contained within this invitation shall be treated as “Commercial in Confidence” and shall also be subject to the terms of any related Non-Disclosure Agreement signed by the parties.

Part 1 of the RFP gives you information about Central Securities Clearing System PLC.

Part 2 is for you to answer and provide details as requested to support your proposal

Proposers are requested to provide one copy of their proposal in paper format and one copy in electronic format (either Microsoft Office or PDF). Submissions to this RFP must be returned by the time stated. Late submissions will not be considered by Central Securities Clearing System Plc.

Queries

All queries should only be directed to the undersigned. We look forward to your responses soon.

Yours faithfully,

Project Management Office

pmoffice@cscs.ng

Table of Contents

Reference	Contents	Action
Part 1	General Information	
i	Letter of Invitation	For Information
ii	Introduction	For Information
iii	Terms Governing this RFP	For Information
iv	Service Providers Actions Required for this RFP	For Information
Part 2	Service Providers Response to this RFP	
A	Service Providers Declaration	For Completion
B	Service Provider Information Questionnaire	For Completion
C	Statement of Requirements	For Information
	<i>Project Introduction</i>	For Information
	<i>Project Objectives and Scope</i>	For Information
	<i>Business Analysis and Project Management</i>	For Information
	<i>User Requirements</i>	For Information
	<i>Functional Requirements</i>	For Information
	<i>Non-functional Requirements</i>	For Information
	<i>Technical Requirements</i>	For Information
	<i>Document Requirements</i>	For Information
D	Methodology/Description of the Solution Approach	For Completion
E	Price Schedule	For Completion
F	Evaluation Criteria	For Information
G	Bid Securing Declaration	For Completion

Part 1

1. Introduction

1.1 Procurement Policy on Bribery and Corruption

Central Securities Clearing System (CSCS) Plc strictly adheres to professional work ethics and emphasizes zero tolerance for bribery and any other forms of corruption. It is our policy that service providers involved in offering bribes will be disqualified and excluded from any potential engagement opportunity.

1.2 Executive Summary of Project

This RFP is an invitation to prospective proponents to submit proposals for the implementation of an Enterprise Data Warehouse.

The successful company should be able to manage and meet the requirements for this activity. The purpose of this RFP is to seek information from potential bidders with an intention to establish an agreement between CSCS and the successful bidder. The contract that follows this process shall bind CSCS and the successful bidder to perform in a specific way for an agreed duration to be agreed in the contract in an event of the formation of the same.

2. Terms Governing This RFP

2.1 Recipients of this RFP are required to read all the information supplied and have a clear understanding of Central Securities Clearing System Plc requirements. Further information can be made available by contacting nominated persons listed in this RFP.

2.2 It is a condition of this RFP that all mandatory requirements (indicated in the body of text by the word “must” or expressed or implied accordingly) are met in full. Responses and proposals that do not conform to mandatory requirements will be deemed to be made on the basis that conformance is implied by the proposer. The contents of proposals must be submitted in the same order as that specified in this RFP.

2.3 Pricing should include details of all costs related to software, required hardware, conversion of existing data, installation, training, final implementation and annual support costs.

2.4 All communication relating to this RFP must be directed to the specified key contact persons listed below. All other communications between a respondent and CSCS staff concerning this RFP are prohibited. In no instance is a respondent to discuss cost information contained in a proposal with the CSCS contact persons or any other staff prior to proposal evaluation. Failure to comply with this section WILL result in disqualification of the proposal.

- 2.5 Central Securities Clearing System (CSCS) Plc will select the successful proposal based upon several evaluation factors including features outlined in the RFP; company stability, experience executing similar projects; implementation plan and price. The selection will be decided based on the proposal submitted by a qualified proposer that best meets the needs of CSCS. CSCS reserves the right to reject any or all proposals.
- 2.6 This RFP is a request for proposal for the implementation of a DWH solution for CSCS. It is not a contract and no contractual obligations shall arise on behalf of CSCS. CSCS will not be liable for any costs incurred in the preparation and submission of a response to this RFP.
- 2.7 CSCS shall deduct Withholding Tax from payments to service provider (successful bidder) to account for that tax to the local tax authorities. Any agreement with the successful bidder shall be subject to CSCS being entitled to make these deductions so that CSCS will not bear an unnecessary additional cost. Service provider can usually claim a credit against their tax liabilities in respect of Withholding Tax deducted by CSCS.
- 2.8 In addition to submitting a proposal in response to this request, all proposals should be sent with a written confirmation that there is no conflict of interest issues that will prevent the firm from taking up this engagement.
- 2.9 CSCS shall evaluate proposals based on their responsiveness to the requirements of this RFP as outlined above. Each responsive proposal will be given a score. A proposal shall be rejected at this stage if it fails to respond to the requirements. The shortlisted vendors shall be invited for an oral presentation before a Committee of CSCS representatives. The vendor with the highest score after the final presentation will be invited for negotiations.
- Negotiations will be held with the aim of reaching an agreement on all points and subsequently engage the successful vendor. If negotiations fail, the vendor with the second highest score will be invited to negotiate an agreement.
- After negotiations are completed, CSCS will promptly notify other vendors on the shortlist that they were unsuccessful.
- 2.10 The following are key contacts for information you may seek for enquiries:
- i. Anthony Ezugbor [aezugbor@cscs.ng]
 - ii. Olumide Jerome [ojerome@cscs.ng]
 - iii. Oluwakemi Oke [ooke@cscs.ng]

2.11 Timeline to be observed for this RFP:

Milestones	Due Date
RFP issued by Central Securities Clearing System PLC	19 th August
RFP questions received by Central Securities Clearing System PLC in writing	19 th – 13 th September 2019
RFP questions responded to by Central Securities Clearing System PLC	19 th – 13 th September 2019
RFP response due	13 th September 2019
Presentation date	To be communicated

2.12 All bids shall be submitted by providing one copy of the proposal in paper format and one copy in electronic format (either Microsoft Office or PDF). Both paper and electronic copies of your proposals should be submitted on or before close of business on Friday, 13th September 2019. The electronic copy should be sent to: rfpsubmission@cscs.ng

The paper copy will be deposited in the Tender Box, on the 13th floor of Central Securities Clearing System Plc., Stock Exchange Building and should be addressed to:

Isioma Lawal

Head, Internal Control

Central Securities Clearing System Plc.

13th Floor, Stock Exchange House

2/4 Customs Street, Lagos Nigeria

Email: rfpsubmission@cscs.ng

3. Service Provider's Actions Required for this RFP

- 3.1 Read Part 2 carefully which contains the under listed sections. Complete them accurately and concisely where required
 - A. Service Providers Declaration
 - B. Service Provider Information Questionnaire
 - C. Statement of Requirements
 - D. Methodology/ Description of the Solution Approach
 - E. Price Schedule
 - F. Evaluation Criteria
 - G. Bid Securing Declaration

3.2 Sign service providers declaration (A) indicating your compliance and acceptance of the terms of this RFP

3.3 Provide your responses to the Service Provider Information Questionnaire (B). They must be precise and concise without unnecessary marketing/advertising materials. If there is any other information which, it is felt should be included because of its relevance to the proposal please feel free to do so but this must be separate from the required structured response.

3.4 CSCS may issue addenda notices to the bid documents to advise of any changes and clarifications thereto or to respond to queries from bidders or for any other reason that the company deems necessary. Addenda Notices will be numbered, and the bidder shall acknowledge receipt via email and inclusion in their Bid.

CSCS may issue additional information for reasons that the company deems necessary at any time for bid submission as nominated in the Invitation to Bid or subsequent Addendum. Such information shall be included in the Contract award.

The Company shall use its sole discretion to make any changes to the date of Bid closing from that advised in the Bid schedule which may result from an addendum.

3.5 Any request for clarification must be emailed to: pmoffice@cscs.ng
CSCS reserves the right to distribute answers to questions to other suppliers who may not have asked that question but where CSCS feels that the answer corrects a mistake, adds clarity or removes ambiguity from the original RFP.

3.6 Authorized representatives of the firm shall initial every page of the RFP and no further questions will be taken or meetings held with regard to this RFP until after the receipt of proposal/s, unless otherwise advised by CSCS.

3.7 Please ensure the bid declaration is a computation of total cost of the project implementation.

- 3.8 The subject matter of the information provided or gained in relation to this Request for Bid may contain valuable property rights of the Company. This information is to be treated in strict confidence by the Bidder and its employees and shall not be used except for the specific purpose of preparing and submitting a Bid. Upon receiving notice, unsuccessful Bidders shall return such information to the Company whose property it shall remain.

- 3.9 Submit response to CSCS in line with the milestone dates stated in 2.12.

Part 2 Service Providers Response to This RFP

A. SERVICE PROVIDERS DECLARATION

To:

The Head, Internal Control,

Central Securities Clearing System Plc.

13th Floor, Stock Exchange House,

2/4 Customs Street, Lagos, Nigeria.

Dear Sir/Ma,

PROJECT TITLE: IMPLEMENTATION OF AN ENTERPRISE DATA WAREHOUSE

We have read and have examined this Request for Proposal (RFP) document, Technical Requirements, Specifications, Guidance Notes and the terms and conditions issued with this Proposal. We offer completion of the works required against this RFP for the total price of:

.....
..... excluding VAT or any other similar tax (in words).

This price is further broken down into individual components as requested in this RFP.

This declaration confirms that this Proposal is tendered as a bona fide competitive offer to CSCS, and the information provided in the Service provider Information Questionnaire and Service provider Response to CSCS Statement of Requirements are fully correct and complete.

We, the undersigned further agree that if our offer in these documents is accepted by CSCS, the resulting contract, if any, shall be based on the CSCS Standard Terms and Conditions issued with this RFP (subject to any permitted variations attached to this RFP).

Signature

Date

Name

Job Title

For and on behalf of

Address

Email

Telephone

B. SERVICE PROVIDER INFORMATION QUESTIONNAIRE

To be eligible, bidders shall submit the documents below which will be considered under Preliminary Evaluation:

1. Organization Profile

1.1 Registration & Accreditation	Compliance Statement (Y/N)	Page Reference Please refer to the page within your proposal indicating how compliance is met (Mandatory)	Explanations Supporting Compliance
<i>Business address</i>			
<i>VAT (Value Added Tax) Registration Number</i>			
<i>Valid Tax Clearance Certificate (where applicable)</i>			
<i>Certificate of Incorporation/Registration</i>			
<i>Submit Tax Clearance Certificate</i>			
<i>Attach Two Reference Letters</i>			
<i>Letter Confirming Banking Details</i>			
<i>Letter confirming email address where Purchase Orders and queries will be sent to.</i>			

2. Ownership & Financial Background

2.1 Financial-Related Information	Compliance Statement (Y/N)	Page Reference Please refer to the page within your proposal indicating how compliance is met (Mandatory)	Explanations Supporting Compliance
<i>Audited financial statements for the last two (2) years. (Unless previously provided within the last one year). The Audited Financial statements shall be submitted together with the signed Auditors Opinion.</i>			

3. Track Record and Reference

3.1 Industry Experience	Compliance Statement (Y/N)	Page Reference Please refer to the page within your proposal indicating how compliance is met (Mandatory)	Explanations Supporting Compliance
<i>How many existing clients you have? Name your key clients</i>			
<i>Similar project undertaken in the past 5 years</i>			
<i>Details of any cancelled projects in the past</i>			

3.2 Relationship with CSCS	Compliance Statement (Y/N)	Page Reference Please refer to the page within your proposal indicating how compliance is met (Mandatory)	Explanations Supporting Compliance
<i>Product/services which you provide to CSCS (currently or previously)</i>			
<i>Value of your sales to CSCS for the past 3 years and by product/services</i>			

3.3 Client Reference (Please provide at least 3 clients for deals similar in nature to this RFP)			
	Company A	Company B	Company C
<i>Names of companies which can provide reference to CSCS</i>			
<i>Names & job titles of contact person</i>			
<i>Contact details (email address, address, office number)</i>			

Non-compliance with these requirements will result into disqualification of the bid at Preliminary Evaluation Stage and the Bidder shall not proceed to the Technical Evaluation Criteria.

C. STATEMENT OF REQUIREMENTS

1.0 INTRODUCTION

1.1 Background

The Central Securities Clearing System (CSCS) Plc. was incorporated on July 29, 1992 as a Financial Market Infrastructure (FMI) for the Nigerian Capital Market. It was commissioned in April 1997 and commenced operations in April 14, 1997. On the 16th of May 2012, CSCS became a Public Liability Company (PLC) by a special resolution.

The Securities and Exchange Commission issued its license as an Agent for Central Depository, Clearing and Settlement of transactions in the Nigerian Capital Market. It operates a computerized depository, clearing, settlement and delivery system for transactions in securities in the Nigerian Capital Market.

CSCS facilitates the delivery (transfer of securities from seller to buyer) and settlement (payment of bought shares) of securities transacted on the approved Nigerian Exchanges. It enables securities to be processed in an electronic book entry form thereby substantially reducing the period it takes a transaction to commence and end.

CSCS has made visible strides in the Nigerian Capital Market and will continue to respond to the needs of the securities and commodities market to further enhance transparency and speedy settlement of transactions.

1.2 Purpose of the Request for Proposal (RFP)

The Central Securities Clearing System (CSCS) as an organization requires the services of a reputable technology company to implement an Enterprise Data Warehouse project focusing on these 2 major deliverables below:

- Build an Enterprise Data Warehouse
- Deploy tools for data analytics, data mining and business intelligence

The purpose of this Request for Proposal (RFP) is to solicit proposals and appraise potential bidders for the implementation of an Enterprise Data Warehouse and Business Intelligence solution, in line with the requirements outlined in this document. The bidder is expected to provide the following services:

1. Carry out a comprehensive scoping exercise to determine size and complexity of the project
2. Provide advisory services to CSCS team on solution and implementation options
3. Procure required components and tools for the DWH implementation
4. Implement the enterprise DWH successfully
5. Provide support and continuous maintenance
6. Provide technical and non-technical trainings

The interested vendors would be required to respond to each of the requirements as outlined in this RFP document, clearly indicating their ability to meet the requirements and their associated costs.

The CSCS team will then evaluate the various responses submitted and choose a more suited vendor. The awarding of the contract will not only be based on the amounts indicated in the proposals but also on the overall suitability of the proposal meeting CSCS's approach, strategic objectives and goals.

2.0 PROJECT OBJECTIVES AND SCOPE

2.1 Project Objectives

CSCS requires an Enterprise Data Warehouse/Business Intelligence (DWH/BI) solution that will be implemented as a single source of data and version of truth by integrating and cross-relating relevant information from various existing source and future systems for the purpose of query, analysis and reporting of information using appropriate Business Intelligence (BI) tools for analysis, transformation and presentation.

Data (structured and unstructured) will be aggregated from various sources comprising 35 system applications such as TCS BaNCS, SAP, HR system, ERP, contact center solution, legacy systems, social media sources and any other system that may be implemented in the future; 5 databases including MySQL, MSSQL, Mongo DB, DB2 and PostgreSQL databases; as well as 3 other cloud-hosted solutions. Our data has been classified into 4 major categories – transactional, corporate, investor and market participants data.

The strategic commitment of CSCS is to use historical and current information to drive decision-making capabilities, to support the business with clear and consistent static reports, standardized information, dashboards and analytical reports showing business trends.

This solution must also provide a user-friendly interface, designed to easily query and report data from various online transaction processing (OLTP) systems that will promote a consolidated, collaborative and consistent analytical view of the data, which can subsequently be populated into data marts used to produce ad-hoc reports, canned reports, and dashboards.

2.2 Project Scope

The project focuses on delivering a data warehouse solution, optimized to meet the data and reporting needs of CSCS. We would therefore require the vendor to provide the following;

1. High level solution architecture
2. An intensive scoping exercise of CSCS systems, APIs and other infrastructure, to determine scope, size, deliverables, dependencies and risks of the project implementation. The selected vendor will investigate and study all existing source systems to identify an end-to-end approach of system implementation
3. Propose an DWH/ BI solution that meets technical and functional requirements within the timeframe prescribed by CSCS. Provide detailed recommendations on most suitable industry standard products for the recommended DWH Solution and related products as well as their associated costs
4. Investigate the right size of DWH/BI solution as regards hardware and software to ensure availability, scalability, redundancy and performance of the solution. Provide detailed recommendations on the hardware architecture covering storage configuration, capacity planning, scalability, partitioning and indexing, data integration, backup and recovery, including cost of hardware procurement and maintenance
5. The project will include mining and cleansing of both structured and unstructured data. The vendor will propose different tools and applications for querying and mining data for a variety of users. The vendor will also propose data integration technology and processes that are needed to prepare the data for use
6. The scope of the DWH/BI solution project will include but not limited to supply, install, implement, maintain and support the DWH/BI solution within the timeframe prescribed by CSCS
7. Design, develop, test and implement the DWH/BI solution for data integration, data repository, business intelligence and analytical requirements
8. Offer onsite system administration, further facilitating support using adequately qualified and experienced support staff
9. CSCS will provide a dedicated test and development environment to conduct end-to-end User Acceptance Tests during the project. The testing should be appropriately applied to ensure all scenarios of testing including load testing

10. Draw a detailed end user training plan and documentation

2.3 Business Analysis and Project Management

Business analysis and project management of the DWH implementation will be carried out in two phases.

Phase 1 - Definition: The selected vendor and the CSCS project team will carry out a comprehensive scoping exercise to determine all data sources, system interfaces and all requirements for a successful implementation, as well as functional design, system specification and models. For this phase, designs, models, process maps, proof of concept, prototypes can be added to support your proposal. At the end of this phase, a system blueprint will be developed and signed off, after which the next phase of the project can proceed.

Phase 2 – Design & Implementation: Using standard Project Management methodologies, the vendor will work closely with end users, subject matter experts, functional and technical teams to configure and deploy the solution successfully. Quality assurance and other system tests will be carried out extensively on the solution. Users will be trained, and all documents will be shared before project close out.

2.4 Solution Requirements

The project is expected to deliver an DWH/ BI that will have the following distinctive features:

1. Implementing data warehouse and business intelligence system with its associated reporting tools that will be used for generating and modelling reports meant for decision making, as well as predictive analysis of the market
2. Dedicated reporting environment with consolidated, aggregated and archived data that will not interfere with transactional operations, providing enhanced data quality, reliability, single version of the truth and consistent reports
3. Data consolidation from various systems to create a 'single version of the truth' and 'single customer view' ensuring that CSCS has an incorporated view of system data

4. Generation of analytical insights for various reporting aspects that include: product, risk management, performance management, revenue assurance, and data mining by embedding data integrity and consistency required by the end users at all levels in CSCS
5. Proposed DWH/BI solution must have prebuilt engines/tools for regulatory reporting, Basel II, IFRS 9, ALM, Automated Budget and other reports
6. Introduction of additional tools that would be efficiently useful in analyzing and understanding the value of CSCS customers and their profitability and further establish better and improved service levels that would help grow the business
7. Create a robust basis for good, consistent and quality data solution that facilitates analysis of the numerous business trends and statistics
8. Metadata, data quality, and governance processes to ensure that the warehouse meets its purposes
9. Real-time and batch processing, real-time backup, transactional database, user customization of fields and reports
10. Mining of both structured and unstructured data
11. The solution must be user friendly for a great user experience. The interface shall be menu driven, provide dialog boxes, drop down list, user input fields etc.
12. Compatible with other tools and ability to integrate seamlessly with other 3rd party applications

2.4.1 Enterprise Data Warehouse

The Data Warehouse is expected to serve as a central repository for data from all data sources, as well as storing historical data from legacy systems. It will store data from the core operations system, accounting, HRIS, contact center, workflow systems and any other system, in one single place.

- The DWH shall be the centralized repository and a single source of data for all current sources
- The DWH shall be adaptive, responsive and resilient to change to allow integration with any new applications that CSCS may implement in future and any new requirements that may come
- The DWH must allow for support of unstructured data from various sources

- The proposed solution shall define a road map for the integration of the current interfaces for the applications that will be integrated with the DWH solution

2.4.2 Extract Transform and Load (ETL)

- Ability to extract data online or in batches at scheduled times or period.
- Ability to process and unlock meaning of data from different sources.
- Ability to standardize and/or aggregate data from various data sources prior to actual loading into DWH solution.
- Ability to profile, cleanse, enrich, control, and sustain data by incorporating any data quality management tool (DQM) to improve quality with ease of implementation and use.
- Ability to generate quality and exceptional reports in conjunction with the DQM tool on data from all sources.
- Open system that can interface/interact with any type of database and load data into the data warehouse without additional enhancements.
- The incremental data to be loaded into DWH from the individual source applications must be using transactional logs and provided as a part of solution for ETL System in line with the business rules validated by CSCS.

2.4.3 Analytics and Business Intelligence

The data analytics, data mining and business intelligence tool is expected to be integrated with the Data Warehouse for generating analytical reports throughout the organization.

- Ability to generate standardized reports which can be accessed by multiple users
- Provision of executive management dashboards and other regulatory reports
- Use of dashboards, custom reports and visualizations for reporting
- Ability to generate standardized reports using standards such as IFRS 9 and BASEL II
- Activation of pre-packaged analytical applications for providing predefined reports and metrics that business units can use to measure their performance
- Ad hoc reporting and analysis for business users to analyze information faster and provide trends
- Provision of other advanced reports and report wizard must be featured on the system.

- The BI tool should allow ad hoc reports being manipulated and analyzed by the business and any other end-user
- The tool must be user friendly for a great user experience. The interface shall be menu driven, provide dialog boxes, drop down list, user input fields etc.
- Generation of scheduled reports with increased consistency and accuracy.
- Ability to allow users perform predictive analysis and data mining.
- Ability to provide dynamic presentations through dashboards and interactive display of up-to-date critical management data.
- Ability to allow users to drill down into granular details underlying the summaries in reports and dashboards.
- Ability to provide house-keeping and exceptional alerts upon reaching certain thresholds for operational or transactional information

2.4.4 Business Reporting and Analysis Requirements

The common attributes of reliable data for decision making that cut across are accuracy, predictive, timely, accessible and actionable. Listed below are some of our specific reporting and analytics requirements. This is not an exhaustive list.

No	Business Reporting Requirement	Analysis Requirement
1	Risk Management	<ul style="list-style-type: none"> • Customer Credit Risk Profile • Lien/Collateral Analysis • Operational Risk Assessment
3	Regulatory Compliance and Reporting	<ul style="list-style-type: none"> • Revenue Assurance • Market Segmental Reporting • Cost Centre Analysis
4	Business Performance and Profitability	<ul style="list-style-type: none"> • Business Segmentation • Revenue Assurance • Transactions Analysis • Activity Based Costing Analysis • Channel Profitability • Customer Profitability • Product Analysis • Product Profitability • Profitability Analysis

		<ul style="list-style-type: none"> • Transaction Profitability Analysis • Automated Budgeting Tool
5	Customer Relationship and Marketing	<ul style="list-style-type: none"> • Campaign Analysis • Customer Complaints Analysis • Customer Delinquency Analysis • Customer Investment Profile • Customer Loyalty • Customer Profile • Market Analysis
6	Investment Management	<ul style="list-style-type: none"> • Financial Market Analysis • Participant Analysis • Securities liquidity Analysis • Securities Available for Lending

2.5 Non-Functional Requirements

2.5.1 Security and Accessibility

- Data warehouse security policy shall be defined, and data governance practices established. Governance policy for approving access requests for data warehouses shall also be established
- The system shall distinguish between authorized and non-authorized users
- Data shall be classified and can be accessed only by authorized users. Ability to create role-based accesses to information
- Ability to restrict direct access to data on the data warehouse. Internal and external user access should only be driven through BI tools
- The access permissions for system data may only be changed by the system's data administrator
- Employees shall be forced to change their password the next time they log in if they have not changed it within the length of time established as "password expiration duration"
- Users must change the initially assigned login authentication information (password) immediately after the first successful login. The initial password must not be reused
- Each unsuccessful attempt by a user to access an item of data shall be recorded on an audit trail

2.5.2 System Availability

- The DWH/BI system shall achieve 99% up time

2.5.3 Scalability

- The BI solution shall be scalable to support unlimited growth in the number of reports and users
- The system shall be capable enough to handle a sizeable number of users (the specific number will be defined) without affecting its performance

2.5.4 Configuration Management

- The selected vendor shall record, maintain and verify configuration information regarding each of the configuration items required to deliver the system, detailing the attributes and the history of each configuration item and the relationship between items

2.6 Technical Requirements

The following are the list of technical requirements to be considered for a successful implementation:

- Operating environment
- Database requirements
- Frontend technology
- Backend technology
- Deployment options
- Server requirements
- Storage requirements
- Network connectivity
- Internet/intranet requirements
- Integration/software installation
 - i. System administration
 - ii. Data management/operations
- License requirements
- Solution Implementation
 - a. Data transformation
 - b. Database implementation
 - c. Application development
 - i. Create front end GUI application
 - ii. Create batch reporting system
 - iii. Ad-hoc query tool implementation
- Integration with third party systems
- System Test

- i. Integration test
- ii. Performance test
- System design and architecture
 - a. Logical design
 - b. Data flow model & architecture
 - c. Database design
 - d. Application design & architecture

2.7 Document Requirements

The selected vendor is expected to provide the following documents to CSCS before, during or after the project is executed:

- Statement of Work (SOW)
- System architecture/model/design
- Well documented process flow
- Technical specification document
- User manual

2.8 Implementation Requirements

The selected vendor must be able to:

- Supply DWH integrated with BI tools within the agreed project plan and budget
- Provide build and tested solutions regarding data models, data marts, reports, external engines
- Provide tested calculation engines for cost allocation, cost and yield, revenue assurance/profitability analysis, customer average balances

2.9 Vendor Experience and Qualifications

- Demonstrate successful implementation of similar projects in size and nature. Provide reference sites of similar business nature where DWH implementations have successfully been undertaken
- Experience in integrating the DWH solution with TCS BaNCS, SAP, Oracle or other enterprise systems
- Provide CVs and copies of qualifications for staff that will engaged on the project and proof for having worked on a DWH/BI for project
- Demonstrate capability of post-implementation support of both DWH/BI solutions
- Offer technical, system administration and end-user trainings during and after the project implementation

- There must be an on-site technician to facilitate project requirements and implementation
- Document all project processes and provide system documentation.

2.10 Post Implementation Support

- Ability to demonstrate capability of post-migration support of both DWH and BI solutions
- Availability of local/regional support office/staff
- Feasible structure for support and escalation levels and timelines
- Plan for patch, product, or system upgrades

2.11 Knowledge Transfer

- Provision of adequate training to staff and final handover
- User manuals and other documentation

2.12 Compliance to ISO 27001:2013 Standards

Solution should be demonstrably compliant with ISO 27001:2013 and other information security standards.

2.13 Timeframe for Completion

Please provide a timeframe for completion of the project. This timeframe will be evaluated. Be advised that timeframes will be part of the contractual agreement; therefore, a realistic timeframe for completion should be provided.

2.14 Technical Evaluation Criteria

1. Demonstration of your understanding of the project scope, solution requirements and non-functional requirements

D. METHODOLOGY/DESCRIPTION OF THE SOLUTION APPROACH

In this section, the Bidder will provide a comprehensive description of how it will provide the required services. Information provided must be sufficient to convey to CSCS that the Bidder has enough understanding of the effort required to provide the requested services and that it has an approach, methodology and work plan to overcome possible challenges.

Your technical proposal should include, among others, the following:

- I. An overview of the system, and a brief description of how the solution will be deployed, installed and transitioned into an operational system
- II. Solution low level designs
- III. Documentation and description of related services
- IV. Explanations for deviations (if any)
- V. A detailed project plan, change management plan, communication plan, end-user training plan, risk management plan, quality management plan etc. for the project
- VI. A resource plan detailing the resources needed to support the implementation efforts e.g. customizing, testing, software, personnel and any implementation requirements
- VII. Capacity building and knowledge transfer program, which should include training sessions for technical and non-technical staff.
- VIII. At least 3 previous works of similar magnitude (provide references in the proposal, demo will be shown during presentation)
- IX. Full name and address of the manufacturer's representative, if any, who can provide after sales and support services
- X. Any other relevant documentation such as proof of competence for this type of project

E. PRICE SCHEDULE

Note: Financial proposals must clearly indicate the following:

- a. Bidders should provide costs for the following:
 1. Cost of hardware/servers in line with the agreed specifications for both production and backup environments.
 2. Cost of integration of BI tools, database, and ETL Software license fee structure
 3. Full implementation costs including pre-built data marts, reports until go-live, including professional fee rates.
 4. Post implementation costs after go-live support and Annual Maintenance Charge (AMC) for the production and backup environments
- b. VAT and other taxes must be indicated separately
- c. All pricing for equipment must be Delivered Duty Paid (DDP)
- d. The quotation should have a validity period of at least 90 days
- e. Completion/Delivery period should be indicated. Project implementation schedule should be shared separately

Bidders must try as much as possible to use a template similar to the table below

A. One off costs				
Line Item No.	Description	Quantity	Unit Price	Total Price
1				
2				
3				
B. Recurring costs				
Line Item No.	Description	Quantity	Unit Price	Total Price
1				
2				
Subtotals (to Grand Summary Table)				
Name of Bidder:				
Authorized Signature of Bidder:				

F. EVALUATION CRITERIA

The evaluation shall be undertaken in three stages:

- I. **Preliminary Evaluation**, which shall consider responses from bidders in sections A and B
- II. **Technical Evaluation**, which shall mainly consider responses to sections C and D
- III. **Financial Evaluation**, which shall consider items under section E

G BID SECURING DECLARATION

Bid-Securing Declaration

[insert: title and RFP number]

To: *[insert: name and address of Entity]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we, and in the case of a Joint Venture all partners to it, will automatically be suspended from being eligible for participating in bidding for any contract with you for the period of time of *[5 YEARS]*, in case of, and starting from the date of, breaching our obligation(s) under the bidding conditions due to:

(a) withdrawing our bid, or any part of our bid, during the period of bid validity specified in the Bid Submission Form or any extension of the period of bid validity which we subsequently agreed to; or

(b) Having been notified of the acceptance of our bid by you during the period of bid validity, (i) failing or refusing to execute the Contract Agreement, or (ii) failing or refusing to furnish the performance security, if required, in accordance with the Instructions to Bidders.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the period of bid validity.

If the submission of alternative bids was permitted, and in case we did submit one or more alternative bids, this Bid-Securing Declaration applies to these parts of our bid as well.

Signed: *[insert: signature of person whose name and capacity are shown below]*

Name: *[insert: name of person signing the Bid-Securing Declaration]*, in the capacity of *[insert: legal capacity of person signing the Bid-Securing Declaration]*

Duly authorized to sign the bid for and on behalf of: *[insert: name of Bidder]*

Dated on _____ day of _____, 20__

[Add Corporate Seal (where appropriate)]