REQUEST FOR QUALIFICATION (RFQ) FOR SUPPLY, INSTALLATION, IMPLEMENTATION, INTEGRATION AND MAINTENANCE OF ENTERPRISE DATA WAREHOUSE BUSINESS INTELLIGENCE AND CRM PROJECT (EDW SOLUTION)

RFQ REFERENCE NO.: IDBI/PCell/RFQ/14-15/03
DATE OF RFQ DOCUMENT: June 16, 2014
DATE OF PRE BID MEETING: July 02, 2014
LAST DATE FOR SUBMISSION OF RFQ: July 09, 2014, 3.00 PM
DATE OF OPENING OF RFQ RESPONSE: July 09, 2014, 3.30 PM
TOTAL NO. OF PAGES: 176

ISSUED BY: DEPUTY GENERAL MANAGER
IDBI BANK LTD

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The cost of RFQ document is Rs.5,00,000/- (Rs Five Lakh Only) This document can be downloaded from Bank’s website. In this event, the Bidders should pay the cost of the tender document by means of DD drawn on any scheduled Bank for Rs.5,00,000/- (Rs Five Lakh Only) in favour of IDBI Bank, payable at Mumbai and enclose the same in the RFQ response.
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A. RFQ INTRODUCTION

A vendor submitting the proposal in response to RFQ for EDW SOLUTION shall hereafter be referred to as “Bidder”.

When two or more vendors join together and form a consortium to offer Products/Services to the Bank as per the intent of this RFQ, the leader of the consortium who submits the RFQ on behalf of the consortium and its members will be hereafter referred as “Bidder”.

The Bidder whose proposal will be accepted by the Bank as per the terms and conditions of this document to undertake EDW SOLUTION shall hereafter be referred to as “System Integrator” or “SI”.

Confidentiality of the Document:

This document is meant for the exclusive purpose of bidding as per the terms, conditions and specifications indicated in this RFQ and shall not be transferred, reproduced or otherwise used for purposes other than for which it is specifically issued.
**B. SCHEDULE OF EVENTS**

The key events with respect to this RFQ process are mentioned in the below table.

<table>
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<th>Serial#</th>
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<tr>
<td>1</td>
<td>Date of Issue of RFQ</td>
<td>June 16, 2014</td>
</tr>
<tr>
<td>2</td>
<td>Last date for Submission of queries for Pre-bid meeting</td>
<td>June 24, 2014, 5.00 PM</td>
</tr>
<tr>
<td>3</td>
<td>Pre-bid Meeting</td>
<td>July 02, 2014, 11.00 AM</td>
</tr>
<tr>
<td>4</td>
<td>Pre-bid Meeting Location</td>
<td>IDBI Bank Ltd, Mezzanine Floor, IDBI Tower, Cuffe Parade, Colaba, Mumbai-400005</td>
</tr>
<tr>
<td>5</td>
<td>Contact person and Address for Pre-bid enquiry</td>
<td>Shri Manishi Chatterjee, Dy General Manager- MISD, 3rd Floor, IDBI Tower, Cuffe Parade, Colaba, Mumbai-400005</td>
</tr>
<tr>
<td>6</td>
<td>Last date and time for submission of RFQ Response</td>
<td>July 09, 2014, 3.00 PM</td>
</tr>
<tr>
<td>7</td>
<td>Name &amp; Designation of the Officer to whom the Bid documents are to be submitted, where delivery is by hand</td>
<td>Shri Manishi Chatterjee, Dy General Manager- MISD, 3rd Floor, IDBI Tower, Cuffe Parade, Colaba, Mumbai-400005</td>
</tr>
<tr>
<td>8</td>
<td>Bid Address</td>
<td>IDBI Bank, IDBI Tower, Cuffe Parade, Colaba, Mumbai-400005</td>
</tr>
<tr>
<td>9</td>
<td>Date &amp; time of opening of Technical Bid</td>
<td>July 09, 2014, 3.30 PM</td>
</tr>
<tr>
<td>10</td>
<td>Place of opening of RFQ</td>
<td>IDBI Bank, IDBI Tower, Cuffe Parade, Colaba, Mumbai-400005</td>
</tr>
</tbody>
</table>
C. Important points for bidders to note before submission

The overall process will be a 2-stage bidding process. In the first stage, the request for qualification (RFQ) will be issued for prequalification and short listing of prospective bidders. On receiving applications for prequalification, the same will be scrutinized for short listing the technically eligible bidders as per the qualification criteria mentioned in the RFQ.

In the second stage the bank will issue a RFP to the technically qualified bidders for inviting financial bids. The lowest financial bidder, who is technically qualified as per stage 1, will be awarded the contract.

While submitting the bid, the Bidder may note

i. Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

ii. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

1. Understanding the Requirements & Submission of bids

Bidders before submission of response must carefully go through the entire RFQ document and understand the project scope, requirements, terms and conditions and other information furnished in the RFQ. Failing to furnish all the information required as per the RFQ or submission of incomplete or conditional response to RFQ will be at the risk of the bidder and such bids are liable to be rejected.

- The bids are to be delivered at the address given in table under schedule of events above on or before the time and date given.

- The Bidders can submit only one bid. Each Bidder can propose only one set of EDW SOLUTION

- The Bidders must propose industry standard tools/applications/products for all the areas of the EDW SOLUTION, that have been implemented in large Banking organizations and which are compatible with the EDW SOLUTION as a whole.

2. Earnest Money Deposit

The response to the RFQ must contain EMD for an amount of INR 1,00,00,000/- (Rs One Crore Only) in the form of a DD or Bank Guarantee from any scheduled commercial Bank (other than IDBI Bank) as per Annexure 04 - Bank Guarantee format in lieu of DD towards EMD valid for a minimum period of 6 months (with a claim period of 3 months over and above ) and renewal thereafter till the finalization of the bidder.

3. Opening of bids

- The responses to the RFQ (technical appropriately) will be opened in the presence of the Bidders’ authorized representatives who choose to attend the meeting on the specified date and time at the venue. The Bidders representatives must carry an authorization letter as per Annexure 03 - Authorization letter format for Technical opening.
D. Executive Summary of the Bidders response

The bidder must furnish synopsis of their responses to the RFQ in the Executive Summary, not exceeding 15 pages. The bidder must give a brief write up relating to their capability, past experience as system integrator and as well as of other consortium members OEMs in implementing EDW SOLUTION.

EDW Solution is defined as the entire solution for end to end implementation of enterprise data warehouse that includes data marts/ data warehouse, Business Intelligence, Analytics and Customer Relationship Management.

Before proposing the EDW SOLUTION, the Bidder is expected to go through the business requirements in detail, understand them and suggest a solution which delivers the business requirements as needed by the Bank within the time frame stipulated by the Bank.

The Bidder must define suitable architecture of the EDW SOLUTION in line with the requirement of as per Section H factoring all the business, functional and technical requirements — Annexure 01 - Functional Requirements and Annexure 18 - Minimum Technical Specification for EDW Solution for informed decision making and for business and customer analytics and for report submission.

The bidder must also suggest proper and optimal solutions for hardware/software, data model, DBMS, ETL Layer, Analytical Solutions, data mining, data quality plus Master Data Management tools, metadata management, information access layer, backup and recovery, Operational CRM etc.

The details of the products offered with reference to the RFQ along with brochures and benchmarking results are also to be enclosed as applicable. The details of their past implementation and current use are also to be given.

The Bidder must give the details of suitable tools/software/hardware/utilities/solutions that it is proposing for ETL, Data Quality, Database, Business Intelligence, Data Mining, Operational CRM etc. None of the tools/software/hardware/utilities/solutions proposed should be open source. Any bid submitted with open source tools/software/hardware/utilities/solutions will be summarily rejected. The tools/software/hardware/utilities/solutions should have the capability for handling the following:

1. **ETL**

The ETL tools proposed should pull the data from the various source systems, clean, align, standardize, transform and load based on the Business rules and requirements as specified by the Bank and mapped to the data model customized for the Bank. It must support mixed workloads, multiple loads and should complete the entire ETL exercise within the time window available at the required frequency and intervals. The bidder to submit the strategy for building or setting up the capability for CDC (Change Data Capture) to support real time/near real time extraction of data from the source systems. The Bidder has to consider the time difference between expected ETL load and publishing of reports and accordingly suggest the scope of CDC to the Bank. Selected bidder has to study and propose appropriate frequency for CDC with the consent of the Bank so as to meet business requirements and timelines.
2. Data Quality
Tools for identifying the data quality issues and resolving the data quality problems are to be provided to have a clean and consistent data in Data Warehouse. It should support cleansing, standardization, de-duplication, enrichment and such other tasks.

3. Data Warehouse Database
Data Warehouse is required to store granular, integrated, cleansed, aggregated & transformed enterprise data for BI, reporting, mining, and analytics. The Database should be able to create a centralized repository and capable of handling large volume of highly integrated data and must be scalable.

4. Business Intelligence
Business Intelligence tools to display and perform the job of interpreting the user requests and to help in developing the appropriate queries including adhoc queries against the EDW, formatting and delivering the results back to the users in presentable format. The output will be either as standard reports/adhoc reports or analytical reports using OLAP (Online Analytical Processing). Information should also be made available in various formats including Dashboards, Scorecards, and Charts etc.

5. Data Mining
Data Mining would consist of mathematical and statistical models etc. The capabilities and features of data mining tools to find patterns or relationships that can be made useful to the organization to understand and predict behavior, identify relationships such as customers or products into coherent sales.

6. DSS (Decision Support System)
The EDW SOLUTION should be capable of providing an enhanced business decision support at various levels of the Bank and it should support the Bank’s initiative in performance measurements also. Reports generation must support multiple formats like PDF, Excel, Word, Text, HTML etc.

7. Operational CRM
The bidder should propose a suitable Operational Customer Relationship Management solution covering the functional areas of contact management, customer service, campaign and marketing management, lead management, Customer Communication and Multi-channel interaction. The bidder must deliver a solution which is integrated with analytical solution and provides analytical CRM capabilities.

8. Analytical Solutions
The bidder should propose Analytical solutions covering the subject areas such as Customer, Product, Trade, Corporate Function, Marketing, Collections, Performance Management and Human Resources. The Bidder must deliver pre packaged analytical solutions and in the executive summary, the bidder must submit the capabilities and features of these solutions for analyzing the various subject areas mentioned in the RFQ. Bidder should propose out of box analytical applications/ engines which should have prebuilt native integration with the data model proposed for the Bank.

9. Technical Architecture
The Bidder must propose technical architecture of the EDW SOLUTION which is in tune with the business requirements of the Bank. The Bidder must give in brief the technical architecture which is proposed under the following three heads.
a. Data Architecture
b. Application Architecture
c. Infrastructure

The Bidder must also cover the infrastructure that he shall provide for Test & Development, Training, and Disaster Recovery (including data centre requirements of DR)

10. Others
The Bidder must also give brief description of the following:

1) Proposed implementation methodology in the phases defined for carrying out and for completion of the project as per the time schedule given in the document.

2) Bidder’s plan and methodology on extending facilities management, maintenance and support for the project during the contract period. Bidder should give the details of the resources (quantity, quality and experience) which he shall deploy at the site and the support the Bank shall get under AMC and ATS. These resources should have minimum experience of 3 years each.

3) The Bidder must propose an independent testing agency along with details of number, quality and experience of resources as part of the EDW SOLUTION offer for the purpose of assisting the Bank in testing of the base version, developments, data migration assurance and other releases for production. Bank reserves the right to select the proposed agency for testing.

4) Training: The bidder must give training schedule and furnish training facilities and trainers credentials.

5) The Bidder must indicate in the Executive summary the total development time that includes studying of the source systems, understanding source data formats, data profiling, data cleansing, unit testing, system testing, placing into production and documentation.

6) The Bidder will be the single point of contact/reference to the Bank. The Bank will enter into agreement with the selected Bidder only. However, the Bidder as well as other partners must confirm to the Bank that they are willing to enter into back to back agreement that is in conformity with the deliverables and other service/uptime commitments the bidder makes to the Bank in its response to the RFQ. If requested, the System Integrator must share a copy of the back to back agreement with the Bank. Bidders have to confirm the same as per Annexure 13 – Technical Offer Covering Letter.

7) The Bidder must furnish the details of the other partners, with whom he proposes to join to undertake the EDW SOLUTION implementation in the Bank. The Bidder against the name of such partners must also furnish the details of the products/services such OEMs/SMEs/Other Consortium partners will offer as per Annexure 09 - Consortium Details

8) The resources to be deployed by the System Integrator & its Partners must also have experience in studying existing databases/Bank’s systems and in gathering the requirements and in supply/installation/integration/implemention of the solution including the design and construction of the EDW SOLUTION suitable to the Bank.
9) The Bidder is also expected to deliver the EDW SOLUTION as per the intent of the RFQ and is expected to maintain liaison with the existing source system vendors for their support in implementing the EDW SOLUTION wherever necessary.
E. Project Scope, Objective & Goal

1. Objective

To build an EDW Solution in a phased manner with a Central Repository of single source of data and version of truth by integrating and cross-relating relevant information from various existing source systems and future systems for the purpose of query, analysis and reporting of information duly using tools of analysis, transformation and presentation. The project is envisaged but not limited to the following characteristic features:

- Aiding Top Management of the Bank in Decision making process by implementing data warehouse and business intelligence system with its sophisticated reporting tools and generation of EIS.
- Creation of a Single Customer View (CSV), enabling the Bank to have a unified view of all offerings availed by a customer
- To generate insights into various analytical domains including Customer Relationship Management (CRM), Product, Risk, MIS, Performance Management, Collections and Recovery, Data Mining, Corporate Functions etc.
- Generation of analytical reporting in above domains as required by the business users at all levels of the Bank for their internal purposes duly ensuring speed, data integrity and consistency.
- To understand the customer value, profitability and interactions better and improve service levels and enable business growth.
- To create a strong foundation with good data quality solution that enables the analysis of the various business domains as mentioned above
- To become a customer centric organization by focusing on customer interactions and satisfaction through integrated Operational Customer Relationship Management solution supported by analytical capabilities.

2. Goal

To aid the Bank at all levels in decision making, review and analysis of business and customers -

a. To provide for the end user cross functional requirements across the areas of customer, product, profitability, marketing, collections, corporate functions, data mining, risk, performance management and CRM.

b. To provide and generate dash boards, score cards and other DSS required for Top Management, Business verticals, Zones and Branches to assist them in decision making and to monitor, analyze and improve the business and operational efficiency.

3. Scope summary

The SI should provide the following services to Bank as part of the Project:

- The scope of work in the Request for Qualification (RFQ) for EDW SOLUTION under this RFQ would include but not limited to supply, install, implement, maintenance and support of the EDW SOLUTION

- Study all the existing source systems
• Right size the EDW SOLUTION with reference to hardware & software to ensure high availability, scalability, redundancy and performance of the solution, and to meet technical and functional requirements of EDW SOLUTION as per the terms of the RFQ within the timeframe prescribed by the Bank.

• Understand EDW, BI and Analytical requirements of the Bank to evolve a Data model & architecture and to design the Integrated Enterprise Data Warehouse solution for the Bank.

• Design, development, testing and Implementation of data warehouse solution that includes all Software Development Life Cycle activities (SDLC) for data integration, data warehouse, business intelligence, data quality, cross functional analytical requirements of the EDW SOLUTION mentioned in this document

• Provide onsite managed services for system administration, data base management, application development by providing adequate resources that are qualified and experienced.

• Extend annual maintenance and annual technical support during the contract period after warranty for the EDW SOLUTION as required including renewal of the licenses wherever applicable during the contract period.

• Supply, install, implement and deploy the EDW SOLUTION as per the terms of the RFQ within the timeframe prescribed by the Bank.

• Provide and maintain a test and development environment separately to conduct end-to-end User Acceptance Tests during project implementation and thereafter during the contract period. The Development server sizing should be appropriately done to ensure smooth development activities to meet the scope and timelines. The testing should be appropriately sized to ensure all types of testing including load testing. However, all the servers except the production server can be leveraged for load testing. The test and development servers should be physically separated from production and training servers.

• Training Infrastructure: The SI should also propose an adequately sized training environment separately for internal training to be conducted by the Bank. Provide and maintain training environment by rightsizing the hardware, software and any other application/solution to conduct and support training programs for 100 people logged in concurrently.

• Training: Comprehensive training covering all aspects of EDW including Functional and Technical to be provided to all the identified Bank staff. This will include technical training, executive training, end user training, super user training on one time. Any additional training requested by the Bank should be at the same rate mentioned in the Masked Bill of Material.

• The SI is expected to maintain an IT Service desk. The IT Service Desk should act as a single point of contact for all users whether for service requests, incidents or problems. Refer Section H: 2.2.15.3 for details.

• To provide under facilities management, managed services covering the following:
  – Onsite Managed services for database administration, system administration and for application support that includes extraction, analysis, development of reports and statements etc.
To provide onsite help desk support both technical and functional during the contract period. The Bidder must also provide incident management solution to log issues, incidents with facility to generate reports for review and monitoring.

- To provide wherever necessary as per the intent and requirements of the RFQ, middleware and interfaces with other existing and future solutions like Operational CRM, Risk Management solution, Call Centre, Treasury, Budgeting & Planning solution etc.

- Provide suitable monitoring software along with required hardware for monitoring the performance of all the hardware and software components

- Provide suitable backup solution (Tape Library) along with required hardware which should be modular.

- The SI is also expected to liaison with the existing application providers of the bank for CBS, Treasury, Debit Cards and others and draws their complete support for implementation of the EDW SOLUTION.

- The System Integrator would also have to provide consultancy services including training to set up a data governance cell, within the Bank and establish processes for day to day operations, metadata management for the EDW SOLUTION.

- The SI shall be responsible for carrying out all the required activities including day to day operational activities to achieve the scope mentioned in the RFQ during the contract period. The SI will also be responsible for the involvement and commitment of other partners for the successful execution of the project. The SI in this regard is required to enter into a back to back agreement with partners that is in conformity with deliverables and other service/uptime commitments the SI makes to the Bank under the contract to be entered into. Whenever requested by the Bank the SI has to share the copy of such back to back agreements.

- Manuals/documentation: Soft copies of User and Technical manuals are to be provided for all the functionalities/modules/hardware/tools proposed for the solution separately. In addition, online help with search option has to be made available for all users for all applications.

- Bilingual: The solution should support bilingual for reporting and Dashboard outputs. (English and Hindi).

The details for the individual Sub-systems of the EDW SOLUTION are as below:

**EDW:**

1. The EDW should be the Centralized Repository of single source of data with single version of truth for all current and future analytical applications.

2. The proposed solution should define a road map for integration/implementation of the current interfaces for the applications to be integrated with EDW SOLUTION, as well as cater to any additional applications that the Bank may acquire during the course of the project. The list of the source applications is provided in Appendix 03 – Applications Profile
3. The EDW should be developed keeping the Industry Model as the base. The same models to be modified / customized to meet the specific needs of the bank as per terms of RFQ.

4. The EDW is to be integrated with the Operational CRM to meet the analytical CRM requirements of the RFQ.

5. The EDW should be adaptive, responsive and resilient to change to allow integration with any new applications that the Bank may implement in future and any new requirements that may come.

6. The EDW must allow for support of Unstructured Data Analysis (for e.g. analysis on data from social media, document management systems, call centre data etc.) once the Bank procures the solution for the same in the future

TECHNICAL ARCHITECTURE & ETL:

1. The Bidder must design and submit a Technical Architecture which is the overall plan for the EDW SOLUTION to be when it is ready for use.

2. The Bidder architecture should describe the flow of data from the multiple source systems to the Decision Makers and the transformations of the data along the way as part of the RFQ response.

3. The Bidder in the Technical Architecture must specify the tools, technologies, utilities and platforms needed to make that flow to happen.

4. The Technical Architecture should cover broadly three major areas viz.,
   a. Data Architecture
   b. Application Architecture
   c. Infrastructure (Hardware)

5. While planning for the architecture, the Bidder should have a complete understanding of the Business requirements and should draw a plan to meet the business requirements. The bidder must be aware, the core functions of the EDW SOLUTION are to get the data out of the source systems, clean, align and conform it, transport it to the Presentation Servers; and then make it available to the ultimate Business Users, which includes - Business Analytics, Development of Dash Boards, Scorecards, Submission of Reports and Statements, Data Feeds to CRM, Risk, Treasury etc.

6. Further, while using ETL tools (ETL/ ELT/ ELTL – based on requirements), the data to be loaded into EDW SOLUTION for all applications must be standardized and / or aggregated prior to actual loading into EDW SOLUTION. However the Bidder must also ensure that Bank intends to have access to both aggregate/summary and granular/atomic data.

7. The Technical Architecture must contain the details as to how these functions are met in the EDW SOLUTION proposed to be provided by the Bidders.

8. The incremental data to be loaded into EDW from the individual source applications must be using transactional logs wherever the application can support the same; and hence the Change Data Capture must be provided as a part of solution for ETL System.
9. The Business Rules to be applied for this must be defined by the System Integrator and will be validated by the Bank.

10. The interfaces and/or adapters to the various source and target applications must be provided by the SI as per the intent of the RFQ.

11. The SI should undertake day to day extraction, transformation and subsequent loading in the EDW SOLUTION during the contract period.

DATA STAGING AREA:

1. The Data Staging Area which refers to Extract – Transform – Load, is everything between the Operational Source Systems and the Data Presentation Area. The Data Staging Area should support transformation of raw operational data into a Warehouse deliverable fit for user query and consumption.

2. While extraction is the first step in the process of getting Data into Warehouse environment, once the data is extracted into the staging area, the SI has to carry out numerous potential transformations such as
   – Cleansing the data (that includes correcting the misspellings, resolving domain conflicts, dealing in missing elements or passing into standard formats and other related activities)
   – Combining the data from multiple sources,
   – De-duplicating the data and assigning the Warehouse Keys.

3. The Staging process should create Master reference able records including the process mentioned above for all analytical usage.

4. The SI must ensure the above transformations of the data and make the data fit for presentation to EDW SOLUTION Presentation Area.

5. For the above purpose, the SI must specify the tools, techniques, utilities and platforms needed, in the architecture, to make that flow to happen.

6. At Data Staging Area, there shall not be any data consumption and there shall not be any transactions processing

ANALYTICS, REPORTING & BI

1. The EDW SOLUTION must support generation of Standard Reports & Statements.

2. The system must also support generation of ad hoc and dynamic reports.

3. The indicative list of Bank Operational reports are furnished in Reports tab of Annexure 01 – Functional Requirements.

4. The EDW SOLUTION should support the Key Performance Indicators (KPIs) required for developing Dash Boards, Score Cards for MIS/EIS. The list of indicative functionalities required and indicative data elements (facts/ measures and dimensional attributes) are furnished in Annexure 22 – Data Elements for Functional Requirements.
5. Data Mining

Data mining tools can be used to access the data, explore it through interactive visual tools and then build visualize models using sophisticated algorithms.

The SI must provide for the functional requirements mentioned in Annexure 01 – Functional Requirements using packaged analytical tools wherever necessary.

6. Analytical Solutions & Business Intelligence

The System Integrator is required to furnish the architecture and methodology followed (including tools, techniques, utilities and platforms needed) for the Data Access Tools to access the Data Presentation Area for various Analytical Applications, Predictive Analytics and Data Mining. The nature of business problems that are likely to be addressed include - Customer Segmentation of the clientele base, measuring the life time value of customers, Customer Churn-out prediction, Loan Default Prediction, Product Profitability, Customer Profitability, Delivery Channel usage behavior by customers etc. The EDW SOLUTION should also support Adhoc Queries, Stored Queries and Reports also among various other features.

7. The BI should also support the OLAP, slice and dice, etc

8. The EDW SOLUTION must allow the users to build ad hoc reports based on the aggregated and granular data as described in the RFQ. This should be GUI driven that allows the user to drag and drop attributes to build reports, dashboards, scorecards, etc in various formats such as excel, pdf, csv, etc

9. The SI must provide suitable Backup Software and Tape Library along with Hardware for taking back up as per requirements mentioned in RFQ.

10. The SI must provide for development, testing and release of any statement, report, dashboard etc as required by the Bank during the contract period.

11. User Access points for the presentation layer applications

The SI has to deliver the predefined requirements at the intervals and frequency specified by the Bank

a. Operational reports – Customized BI Portal, email interface, standard web services

b. Analytical reports – Customized front end

c. Dashboards & Scorecards – User Desktops/web and Mobility devices through Online and Offline access

d. Ad hoc – User Desktops/web and Mobility devices through Online and Offline access

e. BI and Data Mining – User Desktops/web and Mobility devices through Online and Offline access

f. OCRM – Offline and Online access for user desktops and mobility devices of key stakeholders
METADATA

Bidder should provide technical, process and business metadata across the EDW SOLUTION

Technical metadata

a. Source of data, data type, time of data refresh for all analytical usage
b. Data lineage from data sources to reports, analytical and ad hoc usage
c. Data Model report including definitions of entities, attributes
d. Publish user accessible information from Data Warehouse. Ex. Aggregate tables, snapshots, transactions data, etc

Process metadata

a. Should provide and publish on a portal the EDW system status including the job status, data refresh or release date, BI performance data details including query usage, processing and response time.
b. Reports, dashboards, scorecards, data access by individual users or groups

Business metadata

a. Enterprise definitions of KPIs, reports, dashboards, scorecards, etc across the Bank
b. Business rules for derivation of KPIs, derived variables
c. User Training materials for all the metadata should be published on a common portal

DATA QUALITY AND MDM

The Bank intends to build the data warehouse with a clean, consistent and complete data. The state of completeness, consistency, timeliness, and accuracy that makes data appropriate for a specific business use is what the Bank defines as quality of the data.

The Data quality solution (Services + tool) that the Bidder proposes should meet the following requirements

- Profile
- Cleanse
- Enrichment
- Control & sustain

In profiling, the DQ solution should be able to provide profiling capabilities across the data sources

The DQ solution should be able to cleanse the extracted data before applying on to the target data warehouse.

Data enrichment is about updating data in order to be aligned to the enterprise by correcting and completing with data from various data sources available within and external to the Bank. The proposed DQ solution should be able to handle these needs of the Bank.
On an ongoing basis, the DQ solution should build rules that can be applied to both raw data and corrected, enriched data to monitor the quality across the parameters mentioned above. The DQ solution should be able to define, monitor and publish the DQ metrics to the business/technical users of the data in the Bank.

**PHYSICAL DATA MODEL**

Data Model is a critical capability for the enterprise data warehouse project. The System Integrator (SI) should be experienced, well thought out and structured in providing this capability as part of his response. SI should propose comprehensive, suitable industry standard financial services data model that meets the following requirements.

- Should cover all data subject areas required to meet the requirements including but not limited to customer, product, account, location, employee, external organization etc.
- Should provide physical data structures consisting of tables, columns, views across granular and summarized levels.
- Should be customizable for Bank’s specific requirements for additional data elements. The customization should be minimal and easily extendible for future releases.
- Should provide scripts that performs integrity checks of the data model

**Facilities Management**

Facilities Management for Datawarehouse solution covers the following:

- Onsite Managed services for database administration, system administration and for application support that includes extraction, analysis, development of reports and statements etc.
- Onsite help desk support both technical and functional during the contract period, as per the requirements prescribed in Annexure 02 – Masked Bill of Materials. The Bidder must also provide incident management solution to log issues, incidents with facility to generate reports for review and monitoring.

Bank wants the Bidder to provide an integrated comprehensive system to provide for MIS, Analytical and ad-hoc reporting capability. This would provide the management with the ability to access, analyze and explore information, and develop insights and understanding of available data to achieve improved, informed and fact based decision making.
F. ABOUT IDBI BANK

1. BRANCH NETWORK

IDBI Bank Limited (Bank) is a company incorporated and registered under the Companies Act, 1956 (1 of 1956) and a banking company under section 5(c) of the Banking Regulation Act, 1949 (10 of 1949). Bank is also a scheduled bank as notified by the Reserve Bank of India (RBI) under the Reserve Bank of India Act, 1934. RBI has categorized Bank under a new sub group "Other Public Sector Bank". Bank is engaged in providing finance to industries and conducting banking business with its Registered Office at "IDBI TOWER", WTC Complex, Cuffe Parade, Mumbai and Zonal Offices in different regions of the country has a pan-India presence and has also ventured outside India by opening its first branch in Dubai. Bank desires to appoint a System Integrator having experience in end-to-end implementation of EDW, CRM and BI solution.

2. BUSINESS OVERVIEW

The Bank had an aggregate balance sheet size of Rs. 3,28,997 crore and total business of Rs 4,33,460 crore as on March 31, 2014. The Bank's operations during the financial year ended March 31, 2014 resulted in a net profit of Rs. 1,121 crore.

3. ORGANIZATIONAL STRUCTURE :

The Organization structure is furnished in Appendix 04 – Bank Organization Structure

4. PRODUCTS:
   a) Retail Banking Products
      Liability Products

      Current Account Flexi Current Account (Retail), Flexi Current Account (Co-op and Other Banks), Flexi Accounts for Bulk (TASC, Educational Institutes, Govt. Accounts).

      Core Savings Accounts and its variants

      Financial Inclusion Savings Account
      Sabka Basic Savings - Complete KYC, Small Account Savings, In-built Overdraft facility for Basic Savings Bank Deposit (BSBD) Account (including Non-Farmer and Landless Labourers).

      Regular (Non-Financial Inclusion) Savings Account
      Super Savings Account, Powerkidz Savings Account, Super Shakti Savings Account, Jubilee Plus Savings Account, Being Me Account, Pension Savings Account (For Central Govt.), Family Account (For Indian Army), Capital Gains Account.

      HNW Savings Accounts

**Corporate Payroll Accounts (Savings Bank A/C)**

**Retail Term Deposit** Fixed Interest Rate Retail Term Deposit, Floating Rate of Interest Retail Term Deposit, Godhuli Retail Term Deposit, Suvidha Tax Savings Fixed Deposit, Fixed Deposit with Motor Accident Tribunal.

**Recurring Deposit**
Suvidha Recurring Deposit, Suvidha Suraksha Recurring Deposit.

**NRI Products**
NRE/NRO Savings Bank Account, NRE/NRO Fixed Deposit Scheme for NRIs, Resident Foreign Currency Account / FD, Foreign Currency Non-Resident (B) Deposit Scheme, NRI Recurring Deposit, Portfolio Investment Scheme for NRIs, Purchase and Sale of Foreign Currencies and Purchase of TC, Personal Inward Remittances from Abroad (Speed Remittance Service; Money Transfer Service Scheme; Online Money Transfer Service from UK using ‘India Remit’), IDBI Rupee Yield Enhancer [Forward Foreign Exchange Contract on NRE/FCNR (B) Deposit for NRI Customers].

**Structured Asset Products**

**Home Loan & its variants**
Normal Home Loans, Home Loans-Interest Saver (HL-IS), Loans for payment of Insurance Premium (LIP), Top-up Loans, 25-year Home Loan Scheme, Turnover-based Home Loan, Home Loans to Rural Inhabitants, Special Scheme for Housing Loan through ‘Category A’ builders, Housing Loan Scheme for Rural Inhabitants, Rajiv Rinn Yojana, Priyadarshini Awas Yojana, Scheme for financing Rural and Semi-Urban Housing.

**Loan Against Property and its variants**
Loan against Property (LAP), Loan against Property (Overdraft) (LAP-OD), Loan against Rent Receivables (LARR), Turnover-based LAP, Loan for Commercial Property Purchase (LCPP), Reverse Mortgage Loans (RML), Loan against Property Interest Saver, Loan against Rent Receivables to landlords of IDBI Bank, Loan against Rent Receivables to landlords of IDBI Bank for Currency Chests.

**Education Loan and its variants**
Education Loan for Vocational and non-vocational courses, Education Loan - Special Scheme for other students who have secured admission under Management Quota and for students of premier institutes, Education Loan under Financial Inclusion Programme (FIP), Education Loan to physically handicapped students.

**Auto Loan**
Auto Loan – Combo offer to existing Home Loan borrowers, Speed Auto Loan to existing customers, Auto Loan: IDBI – TATA Nano Scheme.

**Personal Loan and its variants**
Personal Loan to Individuals, Salary Accounts with in-built Overdraft Facility, Personal Loan to Pension Account for retired employees of IDBI Bank Ltd.
Card / Alternate Channel Products

Debit-plus-ATM Cards
International Debit-plus-ATM Card, Gold Debit Card.

Prepaid Cards
Prepaid Gift Card, World Currency Card, Open Loop Freedom Prepaid Card in association with ITZ Cash, Cash Card.

Merchant Establishments’ Overdraft
Overdraft/Loan against Card Receivables to Merchant Establishments.

Merchant Products
Point of Sale (POS), Internet Payment Gateway (IPG).

ATM Services, Internet Banking, Mobile Banking, SMS Banking

Capital Market Products

Loan Against Securities, including Life Policies
Loan against Shares, Loan against Mutual Funds, Loan against Life Insurance Policy, Loans against other Securities (NSC, KVP, GOI Bonds and Tax Free Bonds, Gold ETF and Gold Fund), Employees Stock Options (ESOP) Financing. Demat Account

Priority Sector

AGRI–Products

MSE Products
Laghu Udhyami Credit Cards (LUCC), SARAL Vyapar, Sulabh Vyapar, IDBI Udhyami Loan, Finance to Medical Practitioners, IDBI Loan to Professionals and Self-employed, Artisan Credit Card, Loan against Property, Loans to Small Road and Water Transport Operators (SRWTOs), Vendor Finance Programme, Channel Finance for Dealers of Corporates, Agro–Cluster Financing.

5. APPLICATION and TECHNOLOGY:
The Bank has all its Branches / Offices deployed under Core Banking Solution. In order to render efficient service and to facilitate 24x7 banking, the Bank has enabled multiple channels viz., ATMs, Net Banking, Mobile Banking, IVRS, Call Centre integrated with Core Banking Solution. Some of the key applications integrated with Core Banking Solution in the Bank are:

1. Customer Value Management Application
2. Talisma – Email Management System
3. Avaya Application
4. NICE Application
5. Loan Application Management System
6. Loan Processing System
7. Loan Account Tracking System
8. CFS Application
9. DIFC Application
10. OFSA
11. SWIFT Alliance Application
12. iCIBIL
13. ADF
14. HRMS
15. Kondor +
16. E-Blotter
17. E-Kuber
18. Mobile Banking Application
19. IRMA (Integrated Risk Management Application)

- The Bank has implemented Cheque Truncation System at various grids. Bank has plans to roll out the same to other Centres during this Financial Year.

- The Bank has recently opened number of Ultra Small Branches in remote rural pockets thus to cover the unbanked centres and to bring all eligible citizens under Financial Inclusion

Bank subsidiaries/joint ventures/ Third party partnerships also provide multifarious products like mutual fund, insurance, online trading, Factoring services, portfolio management etc.

Bank’s Call Centre is located at Navi Mumbai and Hyderabad. It caters to the needs of customers across Bank with average number of 21000 calls per day. The Bank also manages customer requests through E-mail which is approximately 800-1000 mails per day.

The Tentative list of IDBI core applications are as follows:

<table>
<thead>
<tr>
<th>Core Banking System (Current version is 7.0.25, Bank is soon migrating to Finacle 10.x)</th>
<th>Planning and Budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Finacle Core&lt;br&gt;- Finacle Corporate Finance System&lt;br&gt;- Finacle Dubai Instance&lt;br&gt;- Finacle Treasury</td>
<td>- OFSAA&lt;br&gt;- ALM&lt;br&gt;- FTP</td>
</tr>
<tr>
<td>Call Center and IVR</td>
<td>Credit Card Business (under process)</td>
</tr>
<tr>
<td>NPA Management System (IRAC)</td>
<td>Cash Management System (CMS)</td>
</tr>
<tr>
<td>Locker Management System</td>
<td>Integrated Risk Management System (IRMA)</td>
</tr>
<tr>
<td>Currency Chest Management System</td>
<td>Cheque Truncation System (CTS)</td>
</tr>
<tr>
<td>Offsite Monitoring System (OMS)</td>
<td>Government Business Management (GBM)</td>
</tr>
<tr>
<td>Audit Management System</td>
<td>Anti-Money Laundering (AML)</td>
</tr>
<tr>
<td>Fixed Asset Management System</td>
<td>HRMS</td>
</tr>
</tbody>
</table>
### Payment Systems
- NEFT/NGRTGS/SWIFT/SFMS
- NACH/CPSMS/ABPS

### MIS and Reporting
- ADF (in-house product)
- Other adhoc and control returns

<table>
<thead>
<tr>
<th>FRM and RBTM (under process)</th>
<th>Loan Processing System (under process)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Document Management System (Under Process)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internet Banking and Mobile Banking</th>
<th>ETF (under process)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Retail / Corporate</td>
<td></td>
</tr>
<tr>
<td>- Tax Payments</td>
<td></td>
</tr>
</tbody>
</table>

*There are approx. 240+ peripheral application are built across above.*

All these systems and applications enable the Bank to offer variety of Banking Products to its customers. Some of those products are listed in Appendix 06 – List of Products

The Bank has deployed all its branches and offices on Finacle: its Core Banking Solution. Finacle has 2 modules: Finacle Treasury, Finacle Core. The Bank has many key applications as part of its Online Transaction Processing (OLTP) stack of applications. That includes core banking systems using Finacle (Includes DIFC) from Infosys, OFSA from Oracle Financial Services, Risk Management Software (inhouse), HRMS from Oracle, Treasury Software (K+), Talisma for E-mail management, CVM (in-house) for service and contact management, Net banking & Mobile Banking, ATM/SWITCH, Other Applications including MIS Software / Packages. Details of application landscape for IDBI is provided in Appendix – 03 – Applications Profile.

Bank’s hardware for supporting Core Banking applications are capable of handling about 46 lakh transactions per day.

### 6. Hardware & Software
The Bank has a breadth of hardware stack including IBM, HP, SUN, HCL and others. The Bank has Windows 200x, Variants of Linux, Unix, Solaris. The Bank also has many database servers including Oracle 8i, 9i, 10g, 11g, SQLServer 200x, DB2 9.1, Postgres, MySQL, INFORMIX, etc.

The Bank also has web based, VB based and D2k/Oracle based packages deployed across many of its verticals for various purposes.

### 7. BI/Analytics/MIS capability
The Bank has developed and deployed large number of reports as part of its MIS capability. These reports are provided through the multiple applications to various users.

The Bank is also currently generating ADF reports using in house technology by directly accessing the OLTP systems. However, the bank expects that in future the ADF application will source it’s data from EDW.
G. DETAILED IDBI BANK ENTERPRISE-WIDE DATAWAREHOUSE SOLUTION

1. Overview

This section defines the requirements for the Bank’s Enterprise Data warehouse. This section also lists the Key guiding principles to govern and support further detailing of the solution architecture.

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDW</td>
<td>IDBI bank Enterprise Data warehouse</td>
</tr>
<tr>
<td>EDW SOLUTION</td>
<td>Solution for end to end implementation of enterprise Data Warehouse Business Intelligence and Customer Relationship Management.</td>
</tr>
<tr>
<td>ODS</td>
<td>Operational data store</td>
</tr>
<tr>
<td>DQ</td>
<td>Data quality</td>
</tr>
<tr>
<td>OCRM</td>
<td>Operational Customer Relationship Management Application</td>
</tr>
<tr>
<td>System of record</td>
<td>The approved and authentic data source which creates, maintains the respective data</td>
</tr>
<tr>
<td>Analytical Layer</td>
<td>The processing/ analytical layer is an ecosystem of management and operational frameworks that performs all pre-requisite functions needed to deliver end-user analysis through shared data, metadata, computations, calculations, business rules and controlled access.</td>
</tr>
<tr>
<td>Data Acquisition</td>
<td>The data process which interfaces with data sources and extracts the necessary data needed for the data warehouse</td>
</tr>
<tr>
<td>Staging</td>
<td>The solution component where data is transformed cleansed and prepared for integration into the data warehouse.</td>
</tr>
<tr>
<td>Requirements</td>
<td>Informational requirements for analytical needs for the enterprise data warehouse</td>
</tr>
<tr>
<td>Package analytics</td>
<td>Analytical software products used in conjunction with data warehouse for analysis needs</td>
</tr>
<tr>
<td>Ad hoc query analysis</td>
<td>Structured access to data through BI tool for unplanned analytical needs</td>
</tr>
<tr>
<td>Canned reporting</td>
<td>Mechanism to deliver information through predetermined format, content and delivery of information to users</td>
</tr>
<tr>
<td>External data sources</td>
<td>Any data sources available on a public/private domain outside of IDBI bank</td>
</tr>
</tbody>
</table>
Guiding principles

The following are the key guiding principles governing the overall solution

- Data is an asset and owned by the Bank
- Define enterprise scalable data extraction, storage and access solution
- Identify, analyse and enhance data quality of the Bank’s data asset
- Reduce data storage/redundancy
- Data access solution should be driven by the usage
- Enable operational and analytical needs
- Create once and re-use by many

2. Required High level solution

The required solution architecture below, describes the layers for the Bank data warehouse solution. The components are detailed further in this document for the SI to take into consideration for adherence during solution design and development.

At a high level the solution comprises of the following solution blocks

- Data Acquisition (S1)
- Staging (S2)
- ODS (S3)
- Data warehouse (S4)
- DQ Store (S5)
- Analytical Layer (S6)
- Business Intelligence (S7)
- Data governance (S8)
- Metadata (S9)
- Security & accessibility (S10)
- OCRM (S11)

Serial numbers (Sx) are given to the solution block where x ranges from 1 to 11. The SI should use these identifiers to trace back to these components when the RFQ solution architecture is presented.
The above diagram represents a **guiding principle** for high level architecture. System Integrator is expected to provide a detailed architecture to fulfill the functional and technical requirements.

### 2.1. Overview of the solution blocks

The table and text and the text that follow describe the solution blocks further

<table>
<thead>
<tr>
<th>Solution Blocks</th>
<th>Definition</th>
</tr>
</thead>
</table>
| Data Acquisition (S1) | Layer to automate the data extraction from various data sources, capture the changed data, perform transformations, load the transformed data into various data targets.  
*Potential implementation*: ETL tools, Messaging tools |
| Staging (S2) | Provides the ability to perform cleansing, de-duplication, transformations, standardization of data to integrate the data for enterprise use before loading the data warehouse.  
*Potential implementation*: Databases/Appliances |
| ODS (S3) | Provides granular, integrated, real time/near real time data. Acts as a source for integrated, latest information.  
*Potential implementation*: Databases/Appliances |
<p>| Data warehouse (S4) | Stores granular, integrated, cleansed enterprise data, as well as results of analytical processing for business intelligence and reporting. Stores integrated centralized |</p>
<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Description</th>
<th>Potential Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDM subject areas for analytics.</td>
<td>Potential implementation : Databases/Appliances</td>
<td></td>
</tr>
</tbody>
</table>
| DQ Store (S5)                | Stores data that needs to be resolved for data quality using data quality workflow. Cleansed data can be sent to data warehouse.  
Potential implementation : Databases, Application                                                                                           |                                                                                                                   |
| Analytical Layer (S6)        | The processing/ analytical layer is an ecosystem of management and operational frameworks that performs all pre-requisite functions needed to deliver end-user analysis through shared data, metadata, computations, calculations, business rules and controlled access.  
Potential implementation : Configuration of ready to use analytical engines that contain business rules, calculations |                                                                                                                   |
| Business Intelligence (S7)   | Provides the ability to analyze the information using web based interfaces, prepackaged analytics and prebuilt reports  
Potential implementation : BI tools, OLAP tools, Packaged analytics                                                                                           |                                                                                                                   |
| Data governance (S8)         | Procedures, processes and roles and responsibilities for various data domain  
Potential implementation : Procedures, processes and RACI Matrix                                                                                      |                                                                                                                   |
| Metadata (S9)                | Definitions, dictionary of data items that are needed for enterprise reporting and analytics  
Potential implementation: metadata tools, Manual dictionary                                                                                      |                                                                                                                   |
| Security & accessibility (S10)| Information security providing access only the eligible users and protecting from unauthorized access  
Potential implementation: Roles across all layers of the solution, Directory integration etc...                                                                                      |                                                                                                                   |
| OCRM (S11)                   | Provides the platform to manage customer contact, customer service, lead management, marketing and campaign management, integrated customer communications etc.  
Potential implementation : Configuration of ready to use CRM applications based on business requirements and integration with analytical CRM |                                                                                                                   |

The EDW SOLUTION proposed and assumed as part of the Proposal should adhere to the following guiding principles which should be mapped to design components during implementation. The proposed data management platform should be a unified one to support all analytics pertaining to Functional requirements as per Annexure 01 – Functional Requirements. The proposed EDW SOLUTION should support the deployment / addition of new analytical systems in the future, on the same platform, through internal (bank) development effort to be supported without requiring additional licenses procurement. Specific analytical business applications should be proposed to meet all functional requirements that entail complex computations. It is important to ensure that there is no proliferation of downstream marts/analytical applications, in order to ensure adherence to architectural principles of the SOLUTION.

The analytical applications proposed

- Should not entail heavy lifting or ETL of data from the central repository /DW to the downstream business application
- Should offer a common shared data platform across the following functional capabilities as per Annexure 01 – Functional Requirements

- The solution should provide a single data model to serve as a single repository for all the Functional Applications. All Functional Applications proposed have to have pre integration with the proposed Data Model and there should be no separate data mart/movement from proposed Data Model to Application’s Data Mart. The solution should not allow replication of data through dedicated data marts.

- The solution should provide with a single mechanism for the management of the Metadata across all these applications. Specifically, the definition of security should only be done once at the level of the metadata management tools and not at the level of each individual application.

- Data model proposed has to be already physicalized with tables and relationships that enable the data processing directly from the data model

- The solution should provide with the ability to execute the calculations of each of the concerned applications directly from the Data Model. The interface for defining calculation (calculation of an FTP rate, Regulatory Capital etc.) should make use of the same graphical user interface ensuring consistency of usage.

- The solution should provide for a unified results area to facilitate reporting across all applications

- The solution should provide with a single mechanism for batch execution across applications, for movement of data from the source systems to the data warehouse.

- The solution should provide with the ability to trace data calculations across the applications. The solution should allow to trace the data elements from the results areas to the source in the data model.

- In case any of the functional requirements are found to be provided through customization of data model, during the process of evaluation, the scoring against the functional requirement would automatically become “C” in case marked as “S” or “A”.

### 2.1.1 Data Acquisition - S1 (For efficient, scalable and easy to maintain)

Data Acquisition automates the data extraction from various data sources, captures the changed data, performs transformation, loading of the transformed data into various data targets.

**Guiding Principles**

- Extract the data to the staging as soon as possible
- Extract only the data that is needed for short and long term at the required frequency
- Extract at the most granular level that the data is available
- Extract during off peak period of the operational systems unless otherwise needed
- Store the golden copy of the extraction
- Perform the data validation before processing for Datawarehouse needs
- Ensure Source system data integrity before integrating the data with other data sources
- Ensure that all rejected records in the ETL processes are captured in a separate file and reported for remediation
• Ensure that ETL processes are run post EOD for a time period not exceeding 4 hrs. However, under no circumstance the ETL process should extend into 1 hr prior to commencement of Bank Business hours. The loading time will be post the CBS EOD and before the CBS performs its BOD for operations.

It should have indicative capability that

• Provides a consistent and scalable infrastructure that connects disparate applications, mediates their incompatibilities, orchestrates their interactions, and makes them broadly available as services for additional uses
• Simplifies the integration and flexible reuse of business components
• Encapsulates all of the logic required for access, coordination, validation and transformation of the enterprise data
• Enables Faster and cheaper accommodation of existing systems; Incremental changes can be applied with zero down-time; enterprise becomes re-factorable
• Should also have capability of handling real time requirements of Change Data Capture
• For the current functional requirements, the Bank is expecting T-1 information to be made available from the data warehouse. However, the bidder must keep in mind that the batch window available for data extraction should still be as per the last clause under the ‘Guiding Principles of Data Acquisition’ in Section 2.1.1 of the RFQ, which states that ‘ETL processes are run post EOD for a time period not exceeding 4 hours. However, under no circumstance the ETL process should extend into 1 hour prior to commencement of Bank Business hours. The loading time will be post the CBS EOD and before the CBS performs its BOD for operations.’ As of today, the first branch commences operations at 8.30 am. The CDC component of the ETL should integrate with all the source systems mentioned in the RFQ (Refer Appendix 03 - Applications profile of the RFQ for the source systems)

The Data acquisition system should address the following key functions

• To handle ETL/ELT/EII any other variations in the data acquisition system
• The development environment is driven by a GUI
• Should interface with Bank’s existing and future data sources to extract data for data warehouse
• Should be able to create data lineage reports
• Should have robust restart ability options without performance impacts
• Should be scalable and can process large volumes in real-time, near real time and batch schedules
• Should have the ability to pipeline and partition the data processing
• Should have features that enable effective trouble shooting features as well
• Should be easily installable and maintainable without the SI’s support for general operations

2.1.2 Staging - S2 (Reusability, transformation, integration and consolidation)

Data Staging is meant for data preparation, standardization and integration. The data received from data source silos are to be extracted, transformed and loaded onto the target tables.

Guiding Principles
Keep the staging structures close to the target
Persist only permanent structures and initiate temporary structures as a preprocessing step
Process the master data before processing other data (transactions, aggregation and data for analytical application)
Ensure the business rules are consistent and re-usable
Apply posting into the data warehouse target structures at the end of logical processing point

The following indicative capabilities to be built on this layer

- The design should address ‘stage once and process many times’ approach for stage processing.
- Should reduce creation of multiple persistent layers within this area and optimize the stage processing
- The stage process should be consistent and modularized across the solution architecture and should be supported with suitable naming standards for ease of use and maintenance
- Should create multiple re-usable routines and leverage them across the solution spectrum
- Should be able to establish information access security and controls for access only for needed users
- Should create “golden copy” of source data for re-processing and audit needs
- Should be able to create process monitoring metrics and be able to produce report out of it for logs and performance tuning of the batch
- Should be tuned for transformation and load process performance
- Should be able to identify and publish the data availability through the enterprise
- Should capture manual records such as those present in excel, csv, txt etc. formats.

2.1.3 Operational Data Store – S3 (Flexible, integrated and right time information)

Operational data store persists the data that are needed for operational reporting. The solution proposed should have the ability to store most recent, granular and integrated data from various data sources. The data from various data sources can be sourced, integrated on a near real time / right time frequency for operational reporting.

Guiding principles

- Persist integrated data at the most granular level of data
- Keep the base data structures similar to the data warehouse
- Keep the data based on the maximum data period needed for tactical queries

The following indicative capabilities to be built on this layer

- Operational data store is to store the data details at the granular level for short period of time defined per business needs
- All queries related to trend analysis, historic and summary reporting needs to be directed to the data warehouse.
- ODS can also be looked up as a source for information access related master data management for other enterprise applications
- ODS can be utilized for operational reporting purposes.
• ODS supports most recent valued information which can be combined with analytical information for the enterprise
• ODS data structures should support target based CDC detection and processing

2.1.4 Data warehouse— S4 (integrated, granular and enterprise data repository)

Data warehouse is a subject oriented, integrated and granular data store for the enterprise analytical data. The solution component is the key in ensuring that the Bank wide analytical needs are met and provided consistently to its various user communities for timely and effective decision making.

Guiding principles

• Keep the data at a most granular level
• Pre aggregate based on performance of data access
• Use an abstraction layer on the core tables
• Data processing is done only for summary /aggregation/derivation
• Ensure master data is organized to support the operational and analytical needs
• Information changes are maintained
• Keep the history of changes of master data

The following indicative capabilities to be built on this layer

• **Enterprise data:** Any information that the bank needs to meet its current and future decision making activities. The data sourced into the data warehouse should satisfy the enterprise analytical requirements.

• **Master data:** The data warehouse should have the ability to maintain integrated, high quality data as part of the overall data warehouse solution. The master data should have the history captured for analysis and reporting.

• **Data Model:** The data model should capture the information in granular details and be able to support ensuring high integrity of the data

• The data structure should support multiple types of queries by different users and be able to provide optimal response time during its usage.

• The model should be extendable for future additions and ensures integrity as well

• **Access & Security:** The data warehouse platform should have multi level controls for data access. The data to be accessed only by tools and driven by the roles and privileges.

• **Scalability and performance:** The data warehouse should be scalable to store and process huge volumes of data. Should adequately address the needed functionalities of Partitioning, Parallelism, Set processing, in-memory processing, in-database processing, data virtualization, workload balancing, fault tolerance and recovery
2.1.5 DQ Store plus MDM – S5 (To capture data anomalies and track for closure)

Providing the data warehouse with quality data is the foundation for the success of the data warehouse usage. The data quality certification store is to ensure the data quality issues are captured and resolved using a well governed process before getting into the data warehouse.

Guiding principles

- Data as an asset; should be sourced, managed and archived
- Define and control the DQ parameters where the data is created
- Define a self-learning DQ system
- Define a system for once cleansed and re-used many times

The data quality should aim for the following key parameters.

- Completeness – The amount of information captured should be complete for usage
- Consistency – Precision of the information represented by the data
- Timeliness – Frequency at which the data is updated
- Accuracy – How accurate is the data

There are multiple approaches that need to be addressed depending on the issues. The data quality process should address the following key functions.

- Data should be standardized before put to use for analytical needs of the enterprise
- Data cleansing efforts including address cleansing. Prebuilt cleansing rules should be leveraged where needed.
- Data should be matched, survivorship identified. Rules should exist in technologies and tools that support identification of the related records.
- Data quality should be monitored throughout the life cycle of the data warehouse existence for meeting the quality thresholds. DQ dashboards should be created for monitoring the data quality.
- Once the DQ process is complete data should be shared with downstream Analytical systems.

2.1.6 Analytical Layer – S6

The processing/ analytical layer is an ecosystem of management and operational frameworks that performs all pre-requisite functions needed to deliver end-user analysis through shared data, metadata, computations, calculations, business rules and controlled access.

The analytical processing / computations layer is meant for end-to-end processing of data into business intelligence rather than letting the Data Warehouse being just a data store and a passive data provider to third party engines. Such transformation of data will be aided through the existence of specialized analytical engines.

Guiding Principles
This layer should not entail heavy lifting or ETL of data from the central repository/DW to the downstream business application. Such an approach to analytical warehousing suggests that there should be capabilities to run all analytics and predictive analytics ‘in the warehouse’ without requiring any data to be moved outside the repository into specialist or third party applications.

The layer should address the following key considerations

• Support configurations as opposed to programmatic or scripting effort

• Support deployment/ addition of new analytical capabilities in the future, on the same platform, through internal (bank) development effort via configurations. Such configurations should not require additional licenses procurement

• Support transparent flow through of cross functional analyses

• Should be open and extensible for the bank to develop and deploy its own analytical models and applications using the underlying frameworks within the solution

• Supports analytical development/customization via wizard based tooling approach to cover objects at all levels of granularity (lego approach to building apps). No 3-GL and No scripting should be required.

• Supports transparent visibility of heavy lifting of computational logic, through standard middleware/database routines generated dynamically – thereby allowing for IT administrators to look for bottlenecks and resolve them through parameterization as opposed to vendor support

2.1.7 BI & Analytics – S7 (A framework to create, deliver, manage information for analysis)

The business intelligence / analytics part of the solution comprises of various tools and technologies to enable bank users to view, slice/dice, drill down/drill up/ drill across the information presented to them and make effective decisions.

Guiding Principles

• Identify the delivery mechanism based on the usage

• Clearly define the roles and access privileges

• Deploy the reports through email for standard reports including storage of reports in a common location for access and download for Bank users

• Setup alerts for key performance Indicators

• Derive the reporting attributes in the semantic layer

The layer should address the following key considerations
- **Format**: The variety of tools that enable information access to the data warehouses/ODS layers. Depending upon the usage information can be presented in reports, dashboards, and scorecards or provided with a semantic layer to drag and drop the information they need for analysis.

- **Users**: The end users are identified and categorized in various user groups to map the tools and technologies needed for the user groups. The concurrency of the users and licenses across the user groups are governed and managed by the Data warehouse team on an ongoing basis.

- **Single sign on**: The end user access to be driven by user sign on integrated with the access to the BI presentation layer using a single sign on approach and should only be provided with the information they can access depending upon the roles and privileges.

- **Pre-Built analytics**: Packages exists that provide integrated analytics for various needs of the bank that can be customized. The implementation should consider leveraging such options where available and optimal for ease of use and maintenance.

The various reports, dashboards, etc should be accessible from mobility devices like smart phones, Tablet PCs, etc and should be supported by applicable operating systems of the mobility devices. Bank at an appropriate time during the contract period would recommend the SI to setup the reports, dashboards, etc to be accessible through the mobility devices.

### 2.1.8 Data Governance – S8 (A framework to create, manage and destroy data asset)

Data governance includes definitions around data ownership, standards, and policies. Also includes processes and procedures for the creation, movement, usage, storage, retention and disposal of information.

**Guiding principles**

- Establish a process to define the responsibilities of various stakeholders
- Data completeness is defined at source system level
- Data is owned by the business and quality is enabled by IT
- Provide a platform for ongoing education on enterprise data

**Data governance framework**: Should define a framework of processes, roles and responsibilities supported with policies, procedures and standards

- Data governance should define the naming standards for all data elements across the solution. Should establish procedures to define, implement and monitor the adherence. Should also define the roles and responsibilities in performing these activities.

- The core role of data governance is to ensure “data is treated and managed as a valued enterprise asset”.

- Establishing a good data governance increases the accuracy, consistency, and confidence in underlying data and facilitates the creation of actionable insight that can be leveraged by decision-makers
• Data governance should also ensure the visibility of the enterprise data warehouse and hence educational support to the bank’s users

• Implementation of a good governance model should consider the existing governance framework and collaborate effectively where data and information plays a role.

• One of the key component of governance is also the process of approvals of external data sources

2.1.9 Metadata – S9 (Ensure consistency, standardization and usage across the enterprise)

Metadata management can play a vital role in implementing an Enterprise Data Architecture. Creating a repository to manage metadata can streamline information flow and act as an enabler for enterprise data governance, change management and quality control mechanisms.

Guiding principles

• Define a common business glossary
• Provision for data lineage
• Create data dictionary
• Integrate metadata in SDLC

The solution component should address the following key points

• **Common business glossary** - A common business glossary enables a consistent view of business terms and definitions across the enterprise

• **Data dictionary** - A centralized store can be created for all the business and technical data elements in the organization.

• **Data lineage** - Lineage represents the flow of data in the organization. Data source tracking will speed up data mapping and impact analysis

• **Architecture** – A metadata repository is critical for implementing initiatives such as Master Data Management.

• Enable a global metadata for strategic elements and local metadata for local needs

• Metadata usage is integrated into the enterprise SDLC approach. Business users and analysts are educated on the use of the tool.

• Dedicated resources and/or processes for metadata maintenance. Data Stewards are leveraged to drive maintenance and identify significant change programs impacting the repository
2.1.10 Security and Accessibility - S10 (Right information, Right tool to right user governed by defined policies)

Guiding principles

- No direct access to data warehouse data.
- Internal / External user access should only be driven through BI tools. Ad hoc requests to extract data from data warehouse are not provided directly.
- Create roles and access to information based on the function and level
- Establish governance for approving access requests for data warehouses
- Test environment will be created masking the necessary fields as guided by the bank’s needs
- Define data warehouse security policy and establish data governance practices for security

The security and accessibility ensures the following

- The information is protected and access is governed
- The end users get the necessary information that they can access through tools and technologies.
- Ensures application level security for underlying data sources for data access and usage is implemented
- Role based access at various levels have to be implemented across the data repositories, semantic layers and BI & analytics tools.
- Should leverage extensive features available at the database level and in presentation and application layer level
- No ad-hoc data requests are satisfied unless governed by the necessary authority as defined by the data governance framework
- Periodic review of the access matrix should be done and logs reviewed
- Encryption of the sensitive data is required while sharing inside and outside of the organization
- CRUD matrix and information granularity and user profiles matrix has to be created and maintained as part of the requirements for this layer

2.1.11 Operational Customer Relationship Management - S11

Guiding principles

- Shift from product focus to customer focus by having a single customer view
- Provide consistent service/ experience to customer across all touchpoints
- Understand the customer’s worth to the Bank and fine tune services and communications accordingly
- Increase customer satisfaction and loyalty by providing offerings and value added services suited to the customers.
- Integrate lead generation and management efforts across verticals to ensure opportunities of cross sell are exploited
The CRM solution should handle following key functions:

- Customer 360 degree view incorporating their transactional behavior along with profile information by integrating with OLTP systems
- Lead Management by tracking leads from generation to closure
- Campaign Management by designing campaigns based on customer segments, profiles, behavior etc. and fine tune those based on responses received.
- Integration with CTI applications to ensure Customer Support group leverages the CRM to serve the customers in most efficient manner

2.1.12 Additional Guiding Principles for Data Warehouse

The data warehouse architecture as required by the Bank must adhere to the following guiding principles:

- Follow the concept of centralized data warehouse to ensure data standardization and accuracy across all the applications
- The proposed solution must support Batch as well as real time, near real time, online data refreshes
- The Customer master data must be stored in the EDW and shared by all other applications to ensure that there is no redundancy of information.
- The solution must provide the capability to allow users to view comprehensive granular data as well as highly summarized executive dashboards.
- Dashboards should be supported and made accessible from mobility devices like smartphones, Tablet PCs, etc.
- Provide high user concurrency, capability for Any Query, Any time, Any Place, Any business area & Any System.
- Support the down-stream applications such as ALM, AML, Risk Calculators, ADF etc. and also provide extracts to meet CIBIL requirements.
- The bank expects that in future the ADF application will source it’s data from EDW.
- Support executive dashboards, managed automated supporting and On-Demand querying and reporting.
- The proposed solution must be built on the foundation pan industry logical data models allowing data conformity across applications.
- The key components of the architecture are – Extraction, Transformation and Loading (henceforth referred to as ETL) Subsystem, Data Quality subsystem, Logical Data Model subsystem, Data base subsystem, Analytical Application subsystem, Data Mining subsystem.

H. DETAILED SCOPE OF WORK
The envisaged Bank data warehouse solution scope is described under this section. However, the Bank reserves its right to change the scope of the RFQ considering the size and variety of the requirements and the changing business conditions.

The bidder must thoroughly go through the business requirements and ensure that the EDW SOLUTION and services proposed is the most optimal to meet all the business requirements.

The Bank expressly stipulates the SI's selection under this RFQ is on the express understanding that this RFQ contains only the principal provisions for the entire assignment and that delivery of the deliverables and the services in connection therewith are only a part of the assignment.

The SI shall be required to undertake to perform all such tasks, render requisite services and make available such resources as may be required for the successful completion of the entire assignment of implementation of EDW SOLUTION within the agreed contract price. The Bidder must also furnish the profiles of the resources that will be deployed at the site for both SI and OEMs by giving the details of their qualifications and past experience in handling the tasks in the project where they will be deployed. The profiles have to be strictly as per Annexure 19 – EDW Project team profiles. The SI will ensure that the resources assigned to the project are not replaced without obtaining the prior written permission of the Bank. In case the resources are replaced under unavoidable circumstances, the SI shall provide a written notice of one month in advance to the Bank and shall make available an equal or more qualified replacement. Further SI has to plan for adequate resources for activities and ensure that there shall be minimum overlap of responsibilities amongst the assigned project resources.

Considering the enormity of the assignment and the envisaged relationship with the SI, any service, which forms a part of facilities management that is not explicitly mentioned in this RFQ as excluded would form part of this RFQ. The SI has to envisage all necessary services to be provided and ensure the same is delivered to the Bank. The Bank will not accept any plea of the SI at a later date for omission of critical services on the pretext that the same was not explicitly mentioned in the RFQ.

The SI is completely responsible for the proposed solution to meet the scope and objectives of the RFQ and all addenda issued thereafter. The bank assumes no responsibility for the assumptions made by the SI. In the event the proposed solution fails to meet the SLA service levels and the scope and objectives of the RFQ (and addenda), the SI will have to upgrade, modify or replace the solution within the agreed contract price.

The Bidder has to ensure the arithmetical accuracy of the bid. The bank will not be responsible for any errors in the bid submitted by the Bidder.

Any assumptions, changes, deviations other than what is specified and accepted by the Bank will not be considered for the purpose of this RFQ.
1. Business Requirements

The bidder must thoroughly go through the business requirements and ensure that the EDW SOLUTION and services proposed is the most optimal to meet the all the business requirements. The bidder must provide how the business requirements are addressed / implemented through the EDW SOLUTION architecture proposed in the response. Please refer Annexure 01 – Functional Requirements for the detailed line items of requirement.

The business requirements reflect the need to provide senior management with access to information including the ability to present information in sophisticated, graphical way and support statistical and intuitive exploration of data.

The indicative subcategories are

1.1 Customer

Single View of Customer (SVOC)

The single view of customer entails creating a data model with the customer as the centric entity. All aspects related to the customer entity should be identified and linked to the centric entity. This involves two stages of defining the customer entity record:

- Duplicates within the same source system: It is imperative to identify a customer who exists as multiple instances in the same source system. For example, a customer may hold two savings accounts under different customer id. Or may hold a savings account at a sole holder and another savings account as joint holder. The customer entity in both the savings account should be identified as the same physical entity and assigned an internal unique identifier.

- Duplicates across multiple source system: The core banking platform addresses most of the products held by the customer. With the proliferation of the universal banking concept, the number of “non-banking” products is on the increase. The bancassurance is one such example. Insurance policy, traditionally, is not a banking product and as such do not find a place holder in the core banking system. Banks will typically have multiple systems to manage such products. While the challenge of finding records belonging to the same physical entity of the customer remains, there is further complication in the structure of the data fields. For example, the address may be a 6 field combination in one system and a 3 field combination in another system. Also, the data values for the same field in different systems may be different. For example, the salary in core banking may be different from the salary registered in credit card due to different application form filled by the customer during product acquisition.

Once this is resolved, single view is achieved through generating view on the data model with the customer id as the central reference key across all subject areas. All the Bank source systems maintaining the Customer Masters are to be covered under Single View of Customer -SVOC framework.

Customer Segmentation

Banks deal with millions of customer entities. Since each customer is unique, every bank would like to design its relationship on a one-to-one basis. However, this involves a high level of micro modeling and activity planning. An intermediate stage is to categorize customers into groups exhibiting homogenous behavior in the area of focus. For example, if the product holding ratio is the area of focus, the bank should group customers into clusters who define the same behavior and lead to the same product holding. For example, it may not be
necessary that every customer holding a savings account, fixed deposits and a credit card have the similar pattern of behavior or demographic identity. A statistical clustering algorithm may show this set of customers to be consisting of three (say) major clusters and a “rest” of the population group. While each cluster may differ from the other in the derivation of the definition of the cluster, within each cluster the customer entities are likely to exhibit similar behavior on select list of variables. This now provides the bank with three sets of customer groups and possible three relationship strategies for each group. Similarly, a different business focus may have its own segmentation schema. Hence, at any given point of time, a customer may belong to multiple segments in multiple segmentation schemas.

**Cross Sell & Up Sell**

It is imperative that bank consider increasing the value of a relationship with the customer. This value could be in form of increased usage of the services, additional services or options, or selling more products to the customer. The sequence in which a customer would purchase new products as well as the time interval between two purchases is a critical knowledge to increase the value of the relationship with the customer. Given a source product holding, there are multiple paths a customer relationship can pursue. Considering that a banking customer would typically purchase products one at a time, it becomes important to select the most appropriate product to offer that has the highest propensity of purchase by the customer. The time of offer is equally important. This could be either defined by the calendar period or by the occurrence of a particular event. For example, a credit card may be offered to a new customer who maintains 3 times the minimum required balance after a period of 3 months, could be a time defined cross sell. Or, a personal loan may be offered to any savings account customer who withdraws the maximum amount permissible on his debit card from the ATM more than once over the past 15 days, could be an event defined cross sell.

**Customer Churn/Retention**

Customer retention aims at ensuring the customer subscribes to a product till the lifetime of the product. In case of a loan, the retention aims at not only identifying customers likely to default on their repayments but also those who are likely to foreclose. While scoring models give the score or probability of the customer terminating the product, it is important to know the driver for the score. Different customers will have different reasons for terminating the product. If the key driver is known, the bank can initiate dialogue with the customer to address the concern and ensure the continuity of the product.

**Customer Lifetime Value Analysis**

Customer life time Value analysis is a combination of the following activities:

1. Existing relationship with the customer in terms of products bought and revenue earned till date
2. Predicted revenue in future with the currently held products
3. Potential revenue in future with the possible x-sell or upsell products
4. Above two adjusted with probability of default or pre-closure.
Prospect Customer Profile

It is recommended that the solution should be able to maintain individual or company institutions bank customers who have been identified by the Bank as potential target customers, whom may not have any previous contact to the organization.

Customer Profitability:

In the retail banking industry the measurement of customer profitability is the key to managing the business effectively. Customer profitability is influenced by a range of factor that include the volume and the type of business conducted, the range of products purchased and the utilization by the customer of automated transaction facilities. The capability to measure and analyze profitability from many different viewpoints and by many different dimensions is one of the objectives of this project.

Relationship marketing strategy requires businesses to maximize their knowledge about their customers, anticipate their needs, develop valued products and services and ensure that preferred channels are developed and maintained. Building an effective profitability model will contribute to that understanding and will provide a way to measure the impact of the strategy. Through use of profitability model Bank should be able to ascertain the costs and income drivers, which can be used to calculate account/customer/product profitability. Based on the customer profitability data, Bank will be able to understand its profitable and unprofitable customers.

1.2 Product

Product profitability

While it is easier to get the revenue from each product instance, arriving at the cost has its challenges. Three possible approaches are available to arrive at the costing.

a. Fixed Costing: This approach involves defining a fixed cost for every instance of the product. For example, a savings account could be defined as having a net interest spread of 1.5% and as such the cost will be \((x - 1.5\%)\) where ‘\(x\)’ is the interest rate for a savings account.

b. Standard Costing: This approach involves in identifying the drivers of cost and assigning a cost to every instance of the driver. For example, every call cost to the call center is Rs. 20. Thus, the cost of service to the savings account will be calculated as the cost the total calls to the call center at rate of Rs. 20 per call.

c. Activity Based Costing: This approach involves in identifying the drivers of cost and the allocation of the cost across the drivers. For example, in earlier case, the cost will be arrived at by considering the duration of each call and the cost of the agent attending to the call.

Product Pricing

Product pricing flows from the product profitability and involves price-elasticity modeling. For this purpose, each version of the proposals for the product and the accepted / rejected status from the customer is to be provided to the modeling exercise. In a banking scenario, this information may not be available. In the absence of this information, the product pricing can be decided via simulation techniques on the various parameters that drive pricing or profitability.

IDBI has already floated an RFP for OFSA upgrade to perform its ALM, Costing and Profitability calculations. Some of the key functionalities that are being covered are:
Details of the requirements coverage and scope of work is available in “RFP for Implementation of OFSA (Ref No IDBI/ RFP/ OFSA/2014, Dated 13.05.2014)” downloadable from IDBI website.

### 1.3 Marketing

Based on the Campaign analytics, Customer analytics and segmentation analysis the EDW SOLUTION should provide the next best product that the customers are likely to purchase. EDW SOLUTION should also provide detailed information on channel usage – which, when and where of the customers’ use of the channels, frequency of use by channel, by product, by value, whether a customer prefers certain channels over others, which channels provides the most value to the customer, what are the channel costs and profitability, etc. Users can leverage this information while planning changes in the existing channel structure, introducing new channels and migration of customers to low cost channels. Such information should be available on OCRM platform to be used while interacting with customers.

### 1.4 MIS, Dashboard/Scorecard and Ad-hoc Querying Capability

The EDW SOLUTION has three-fold objective: (i) MIS (ii) Dashboard/Scorecard and (iii) Ad-hoc querying capability. The EDW SOLUTION should provide complete MIS and requisite functionality – EIS, Balance sheet analysis, Regulatory reports etc., besides statutory reports/statements for the Bank. In addition, the solution should provide ad-hoc query capability. While the users would identify certain set of questions they would routinely like to get answers to predefined/ canned queries. Bank wants to have facility, which can enable the business users, ask undefined/unknown/ad-hoc queries. The indicative list of reports needed by the Banks have been highlighted in Annexure 1 – Functional Requirements. The bank requires the solution proposed to provide Dashboards/Scorecards on mobility devices such as Smart Phones, tablets etc.

### 1.5 Business Performance Management

The bank intends to implement an integrated solution for performance management. Integrated performance measurement broadly consists of three components:

a) Measuring and Evaluating: Running the business and monitoring performance  
b) Planning and Targeting: Alignment of business to deliver on strategy  
c) Intervention and Realignment: Realigning the business as needed  

Along with Planning and Budgeting, Bank would like to monitor performance for Key Indicators vis-à-vis Budget data. This will help Bank understand and adjusts its course of actions over the year to meet the overall objectives of revenue and profitability.
1.6 Collections & Recovery

There are various collection media employed by banks. This could range from offloading to a collection agency at a high cost to just sending out reminder emails at a very low cost. Often, a sequence of activity across various media is required. Each channel has a certain probability of recovering the collectible amount. Each product also has a probability of the outstanding amount that can be recovered. All these probabilities are models that are built using the customer centric data. The challenge is to maximize the collectible amount at minimized cost of media usage. At the same time, certain media may have a threshold on the capacity available for execution.

The analysis must provide information on collectible amounts and cost of recovery for various portfolios of the bank.

1.7 Risk Analytics:

Bank managers make lending decisions based upon the attractiveness of each opportunity. In most cases, these evaluations rely on incomplete or disconnected information. Making timely, consistent, and accurate lending decisions requires a comprehensive understanding of account, product, and portfolio characteristics. Bank needs to provide its credit officers and risk managers with ready access to the information they need to build and maintain a reliable, risk appropriate portfolio.

Some of the parameters that should be addressed by the EDW towards risk management are as follows:

- The EDW SOLUTION should act as a primary source of data for all analytical needs for Credit, Market, Operational, and Enterprise wide risk management areas.
- The EDW SOLUTION should be capable of capturing key details of the Customers / Obligors / Issuer / Guarantors to enable a single view of the customer within the Bank and across group entities.
- The EDW SOLUTION should be capable of capturing Assets and Liabilities information at a granular level (e.g. Account / Facility level for Banking Loans and advances and deal level information for treasury investments and trades).
- The EDW SOLUTION should be capable of capturing the relevant information on Credit Risk Mitigants including Collateral, Credit Derivatives and other guarantees.
- The EDW SOLUTION should be capable of capturing internal loss data experiences of the Bank along with external loss data published (after due scaling) to enable Operational Risk Management.
- The EDW SOLUTION should support generation of internal analytical reports on Risk Management.
- The EDW SOLUTION should be able to perform data quality checks that identify missing and bad quality data and be able to address the same based on defined business rules.
- The EDW SOLUTION should be able to retain risk related information as per local and host country regulations. The EDW SOLUTION should provide role based security controls to manage access to Risk related data and reports.

1.8 Predictive modelling/Data Mining

Data mining tools can be used to access the data, explore it through interactive visual tools and then build visualize models using sophisticated algorithms. This "iterative process" ultimately identifies the main factors.
determining which customers are likely to stay with the bank and which customers are likely to leave. With this insight, business decision makers can take the necessary actions to retain the customers who are likely to leave.

Similarly, predictive modeling built upon the availability of atomic data should help in predicting future probabilities. Thus Propensity is the tendency or likelihood that a customer will exhibit a particular behavior or action, e.g. purchase a specific product or service, close an account and/or leave Bank, default on a installment repayment, etc.

Predictive modeling should enable the Bank to identify those significant characteristics that lead to certain behaviors; Score each customer, based on those characteristics; Based on those scores, predict which customers are most likely to exhibit those behaviors.

The Bank would like to use models for customer segmentation, churn analysis, Predicting future NPA, Cross selling and Up-selling, predicting fraudulent patterns, etc. The exact requirements are based on the actual implementation of the EDW project.

1.9 Corporate Function

The bank wants a Planning System that has the ability to create full balance sheet, net interest margin and income statement budgets and forecasts on a basis consistent with actual organizational unit performance measurement processes. Bidders are expected to be cognizant of the fact that planning exercises in banks are different from other industries because in the banking industry, current book of business and its behavior impacts future revenues. Hence the demonstration of the Planning system being offered needs to include margin measurement and business planning.

Bank intends to perform budgeting and planning as per the process below:

Both Targets based planning and a bottom-up approach should be used for planning. Key features required for both approaches are:

i) Target planning process:
   a. Top management shall input numbers at Region/Zone level
   b. Target for verticals may also be given

ii) Bottom-up planning process:
   a. Numbers to be inputted at branch level.
   b. Numbers for Branch-wise planning shall be revised/updated accordingly based on the number from Target planning process by Top Management
   c. Plan numbers (for Branch-wise process) for next year will be decided on various factors such as last year actual data, market trend, etc. History for last one/two year data will be maintained in the system.
   d. Planning will happen on Average balance for the Products
   e. For International Branch, Dubai, the planning happens in INR. Therefore, the planning and reporting shall happen in INR.
   f. What-if analysis and rolling forecast to be incorporated.

Currently Bank has Hyperion Planning licenses and would like the SI to utilize the same for implementation of the aforesaid functionalities.
Please refer to the Annexure 01 – Functional Requirements for the detailed functional requirements

1.10 Operational Customer Relationship Management
The bank requires an Operational CRM system which provides an integrated platform to manage all customer interactions including service request processing, customer feedback, lead generation and closure, campaign design and tracking, single customer view to all customer touchpoints and channel management. EDW should provide the analytical outputs which need to be consumed by OCRM solution.

Please refer to the Annexure 01 – Functional Requirements for the detailed functional requirements

1.11 General Ledger and Profit and Loss Consolidation
Data relating to the branch wise GL and PL should be extracted separately on daily basis with the following parameters:
- Geography (Branch / Region / State / Zone / Bank)
- Currency (Should facilitate multi-currency GL / PL)
- Date

The SI should compute the necessary branch level reclassifications and MOCs (the logic of the same will be provided by the bank) as part of extraction process.

Moving averages on the above is to be computed and stored separately to arrive at the ratio analysis. Branch / Region / Zone / Bank level performance parameters should be provided both in tabular and graphical formats in the proposed dashboards to the respective business heads. Also, the proposed dashboards should facilitate the display of various combinations like country wise / currency wise / system wise / vertical wise performance parameters.

The following are the indicative computed values expected from the GL / PL data consolidation:
- Credit Deposit Ratio
- Cost of Deposits
- Yield on Advances
- NDTL
- Cash Balances
- Bank Balances

This should also facilitate rupee revaluation using consolidated / computed data and enable the bank to draw various balance sheets.

A separate branch profiling to be provided as a part of this to enable the bank to accommodate targets / budgets, audit ratings of the branch for last 5 years, averages and business performance parameters like,
- Aggregated deposits
- Bank deposits
- Total loans
- Business
- NPA and recovery performances
- Number suit file cases under various categories
- ATMs attached
- Average cash maintained in ATMs
- Average cash and bank balances to access branch / branch head performance
- Performance ratios
- Growth and other related ratios
- Interest income analysis

The above given list is indicative and not limited to above elements only.

2. **Technical Requirements**

The Bank intends to build an enterprise wide data warehouse with the following objectives

- **Data Acquisition**: Build a scalable system for enterprise deployment on Data extraction, transformation and loading (ETL)
- **Data Quality**: Build a sophisticated data quality profiling, cleansing and enrichment capability before loading into the data warehouse.
- **Data warehouse**: Build an enterprise data warehouse that holds integrated, detailed, summarized data that satisfies the bank’s business requirements
- **Business Intelligence**: Build a consistent and business driven reporting, ad-hoc, dashboarding and scorecarding capabilities. The solution should also establish and sustain the cross functional analytical requirements of the Bank
- **Metadata management**: Build a strong metadata capability to standardize the definitions, data lineage and publish them for consistent usage of the data
- **Data governance**: Build a strong data governance capability to define, monitor and control the changes to the data across the data warehouse solution.
- **Security & accessibility**: Build and integrate security and accessibility capabilities for the data warehouse solution with the bank’s existing security and accessibility processes.
- **ODS**: Provide for an operational reporting store that contains data for at least past 6 months. The System Integrator must however estimate the past data requirement for ODS to ensure that the SLAs are met for the same.
- **Master Data Management**: The data warehouse should perform as a single repository for master data (including but not limited to customer, product, location, employee…. details) for any analytical systems.
- **Customer Relationship Management**: The EDW SOLUTION should have ability to cater to Bank’s Operational as well as Analytical CRM needs. This includes single customer view, integrated
marketing and campaign platform, integrated customer communication, cross-sell and up-sell analysis, customer retention analysis, customer lifetime value analysis etc. However, the Bidder must thoroughly go through the business requirements and ensure that the EDW SOLUTION and services proposed is the most optimal to meet all the business requirements.

The technical requirements are listed under two broad categories and detailed in following sections

- Technology/Tool/Application requirements
  - The requirements here cover the ETL, Data warehouse DBMS, data quality, BI, data mining and analytical solutions
  - The requirements also cover the data governance and Metadata requirements of the bank.
  - The SI is expected to meet all of the requirements stated in the Annexure – 18 Minimum Technical Specifications for EDW Solution

- Bank specific technical requirements
  - This detailed section provides the specific requirements of the bank across the solution. The Bidder is expected to understand and provide the optimal solution in his response.

2.1 Technology/Tool/application requirements

The requirements are mapped to the 11 solution blocks as described in the conceptual architecture as described in this document under Section G. The detailed requirements on each of the solution blocks are in the Annexure 18 – Minimum Technical Specifications for EDW Solution

2.2 Bank’s requirements

The bank specific functional and non functional inputs are covered in detail under this section. The requirements are structured under the following 3 layers

- Application Layer
- Data Layer
- Infrastructure Layer

The following SECTIONS detail the above layers cutting across the solution blocks across the SOLUTION architecture.

2.2.1 General

1. The SI would need to study the data sources, supply, install, develop/customize, implement, rollout, conduct training and maintain the following applications as per
functionalities required in Annexure 01 – Functional Requirements & Annexure 18 – Minimum Technical Specifications for EDW SOLUTION.

2. Implement an EDW SOLUTION including other 3rd party applications as listed in this RFQ. The tools/applications would include the solutions mentioned below.

- Physical Data Model
- Extraction, Transformation and Loading Tools
- Data warehouse DBMS platforms
- Data Quality
- Reporting tools/Application
- Data Mining tools
- Packaged Analytics Applications
- Metadata Management tools
- Data Archival tools
- Presentation layer Tool
- CRM Tool
- Any other applications required to give effect to the solution as desired by the bank

3. The Bidders have to note that the EDW Solution should provide for Maker Checker facility to verify updating of functional and technical EDW SOLUTION parameters in relevant and key areas.

2.2.2 Technical architecture

The Bidder should propose a detailed level technical architecture in the RFQ response. This architecture should be in compliance with the IDBI bank’s conceptual architecture provided to them in the RFQ document.

- The Bidder should provide a mapping document addressing how the EDW SOLUTION proposed by the SI in the RFQ response meets the IDBI Bank’s conceptual architecture.
- The Technical architecture should include hardware, backend and front-end software, LAN and WAN requirements
- The SI should provide a complete technical map of EDW systems to user interfaces
- Should provide details of each components of the architecture.
- Type of networking along with bandwidth requirement
- Type of software and hardware products required for data extraction, transformation, Data warehouse DBMS, Reporting, dashboarding/scorecarding ad-hoc query capability, data mining, Analytical Solutions and metadata storage and presentation

The SI will prepare a high-level logical dataflow diagram for the Bank for the overall DWH application and its interdependent systems. The architecture proposed by SI during implementation phase needs to be discussed and mutually agreed between SI / OEM and the bank. In case any change is required, the bank reserves the right to accept any such request.
2.2.3 Data Acquisition (ETL)

1. The SI will be responsible for successful Analysis, design, development, Implementation and maintenance of Extract, Transform and Load programs from the data sources specified in the Appendix 03 – Applications profile.

2. The SI would need to factor all effort to liaise, interact, develop tools, correspond etc. with the source system Vendors to obtain the data as desired by the EDW SOLUTION.

3. The SI should study the data sources, analyze the underlying data for meeting the requirements and define a data acquisition strategy to meet the banks requirements. The SI will take not more than one month from date of purchase order to prepare the “data acquisition Strategy” and process documents. The SI will give the Bank adequate time to review and sign–off the “data acquisition Strategy” and process documents.

4. The ETL jobs should be scheduled to run automatically on a periodic basis, ad-hoc basis.

5. The ETL system/jobs should not be run during the Branch operation hours and service hours. The ETL system/Jobs should interface with data sources and data consumers of the data, SI will prepare a data acquisition Strategy document. This document would provide a detailed mapping of the source data elements to target database as identified in the PDM and also indicate the transformation required before that data can be uploaded to the target database. This document will also spell out the time window available for uploading different source data, the required frequency of update to meet the user requirements and upload strategy. The extraction strategy for each data source should also be provided.

6. The SI Should deliver a mapping document that contains the following details:
   - Identification of table name, column name, data type, length, target column, source system, source table / file, source column / field, transformation required
   - Initial data migration from legacy systems to the EDW
   - Data flow diagram in terms of physical movement from source to EDW server
   - Procedures required to be instituted at source systems
   - Staging processes, cleaning and transformation required
   - Data integrity rules
   - Decisions about incremental / transaction event log or full refresh
   - Data staging audit specification (content/ lineage audit)
   - Identification of real time, non real time, push/pull mechanism are to be confirmed in this document

7. The Data acquisition system should consider mechanism that does not impact the performance of the Source systems from which data is extracted for the data warehouse. The SI should propose possible alternatives including “business copy” of the required data and also how Changed data capture is done.

8. The SI will also ascertain the time lag with which data are available in data sources. There may be
different time lags in relation to provisional data, revised data and final data. The SI should design
the SOLUTION to meet the refresh requirements driven by the business requirements for each
Information need.

9. The Bidder should propose the SOLUTION in his response identifying the data latencies (real
time/near real time/ right time / daily/weekly/monthly/yearly/ad hoc/on demand) for various data
subject areas at an entity level based on the business requirements.

10. The ETL System should include tools and technologies that support change data capture, data
extraction, data transformation and data loading before populating the data warehouse/ODS.

11. The ETL solution should support mixed workloads as per the volumes indicated in this RFQ

2.2.4 Data Quality and Data Governance

2.2.4.1 Data Quality
The SI should include Data quality and Data governance scope as part of his response. The SI
should propose the SOLUTION/services/Response addressing the following requirements.

1. The SI should propose a Data Quality tool as part his SOLUTION stack as meeting the
requirements as per the Annexure 18- Minimum Technical Specification for EDW Solution.
The Bank requires cleansing any data errors that can be corrected via an automated
process.

2. The SI should propose solution for data profiling, data cleansing, standardization and de-
duplication.

3. The SI should propose solution for creating the DQ Store data model and populating the
same for measuring data quality metrics

4. For identifying Unique Individuals the SI can use whatever rules they wish to use like
Name & Address, PAN number etc. The output should show the match clusters, such
that within each cluster, individuals who are same but having differently spelt Names,
Addresses, telephone numbers, etc are clubbed.

2.2.4.2 Data Quality Assessment
Data Quality is of high importance to the Bank’s EDW initiative. Data quality can be
improved by the appropriate use of certain varieties of tools. Data quality activities fall
generally into in the following functions:

- Identify Quality issues.
- Resolve Quality problems

One of the Bank’s objectives is to identify data quality issues as soon as possible in the
development cycle. This will be accomplished by a combination of business analysis
activities, and technical inspection of data sources. One or more data quality tools may aid
the inspection. The Bank requires cleansing any data errors that can be corrected via an automated process. The ETL tool can accomplish some cleansing. Other cleansing process may be best dealt with through a separate tool, such as a Name and Address Cleansing tool.

The SI is required to respond in details and indicate how the toolset will be employed to address the data quality objectives.

### 2.2.4.3 Data Cleansing and De-duplication

1. **Data Profiling and Analysis** - Identifying Key Data Quality Metrics such as for the customer and transactions (like Savings, Loan, Deposits etc.) data in terms of
   - Availability
   - Standardization
   - Accuracy
   - Consistency of Data

2. De-duplication activity would be a repetitive process during the implementation phase for minimum three iterations and during sustenance Bank would need it to be done on Quarterly basis.

3. Prevention of new error records

### 2.2.4.4 Data Cleaning

**Customer Data:**

The Bidder should propose tools containing specific libraries

1. The Bank would also like the SI to define a standard data dictionary which will be used for attribute codification purposes. E.g. Standard values for Salutation, etc

2. Extraction of key values in the correct field of City / State / Pin-code/ Gender /Title /Mobile /Telephone, etc.

3. Population of Missing values i.e. City/Pin code/Gender. This may have to be derived from other fields and consistent with other information

4. Standardization of Spell/Format Variations in City/Title/State/Phone/Pin For example: The city value may have various spellings like Bangalore, Bengaluru, B’lore, Bangalooru and it needs to be written in one standard form like Bengaluru.

5. Enrichment with New Values like Language/Landmark/STD Code/Locality/etc For example: The data provided has only Telephone, Address, Name.

6. Exception values that can’t get corrected due to data insufficiency need to be flagged off with the reasons, Define the Customer Attribute Rules such as Rules for the Combining and
Splitting of Accounts, House-holding criteria rules, Customer and address rules, thresholds for de-duplication, etc.

Transaction data:

1. Finding gaps in transactional data for details like the name of the borrower, EMI, ROI, Term period, Sanctioned Limit, margins, Date of Sanction, Date of NPA, Repayment start date, outstanding Balance, Principal and Interest, provisions / unrealized interest, Drawing Power, Stock Statements, Documentation etc for various types of Advances.

2. Checking the availability of fields like Occupation, Line of Business, Country Code, Type of relationship, Resident Status, Address Type, Account Type etc should be available.

3. Information like Nomination details, Operative instructions etc for various Deposit schemes.

4. In Corporate accounts details of external rating (long term/short term) should be filled in respective columns.

5. Checking of dates i.e. No blank dates in fields like account opening dates, sanction date, minor birth dates, last interest application dates, next interest application dates, standing order execution dates, loan outstanding dates (broken into interest, principal, charges) etc.

6. Check for dates that are irregular, unrealistic and odd.

7. Value of collaterals available for particular advance against deposit / (KisanVikasPatra) KVPs/ NSCs / LIC Policies etc.

8. Verify critical details like the name of the borrower, EMI, ROI, Term period, Sanctioned Limit, margins, Date of Sanction, Date of NPA, Repayment start date, outstanding Balance, Principal and Interest, provisions / unrealized interest etc

Tools for data upload

- The SI will demonstrate and provide and conduct training for Bank’s staff on the tool for punching of missing/wrong data with maker & checker capability.

- The SI is expected to suggest a model to ensure data quality at par with standard models and also implement the same, if selected. However, the SI have to demonstrate their ability in addressing data quality issues which will be evaluated as a part of selection process.

- The SI has to clearly mention the data governance framework for assuring the quality of the data. A detailed presentation has to be made on the framework, data quality tools that they are going to use in order to ensure data quality.

- The SI has to suggest the steps that would be necessary to ensure data quality through quality checks at the time of collection of the data, at the extraction, loading and analysis stage. If major aberrations are detected at that stage, in the process, the SI is expected to put in place a system for data governance to ensure data quality. The system has to clearly layout responsibilities at various levels and the tools to be used at those levels for quality checks.

- It may also be necessary to have periodical snap shots on data quality based on the
statistical principles of process control. The SI is expected to bring in knowledge on all these aspects and the industry experience based on his partnership with many other organizations on data quality as part of Business Intelligence.

- Gathering incomplete data from the customer or updating the incomplete data in the source systems (as per Appendix 03 – Applications profile) from the documents/other sources on Data Cleansing activity will run in parallel to the EDW SOLUTION implementation and it is out of scope for the SI.

2.2.4.5 Deliverables

1. Data Quality assessment plan & result document
2. Cleansed Customer Data with unique customer ID and household ID.
3. Pilot Results indicating the Business Rules, Thresholds to be applied, the statistical confidence for this Rule, precedence in data correction for the Source systems, etc.
4. Customized Data Dictionary in a portable format such as .CSV file or other format as desired by bank.
5. Data quality reports for the Bank for customer as well as transactional data.
6. Source system wise Report of data cleaned by SI and the source system- wise report for which bank has to take data cleaning action.

2.2.5 Data warehouse, Master data, ODS, DQ Store

The following sections detail the requirements on the data layer in the SOLUTION ARCHITECTURE.

2.2.5.1 Data model

The Enterprise data model is a critical component of the overall SOLUTION. The SI should meet the following requirements.

1. The enterprise data model should provide entities, attributes to store information required in the business requirements stated in this RFQ
2. Should be easily extensible without impacting the integrity of the model
3. Should include documentation with a data dictionary; attribute definition, entity definitions, data types for all attributes.
4. The data model should provide pre packaged semantic layer on top of the model
5. The data model should be physical data model and meets all the business requirements without additional entities or attributes. The data model should accommodate any extension for IDBI bank specific information attributes.
2.2.5.2 Data warehouse
The data warehouse is the key component of the EDW SOLUTION. The Bidder should demonstrate his experience and understanding of data warehouse through his EDW SOLUTION and services proposed.

The EDW SOLUTION should meet the following requirements

1. The Enterprise data warehouse should store the information requirements in a centralized repository.

2. The data warehouse should store the granular details as required by the business requirements, the aggregated/summarized data as needed for decision making by the bank.

3. The enterprise data warehouse should keep at least data for last 39 months online. Even though data later than 39 months is to be archived, it should be available for any statistical analysis or data mining purposes if required.

4. The data in the enterprise data warehouse are not be deleted. They should be marked “delete” by the process identifiers.

2.2.5.3 Master data
The EDW SOLUTION proposed by the Bidder should meet the following requirements with respect to Master data

1. The SI should scope to provide Analytical MDM as part of the Data warehouse

2. The data warehouse should perform as a single repository for master data (including but not limited to customer, product, location, employee….) details for any upstream/analytical systems.

3. The repository should be able to provide single view of customer, product, employee etc….

4. The repository should identify the active master record for any master data subject areas

5. The data structure should track changes to the master data and store changed values for various time period

6. Complete audit trail should be maintained on the access and changes on master data

7. The EDW SOLUTION should publish information regarding the access by various users and the changes accessible by the BI tools and technologies

2.2.5.4 Operational Data Store
The bank expects the Bidder to propose an EDW SOLUTION with last 6 months data on ODS for operational reporting. The SI should

1. Propose the data flow from the data sources to Data warehouse, DQ Store and analytical layer
2. Should store minimum 6 months data that are needed to be stored in the ODS layer

3. If the Bidder propose any data models for ODS layer, then they should provide the data model in 3rd normal form.

4. ODS should be utilized for operational reporting purposes.

2.2.5.5 DQ Store
DQ Store is envisaged as a place where cleansed, standardized and de-duped data resides

1. The DQ Store should identify and resolve duplicate customers

2. The DQ store should be accessible to data stewards who select a record when multiple customer records are presented.

3. The DQ store should store metrics related to data quality in a normalized /de-normalized schema

4. The DQ Store should keep in process/pending/monitoring records that are not resolved for “golden customer record”

5. The DQ Store should also keep a copy of all the records before processing, in process of rectification apart from cleansed records.

6. Once the DQ process is complete data should be shared with downstream systems.

2.2.6 Query Characteristics/Complexity
Query management and governance is the key aspect in the data warehouse SOLUTION. The SI should completely understand the details of this and propose best fit solution that meets the following needs.

2.2.6.1 Definition

Query - simple: Query with upto 5 tables join with Primary Index select condition on a base of 10 million records with 10,000 records in the query result.

Query - medium: Query from joining 6 to 10 tables on primary or foreign key fetching around 100,000 records including grouping or sorting on given condition from 10 million plus records

Query - complex: Query from joining more than 10 tables on composite key fetching any number of 1,000,000 records, including grouping or sorting, formula calculation, aggregation etc. for report displaying on given condition from 10 million plus records
2.2.6.2 Response Time

<table>
<thead>
<tr>
<th>Query type/complexity</th>
<th>Response Time (Seconds)</th>
<th>Query Mix (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>Medium</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Complex</td>
<td>960</td>
<td>10</td>
</tr>
</tbody>
</table>

2.2.6.3 Verification

These responses will be measured through user acceptance testing and user responses during the implementation process as well as through the solution benchmark which will be undertaken by the SI on the proposed solution. The sizing should take these requirements into considerations and meet the above requirements. Any miscalculation on sizing of the resources or the solution not meeting these requirements should be managed within the contract value proposed by the SI.

The EDW SOLUTION should have the capability of automatically stopping queries which run longer than the preset duration.

The system should manage the mixed workloads of queries (Operational, Analytical) and should allow the fast running queries for better response while allocating resources across queries that are running on the system.

2.2.7 Analytics, Reporting & BI

The SI should provide

1. The reporting should provide presentation layer tools and technologies to login using biometric access. The Bidder must quote for the integration/interface cost for biometric access as part of the Commercial bid that will be asked from technically shortlisted in stage 2. The Bank however will decide at its discretion whether this solution is required to be implemented or not. This decision will be communicated to all concerned bidders before the opening of the Commercial Bid that will be asked from technically shortlisted in stage 2.
2. The solution proposed should integrate with bank’s existing security and access systems to provide single sign on for the end users.
3. The reporting system should provide a centralized management of the reporting across the enterprise.
4. The reporting system should track and monitor usage of reports, dashboards, scorecards and publish the same to IT management
5. The reporting systems should be accessible during the operation hours.
6. The reports/dashboards/scorecards and results of ad-hoc must be provided in various forms including csv, pdf and excel
7. The SI should propose a GUI oriented, multi user report development environment.
8. The reporting system should maintain and manage various versions of the reports, dashboards and scorecards.
9. The reporting system should provide the ability to drill down, drill across through multiple hierarchies.
10. The reporting system should have reports scheduled on a periodic basis and also should deliver reports to various users.
11. The reporting system should interface and deliver reports /dashboards /scorecards /ad-hoc query results to branch users.
12. Reporting system should publish reports to group ids which are available on the enterprise email servers.
13. All scheduled reports should be completed and delivered to the users before 9:00 A.M. on all business days.
14. The SI should propose an offline report library where past reports are stored and accessible to end users based on their roles.
15. The reporting system should integrate with enterprise access and authorization systems and provide access based on access rights defined during the design.
16. The access to the data warehouse would be on a need to know basis.
17. No direct access to the data warehouse other than through the BI tools and Data Mining tools.
   The tools and technologies should be able to generate audit trail of user access.
18. The reporting system should deliver reports/dashboards/scorecards offline and online mechanism. This includes mobile devices, end user email boxes, reports library and online access to the reports/dashboards/scorecards.
19. The reporting system should have query optimizer to performance tune, define and decide access paths of the end user queries.
20. The power users and Super Users identified by the bank should be able to access the data in the data warehouse, and other layers using BI tools.
21. Please refer the hardware section 2.2.12 for any bandwidth /network requirements for reporting system.
22. The reporting system should provide features to restrict the print facilities at the branches. In other words the reporting system should support encouraging soft copy usage across the bank.
23. The Bank expects the following user access:
   - Business User: Only viewing access and no Query In Access
   - Dashboard User: Only viewing access and no Query In Access
   - Power User: Viewing and Query In Access
   - Super User: Viewing, Query In, Production and Development Access
Business users have been arrived at these user numbers by assuming 30% Y-O-Y growth.

Note: The user concurrency is specified in the respective rows of the above table for the concerned row only.

The bidders should cater to, at minimum, the following User Concurrency requirements of the Bank across various analytical applications as shown below, with respect to the Production Environment during the contract period of 5 years. Any impact on Production environment sizing has to be taken into account for Test & Development and Training environment sizing also as per the RFQ requirements. However, the bidders should right size the solution to meet the requirements provided in this RFQ for the contract period of 5 years. In case the RFQ requirements are not met, then the selected bidder has to provide additional components required to meet the RFQ requirements, at no additional cost to the bank.

<table>
<thead>
<tr>
<th>Analytical Application</th>
<th>Number of Concurrent Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Intelligence</td>
<td>1200</td>
</tr>
<tr>
<td>Data Mining</td>
<td>50</td>
</tr>
<tr>
<td>Performance Management</td>
<td>150</td>
</tr>
<tr>
<td>Corporate Function</td>
<td>50</td>
</tr>
<tr>
<td>Customer Analytics</td>
<td>200</td>
</tr>
<tr>
<td>OCRM</td>
<td>300</td>
</tr>
</tbody>
</table>

The afore mentioned User Concurrency requirement of the Bank has to be met in line with the Response Time indicated as per Clause 2.2.6.2 of the RFQ.
2.2.8 Metadata

2.2.8.1 Information regarding source data systems

Metadata provides a road map of all the Data in the EDW SOLUTION and enables effective administration, change control and distribution of the data supporting the EDW SOLUTION components.

2.2.8.2 Meta Data Collection (Business, Process and technical)

Bank expects industry standard business, process and technical metadata repository. The EDW SOLUTION indicative Architecture diagram shows the Metadata repository as an integrated part of the overall solution. Proposed detailed solution architecture is to be provided by SI.

1. The Metadata Repository should store, publish and provide full query and reporting ability on metadata generated by every layer of the EDW SOLUTION Architecture from Data Capture to User Interface/ Layer.

2. This component is expected to provide a common repository with facilities that are capable of sourcing, sharing, storing and reconciling a comprehensive spectrum of metadata including business and technical metadata.

3. SIs are expected to provide details on offered solution on how the various tools will integrate to provide a seamless view and data lineage of data traversing through the lifecycle of EDW SOLUTION.

4. The SI must give details on following areas along with other details on offered product:
   - Major features provided by the tool Proposed for the Project
   - Implementation Methodology
   - User friendliness of tool
   - Metadata Compatibility with entire stack proposed for the project
   - Details of Business Metadata provided with tool
   - Glossary should be available with the Business Metadata
   - Metadata Strategy including
     - Metadata Capture strategy
     - Metadata update strategy
     - Metadata Maintenance Strategy
   - Provision of Support

2.2.8.3 Metadata strategy documents

The SI will have to provide a strategy document for metadata management strategy for the
following components of metadata.

- Source system metadata
- Data staging metadata
  - Data acquisition information
  - Dimension table management
  - Transformation and aggregation
  - Audit, job logs
- DBMS management metadata
  - DBMS system documentation
  - SQL administration scripts
  - Backup status, procedures, etc.
- End-user metadata
  - Functions and concepts
  - Reports
  - Data availability
  - Definitions
  - Status of EDW

2.2.9 Data Archival

Data should be archived in such a way to ensure that there is no loss of data and it must be possible to restore the archived data for specific queries by the Bank users.

Data warehouse has large volumes of processed, raw data. Each of the categories is required to be archived for the following needs. The IDBI bank data warehouse SOLUTION comprises of many processed data across the various layers of the architecture. The data needed for analytics should be stored optimally based on the needs in online as well as offline/archival location. The Bidder is expected to go through Appendix 01 – Technical specification for Data Archival Solution

1. The Bidder should propose SOLUTION for the users to query historic data
2. At any point of time 39 Months of data should be available online in the EDW SOLUTION. The historical data should be taken from 39 months onwards. Post the 39 months of data existing in the EDW SOLUTION the first month’s data must be moved to non production storage on a rolling basis.
3. The bank’s data archival policy has to be adhered to by the SI. The bank will share the policy to the SI.
4. The archival solution should be able to integrate easily with the proposed solution components of the data warehouse solution.
5. The archival solution should be able to archive/restore huge volume of data and information and restore them with minimum operational downtime.
6. The archival solution should support tracking the analytics back to the source of information for integrity of reporting
7. Should support facilitating the reprocessing of the historic data/information.
8. Reduce the cost of operations in managing the data storages suitably and publish the archived reports, dashboards and scorecards to the users.

9. Should have been implemented in at least one or more public sector bank with more than 2000 branches on a centralized web based solution.

10. The Bidder should propose EDW SOLUTION as per the following illustrative data archival requirements

<table>
<thead>
<tr>
<th>Data Retention &amp; Archival</th>
<th>Remarks</th>
<th>Online</th>
<th>Archival Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source data files</td>
<td>Files that are sourced from data sources. Should account for some intermediate processed files as appropriate.</td>
<td>Last 3 months ETL Server file folder</td>
<td>Last 13 Months DW Database</td>
</tr>
<tr>
<td>Data warehouse</td>
<td>Master tables, aggregate tables, physical tables, transaction tables, reference tables etc</td>
<td>39 Months DW Database</td>
<td>5 Years DW Database</td>
</tr>
<tr>
<td>ODS</td>
<td>Master tables, aggregate tables, transaction tables, reference tables</td>
<td>6 months DW Database</td>
<td>3 Years DW Database</td>
</tr>
<tr>
<td>DQ Store</td>
<td>All the custom tables created for storing the data quality records, metrics etc…</td>
<td>6 months DW Database</td>
<td>13 Months DW Database</td>
</tr>
<tr>
<td>Reports</td>
<td>Critical reports needed for references</td>
<td>3 months Report Server</td>
<td>13 months Report Server</td>
</tr>
</tbody>
</table>

The Bidder must include a Data Archival component as part of their overall EDW SOLUTION. The Bank however will decide at its discretion whether this solution is required to be implemented or not. This decision will be communicated to all concerned bidders before the opening of the Commercial Bid that will be asked from technically shortlisted in stage 2.

**2.2.10 CRM**

SI should provide tentatively the following:

- Customer data acquisition either through external data sources or direct input into CRM
- Functionality to load CRM database either from EDW in batches, or integration with Core system on real time basis for transactions
- Ability to avoid duplicate customer data into Customer Master
- Ability to expose CRM interfaces to be invoked by external applications
- A flexible and scalable CRM data model to include required data field at a later date and extend the model
- Support increasing numbers of OLTP users access
- Automatic failover while executing OLTP or batch processes
- Ability to support internet web-based architecture with the feasibility of mobile application based front-end presentation
- Ability to provide integration of operational CRM with analytical CRM.

Technical requirements are covered in detail in Annexure 18 - Minimum Technical Requirement for EDW Solution where OCRM functionalities are mentioned separately while ACRM functionalities are spread across Customer, Profitability and Data Mining sections.

2.2.11 Systems Specifications Requirement Study

The SI will conduct a detailed systems requirements study and provide a Functional Requirements Specification Manual (“FRSM”) relating to the functionalities as required to support the various products and services offered by the Bank / to be offered by the Bank in the near future as responded by the SI in Annexure 01 – Functional Requirements. The FRSM must also include all the areas where the SI is suggesting a work-around.

The SI shall provide the FRSM to the Bank for review and comment and any comments or suggestions of Bank will be incorporated therein. The FRSM will deem to be completed when signed off from the Bank.

Gap Identification and Resolution

The SI will be responsible for gap identification and resolution so as to:

- Provide all functionalities as mentioned in the Annexure 01 – Functional Requirements
- Provide all functionalities as mentioned in the FRSM.
- The SI will provide the Bank with the gap identification report along with the necessary solutions to overcome the gaps and the time frames.
- The SI will ensure that all gaps identified at the time of system testing will be immediately resolved.
- The SI will resolve gaps by proposing a suitable work around or customizing the proposed solution by way of modifications / enhancements, as necessary, to the proposed software solution.
- The SI will give adequate time to the Bank for reviewing the gap report
- The SI will incorporate all the suggestions made by the Bank to the gap report.
- The SI will ensure that they have the necessary infrastructure and people in place to resolve all the gaps within the time lines agreed, for the implementation and roll out.
- The cost of all customizations as mentioned above is required to be included in the Price Bid and the Bank will not make any additional costs for such effort.
- While costing the customization effort required, the SI should exclude the effort required from the Bank’s side.

Additional Customization beyond the RFQ requirements:
The Bank may require the Bidder to address additional requirements that are not either of the following:

1. Bug fixes
2. Gaps found during base version testing
3. Gaps against the functionalities specified in Annexure 1- Functional Requirements

### 2.2.12 Hardware & Software Requirements

1. The Bidder needs to size, supply, design, commission and maintain the hardware and related software for all the applications for the period of contract required as per the RFQ.

2. The Bidder is required to size for adequate hardware based on the volumes for the EDW Application & Database and other Applications. The bank would like to stagger the deployment of the hardware resources in 2 stages. In stage 1, the initial hardware deployed should be capable of handling the first three years load and volume or till completion of implementation whichever is later. As part of stage 2, after completion of 3 years, the SI has to ensure that appropriate hardware and other resources are added based on the projected load and volumes and performance criteria for the next 2 years.

3. The hardware technology proposed for the EDW should be the enterprise class, best of the breed, latest, tested and stable release of OEM and based on the latest platform enabling technology supporting the complete EDW.

4. All production server hardware in the EDW SOLUTION should have fail over and should be configured to be Highly Available. The configuration should be such that there is equitable distribution of the load in the configuration and if a failover occurs then the server running should be able to take full load subject to scalability conditions described in clause 2.2.12.11. The hardware sized for all the applications should be redundant & scalable. Should there be a hardware failure, the failed component should be replaced or fixed in less than 4 hours.

5. The production hardware must be enterprise class with adequate vertical and horizontal scalability. If an appliance is proposed as part of the EDW SOLUTION there must be adequate CPUs, memory and storage available to accommodate the sizing and growth aspirations of the Bank during the contract period. During the contract period the Bank will not consider any plea by the SI for horizontally scaling the appliance in case the sizing is inadequate. Hence the SI must propose an appliance having adequate vertical headroom. In case any horizontal scaling of the appliance is required then the Bank would not bear any cost and the cost will have to be borne by the SI.

6. Separate adequately sized hardware should be quoted for test & development and training and applicable servers.

7. All the EDW servers suggested should have dual power supplies. The power input to the power supplies will be from separate UPS. In case of failure of one power supply, the second power supply should be able to take the full load without causing any interruption in services.
8. The solution proposed by SI should support high disk IOPS; to meet the banks requirement in terms of performance.

All servers are required to have a minimum of dual 1000 Mbps Ethernet network interface cards (NIC) or a better equivalent installed on the board itself or on different slots. Each NIC will be cabled from a different module on the switch using gigabit speed cabling.

9. The SI is responsible to arrive at the sizing independently. The Bank is not responsible for any assumption made by the SI with respect to the sizing. In the event the sizing quoted by the SI does not meet the performance / service levels as desired in the document, the SI will at their cost carry out the necessary upgrades / replacements. The Bank will not pay any additional amount during the period of the contract.

10. The intrinsic linear scalability of the parallel architecture enables systems to expand up to various nodes supporting the growth demands of Bank's growing business. This ensures the consistent dependability required to collect, store and analyze critical business data. Additionally, the server management system enables control and monitor essential components through a single, central location. Uninterruptible power supplies stand ready to maintain critical availability to vital server components in the event of AC power loss. Supply of UPS is to be a part of this RFQ. EDW is a mission-critical Decision Support environment and hence reliability is mandatory. The server is to be designed since inception to be a fault-resilient, mission-critical platform. With respect to RAS (Reliability, Availability, and Serviceability), the server should provide the most comprehensive features and functionality to ensure maximum system uptime.

11. Bank is looking for a hardware infrastructure for EDW SOLUTION to support large volumes of data with multiple concurrent users running ad-hoc complex queries. Keeping in view that the branches located in Metro, Urban, Semi Urban and Rural areas besides administrative offices, may extensively use the Data Warehouse; Bank opines that number of concurrent users could be high and is given in the related table. Bank requires a processing hardware platform based on the state of the art technology, highly available (365x24x7) & Manageable and gives the maximum performance throughput at these large volumes of data to multiple concurrent users.

12. Hardware should be on minimum 64 bit technology and support IPV4 and IPV6 protocols. The hardware should support fiber optic channel or better technology and should provide gigabit ports.

13. The SI will be completely responsible for supply, installation, configuration, customization and maintenance of the complete EDW SOLUTION for the period of the contract. The bank at a later date will not make any additional payments for the solution provided by the SI. Any assumption made for hardware sizing, solution sizing or bandwidth would be the complete responsibility of the SI. The bank at a later date will not accept any plea from the vendor with respect to the assumptions made by them.

14. Bidder need to provide the details separately in their respective sections as per the format given in Annexure 02 – Masked Bill of Materials

15. The recommended hardware should have high reliability, fault tolerance, redundancy and high availability having no single point of failure in the hardware (NSPoF).
16. The hardware and software proposed as part of the solution must, at a minimum, cater to the peak load requirements in terms of ETL loading times and BI access which are defined as follows:

- The peak load for reporting purposes will be on Fridays and Saturdays as well as the entire first week of every month.
- The recommended hardware and software should support the initial and incremental EDW requirements for the contract period.

17. Application, Database and Web servers should be both vertically and/or horizontally scalable and must be capable of incremental expansion to meet the growth requirements of the Bank as defined above. The key server hardware proposed must be enterprise wide class in their respective category.

18. The specified servers must be current/recent in the OEM’s product line and must be fully supported by the OEM for the duration of the project and for the warranty and post warranty.

19. While proposing the actual storage specifications, the sizing and parameters should be taken into consideration and specification must be provided by the SI based on the application, architecture & the storing volume requirement. Also the proposed storage solution should be scalable to meet the sizing and the growth requirements. However, the bidders should right size the solution to meet the requirements provided in this RFQ for the contract period of 5 years. In case the RFQ requirements are not met, then the selected bidder has to provide additional storage at no additional cost to the bank. However, the procurement of the storage hardware would be as per point 2 of Section 2.2.12 of the RFQ, which states that ‘The bidder is required to size for adequate hardware based on the volumes for the EDW Application & Database and other Applications. The bank would like to stagger the deployment of the hardware resources in 2 stages. In stage 1, the initial hardware deployed should be capable of handling the first three years load and volume or till completion of implementation whichever is later. As part of stage 2, after completion of 3 years, the SI has to ensure that appropriate hardware and other resources are added based on the projected load and volumes and performance criteria for the next 2 years.’ While proposing the actual storage specifications, the sizing and parameters should be taken into consideration and specification must be provided by the SI based on the application, architecture & the storing volume requirement. Also the proposed storage solution should be scalable to meet the sizing and the growth requirements.

20. SI is required to provide for the detailed configuration of the proposed Hardware (Training, Test &Dev, Production and DR server) environments in Annexure 02 – Masked Bill of Materials.

21. The SI is required to provide the configuration details of the server/storage system. Each node should run separate instance of operating system. Each node should be connected to a dedicated storage (providing fixed number of disks, cache memory and fiber channel or better ports) via high speed fiber channel adapters. Each node should have multiple network ports to communicate with ETL & Application servers.

22. Proposed hardware in complete (Including front end configuration). SI shall submit Annexure - 02 Masked Bill of Materials (both masked and final) duly filled in with the details in the description column.
• Space Requirements
• Power requirements
• Standard temperature requirements/ heat
• Suggest DR configuration for Active-Passive environment.

The bidders are also required to fill up Annexure 20: Data Storage requirements and Annexure 21 – Hosting Space Requirements as per the template provided separately. Bidders have to provide the space required in DC and DRC in per square feet for bank to plan the hosting area.

General Instructions:

1) The bid documents submitted should be properly paginated and indexed.

2) The Earnest Money Deposit of Rs 1,00,00,000/- (Rupees One Crore) as per Annexure 4-Bank Guarantee format in lieu of DD towards EMD submitted, should be appropriately extended in order to comply with the validity period mentioned in the RFQ, which is for a minimum period of 6 months from the date of submission of the bids (with a claim period of 3 months).

3) No price points will be accepted in the Masked Bill of Materials, submitted along with the Technical bid.

4) All deviations must be specified clearly in the format given as per Annexure 6 only. Also, it is to be ensured that deviations are mentioned in Annexure 6-Compliance Statement only and not anywhere else in the bid.

5) All documents asked for, as part of the Annexures have to strictly be in line with the format indicated in the Annexures only without adding any assumptions/conditions etc

2.2.12.1 Operating System

The SI should propose a robust operating system mostly used for the Data Repository environments. It should support multi-user, multitasking, and multi processing environment. The proposed operating system must be fault tolerant and secured.

The Operating System should be industry leading enterprise class main stream.

• It should be minimum 64 bit
• It should have in-built Logical Volume Manager & Workload Management
• It should be licensed for unlimited users
• It should be easy to manage
• It should have high security and on-line serviceability
• Power fail Recovery - Automatically saves the entire system status to disk, and then should restore it following restoration of power.

• Automatic Isolation of Failed System Components

• Ensures file system integrity using journaling file system features following a failure, avoiding time-consuming file system recovery procedures.

• Allows striking the best balance between data availability and performance

• Extensive Diagnostics and Support Tools to support staff to quickly and remotely evaluate systems and take corrective actions.

• Hardware should support IPV4 and IPV6 protocols

2.2.12.2 Database Management System (DBMS) and Data Repository

1. The EDW SOLUTION proposed should support large volumes of data, with multiple concurrent users running ad-hoc complex queries. This centralized database is the heart of the EDW architecture and will determine the performance of all the processes around it.

2. The DBMS should provide EDW environment and handle large volumes of raw data sizing and support complex business models through multiple concurrent users spread across businesses. The DBMS must be capable to handle large data loads, data querying/retrieval and data analysis in both batch mode as well as in real-time/near real-time environment.

3. Some of the key features for the Data Warehouse DBMS expected to cover are:

   • High Query Performance
   • Linear Scalability
   • High Availability
   • Query Process & Optimization
   • Query Governance
   • Complete Parallelism
   • Low TCO for Database Administration Tasks
   • Easy Manageability
   • Data Loading Tools/Utilities
   • Encryption and Compression
   • Rollback

2.2.12.3 Monitoring Software

Data warehouse monitoring
The query monitoring software gives the administrator a complete end-to-end view of queries that are running on the data warehouse and their resource usage. The query monitoring system should allow the following:

- Allow the task or query to proceed
- Proceed, and log the task or query for further analysis
- Proceed, and alert the administrator or DBA via e-mail or pager
- Changing the tasks into lower priority
- Hold, defer or reject the queries that are having resource issues
- To set and monitor the limits of large load/processing queries
- To monitor the health status and utilization of underlying servers and storage

ETL Monitoring

- The ETL system should provide the following as part of monitoring the ETL jobs.
- The system should provide GUI interface to monitor the jobs that are running
- The system should provide the resources (CPU, Memory) allocated to the job and status of the detailed steps in the jobs
- The system should alert when the resource allocated to the job exceeds the limit
- The system should collect the statistics and provide dashboards to the management on operational statistics
- The system should cancel/hold any jobs from being run or change the priority from high to low or low to high
- The system should provide features to identify and fix the following:
  - Poorly indexed queries
  - SQL syntax causing wrong optimizer choice
  - Sorting
  - Slow transforms
  - Excessive I/O
  - Unnecessary writes followed by reads
  - Opportunities to run processes in parallel
  - Unnecessary transaction logging
  - Network traffic and file transfer issues

Reports/Dashboard/Scorecard/Ad-hoc Query Monitoring

- The EDW SOLUTION should meet the following monitoring requirements
  - The performance of the scheduled reports and queries to be monitored against the limits set for that type
– Alert or messages to be sent to Administrators
– The step by step running of query and performance of each steps to be collected, monitored and controlled.

2.2.12.4 Acceptable applications and tools

1. The Bank will accept standard tools to establish features and functionalities for state-of-art technology to be used to get best performance. The products offered should have comparability in their performance, features and functionalities.

2. The SI shall provide enterprise-wide usage licenses for all software/ tools without any limitation to number of named/ concurrent users, processing capability or any other component etc. The SI should propose and use standard and time tested tools.

2.2.12.5 Redundancy and High Availability

The Bank expects the EDW SOLUTION to be highly available to support decision making.

1. The system should be configured in high available (HA) mode as mentioned in the RFQ. The entire system should be configured in such a way that there should not be any single point of failure. Bidder has to quote for all the hardware peripherals and software required.

2. The system can also be monitored from single monitoring workstation. All the servers (DB/APP/WEB) at the Data Center shall have Gigabit Ethernet LAN (or higher) connectivity. However, there will be a private Gigabit Ethernet LAN (or higher) between Servers.

3. The SI will have to set up the DR site which must be capable of handling 100% of the storage load of DC production. The CPU, memory and other components can be sized at 70% of the DC. The DR will be used only when primary is not available.

4. The services offered as part of the warranty and post-warranty support must be in conformance with the specifications supplied in the Technical Specification. During this period, the SI will be responsible for the patch application / bug fixing / replacement / support of all software supplied under this tender.

2.2.12.6 Additional Servers

1. All servers should be minimum 64 bit technology and support fiber channel or better and provide gigabit ports. The proposal must offer as many numbers of additional servers as may be required to run one or more of the associated software tools and products forming part of the solution. Thus for example, if the offered ETL tool or Metadata repository management
separate server, then the same with appropriate and adequate configuration must be offered complete with the required Operating System and any other system software.

2. In case one or more (or all) offered tools run on the main server system itself, the appropriate configuration for that part of the load must be additionally provided for in the solution clearly mentioning this distinct load and configuration requirements.

2.2.12.7 Test & Development and Training Servers

The SI should consider multiple environments for various SDLC activities across the SOLUTION.

1. There should be a separate environment for the ETL, Data warehouse and Presentation layer environments. So there should be three separate Training, Test and Development environments.

2. A development, test and Training servers must be configured in the EDW SOLUTION, which should be a separate server/node/resource. The additional configuration towards this usage should be clearly indicated.

3. This hardware and licenses should be made available within a month of issuance of Purchase Order.

4. The test & Development servers should be sized to 20% capacity of the respective production servers while the Training servers should be sized to 10% capacity of the respective production servers. The test & development environment should be identical to the production environment with respect to hardware and software (not limited to database, appliance & data model). The capacity for Test and Development environments remains as above. This is to avoid any issues during the go live stage of each phase.

2.12.8 Hardware/Software Components

1. The SI must ensure any Hardware and system software components required for the project is included in the offer in terms of different servers/ Operating systems /any other system software and tools.

2. Bank will provide the physical data centre infrastructure with LAN and WAN connectivity.

3. In case it is discovered during the project that any Hardware/ Server/ System Software component has not been included in the original bill of Material of the SI, but is required for the solution as specified in the RFQ, the SI at no additional cost shall provide the same to Bank.

4. SI should include all hardware requirements for interface, staging, ETL servers data warehouse, Web Server, Data Quality server, development and training server, and related hardware components.
2.2.12.9 Capacity Planning

1. The SI is required to provide detailed information as how their solution addresses capacity issues. As the data volume grows and more data is added, ability of the solution to handle the ongoing load must be monitored. Capacity planning means continuously determining the capability of the hardware and software to support additional users.

2. The SI should consider Appendix 03 - Applications profile for source systems for EDW SOLUTION project.

3. The SI should consider the following statistics as on 31/03/2014 for branches under CBS is as under:
   - Number of Branches: 1400
   - Transaction Volumes: 33 Lakh
   - Number of Customers: 118 Lakh
   - Number of Deposit Accounts: 118 Lakh
   - Number of Loan Accounts: 5 Lakh

The projections for accounts and transactions pertaining to CBS for next 5 years are:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Branches</td>
<td>1400</td>
<td>2000</td>
<td>2500</td>
<td>2900</td>
<td>3300</td>
<td>3700</td>
</tr>
<tr>
<td>Customers (in Lakhs)</td>
<td>118</td>
<td>153</td>
<td>199</td>
<td>259</td>
<td>337</td>
<td>438</td>
</tr>
<tr>
<td>Peak Transactions (per day) (in Lakhs)</td>
<td>109</td>
<td>142</td>
<td>184</td>
<td>239</td>
<td>311</td>
<td>405</td>
</tr>
</tbody>
</table>

Bandwidth Sizing

1. SI is required to assess and advise on the sizing of the bandwidth based on the requirements of the users at various levels of the Bank. The Bank has a three tier architecture and expects the solution to cater to various users (including power and super users) defined in the document above across branches, Circle Regional-,Zonal offices and Head office.

2. The Bidder is required to provide details of Bandwidth requirements to meet the RFQ requirements. The Bank would procure any additional bandwidth requirements.

2.2.12.10 Additional Requirements

- Liaison with Source Data vendors: The System Integrator (SI) will need to liaison with the source systems and their vendors as indicated in Appendix 03 – Applications profile for the data acquisition...
for the purpose of the SOLUTION. The Bank will be facilitating the interactions between the Bank’s existing source data vendors as well as the System Integrator (SI). However the onus of the liaison would lie with the System Integrator. The SI will have to ensure that they are successfully able to derive the requisite data from the Bank’s source systems. These activities will also involve understanding source data structures and tables in order to build ETL and similar routines to transfer data into the Data warehousing environment.

- Optimal sizing the solution by gathering the requirements from the Bank for establishing the Enterprise wide Data Warehouse set-up by providing hardware, operating systems, database, ETL tools, Business Intelligence, Analytical Solutions, Data Quality tools, Data Mining tools and any other component required for establishing Enterprise wide Data Warehouse solution.

- OEM Role in the implementation: The OEM’s should be committed to the success of the project and have ownership during the actual implementation. The OEMs involvement in the overall implementation, support, sustenance etc. must be at the minimum 20 percent of the total effort being proposed by the SI. The same should be reflected in Annexure 02, Masked Bill of Materials in the implementation effort. The bidder must also share the details of the involvement of OEMs during support & sustenance. The following are the expectations with respect to OEM involvement during the contract period:
  
  o The OEM should provide qualified personnel who will ensure that the EDW SOLUTION is designed and implemented according to the highest standards during the implementation phases 1, 2 and 3.

  o The OEM should ensure that it provides qualified staff during the support/sustenance phase

  o The OEM should ensure that there is a carryover from the implementation team into support/sustenance phase.

  o The Bank reserves the right to interview resources proposed by the bidder and if any of them are found unsatisfactory, the bidder would need to substitute such resources, either through internal or independent agencies, to the Bank’s satisfaction.

- Domain experts, SMEs: During the implementation, SI must also deploy domain experts, SMEs for achieving successful implementation of EDW SOLUTION and the Bank requirements. The Domain experts, SMEs must be involved in the use case development & verification, business requirement/system requirement documentation, data model designing & mapping, physicalization of data model, creation & updation of supporting documentation, preparation etc. The domain experts, SMEs involvement in the overall implementation, support, sustenance etc. must be at the minimum 10 percent of the total effort being proposed by the SI. The same should be reflected in Annexure 02, Masked Bill of Material in the implementation effort. The bidders must also share the details of the involvement of SMEs during support & sustenance. The Bank reserves the right to interview resources proposed by the bidder and if any of them are found unsatisfactory, the bidder would need to substitute such resources, either through internal or independent agencies, to the Bank’s satisfaction. The Bidder should have a formal arrangement with the SME identified for the Project and name of the SME to be specified.

- EDW SOLUTION Benchmark – It is mandatory for the System Integrator to conduct a solution benchmark for the purpose of the EDW SOLUTION for the Bank, incorporating the proposed technology architecture and estimated capacity of the solution offered in meeting the Bank’s requirements with consideration for future scalability within 6 months of project start date. A certificate of the benchmark results will need to be submitted to the Bank as part of the acceptance
process of the EDW SOLUTION. This benchmark will need to be conducted within 2 months of the phase 1 go live of the EDW SOLUTION as per the implementation plan defined in Section I: Project timeline. During the subsequent stages of the project post the phase 1 go live, on a quarterly basis the System Integrator must ensure that a review of the EDW SOLUTION performance is conducted and adherence to the SLA parameters are verified as desired in the document.

The benchmark must be performed for data volumes, no. of users, query mix, concurrency projected as per this RFQ. The expected QphH (Query per hour performance metric) must be at least 1,00,000. The benchmark must be conducted using the data provided by the Bank. In case the benchmark results are below the sizing requirements of the Bank, the SI has to upgrade the EDW SOLUTION infrastructure at his own cost.

- Independent testing agency – It is mandatory for the System Integrator to propose an external testing agency for conducting the functional testing of the EDW SOLUTION. This agency has to be reputed and should have experience of having performed functional testing in one Public Sector Bank in India in areas of core banking functionalities. The Bank will have the discretion to engage this agency during the implementation stages. The bank may also make the payment directly to the agency.

Based on the contents of the RFQ, the testing agency shall be required to arrive at Test Methodology in consultation with the Bank, based on a standard which is suitable for the Bank.

The testing agency will be responsible for the following:

a. Development of suitable testing methodology/testing strategy document
b. Development of test cases
c. Development of test calendars
d. Development of entry and exit criteria for the testing.
e. Development of detailed test scripts.
f. Train the Bank’s team in test script development and testing methodology.
g. Test the application software’s for functionality, operational convenience, security and controls. This will also includes the positive and negative cases for each type.
h. Testing will be done on LAN as well as WAN environment including HO, CO and Branches as desired by Bank.
i. Record the test results against the test cases tested.
j. The testing should also ensure conformity to:
i. Tender Document Floated by the Bank (Functional Specifications) and addenda thereafter, if any
iii. Product Demonstration cases prepared by the Bank.
iv. Gaps pointed out by Solution vendors
v. Interface testing
vi. Existing test standards
k. Point out gaps, errors, bugs during testing
l. Document the gaps, errors and bugs observed during testing
m. Maintain a track of errors, bugs and customization request and their resolution
n. Explain the bugs, errors and gaps to the Bank and application vendors.
o. Re-test the gaps, errors and bugs after rectification
p. Assist in Sign – off on the customization
q. Assist in Sign – off on the user acceptance test.

r. Submit all documents on methodology, strategy, test cases, test documentation, customization requests, solution etc. to the Bank.

s. Conduct unit testing, integration testing of the entire functionality of the solution.

t. Data Migration Assurance through process audit, building logic to verify correctness, completeness & arithmetic accuracy

- **Hardware Utilization**

The Bidder must size the EDW SOLUTION based on the requirements provided in this RFQ for the contract period of 5 years to meet the requirements of the RFQ. Over and above the sizing requirement of the RFQ the Bidder must provide 30% buffer in terms of CPU, memory, I/Os and other components and a 10% buffer for storage. At the time of the Benchmark the selected bidder must be able to demonstrate to the Bank that even after disabling the 30% additional buffer, the EDW SOLUTION meets the requirements of the RFQ. In case the requirements of the RFQ are not met both in production environment and during Solution benchmarking then the selected bidder has to provide additional sizing at no additional cost to the Bank.

The hardware provided should be highly available with adequate redundancy and scalable vertically and/or horizontally and fault tolerant. The hardware should be sized for mixed workload peak query processing as per sizing requirements of RFQ so that the utilization is always within 80% of the available CPUs/processing power. In case the above requirement is not met, additional hardware would have to be provided by the SI at no further cost, within two weeks of crossing the threshold(s).

In addition the sizing of CPUs, Memory, I/Os and other components of the EDW SOLUTION for the 5 year contract period, the Bidders must provide 30% buffer of CPUs, Memory, I/Os, and other components over and above the actual contract terminal year (5th year) sizing requirement of the EDW SOLUTION. The 30% buffer is required for the Bank to meet any scaling, emergency, future or contingency requirements whenever any need arises by making available in the same hardware/appliance additional CPUs/processing power, memory and other components.

**Important notes that need to be adhered:**

1. The SI is completely responsible at arriving at the sizing independently. The Bank is not responsible for any assumption made by the SI with respect to the sizing of the EDW SOLUTION. In the event the sizing quoted by the SI does not meet the performance / service levels of the Bank during the contract the Bidder will at their cost carry out the necessary upgrades / replacements. The Bank will not pay any additional amount during the period of the contract.

2. Any assumption made by the SI on hardware sizing, solution sizing or bandwidth would be the complete responsibility of the Bidder. The bank at a later date will not accept any plea from the Bidder with respect to the assumptions made by them. The Bidder has to share their sizing methodology, calculations, assumptions, details, etc when requested by the Bank during the evaluation and contract period. The Bidder is fully responsible to convince and seek consent to the complete satisfaction of the Bank on their sizing methodology.

3. The Bank at all times will benchmark the performance of the Bidder to the RFQ documents circulated to the Bidders and the expected service levels as mentioned in the RFQ. In the event of
any deviations from the requirements in the RFQ, the SI must make good the same at no extra costs to the Bank within two weeks of detection of the deviation, in order to achieve the desired service levels as well as meeting the requirements of the RFQ.

The bank would like to stagger the deployment of the hardware resources in 2 stages.

Stage 1

1. In Stage 1, the initial hardware deployed should be capable of handling the first three years load and volume as provided in this RFQ.

2. During Stage 1, the SI shall size the hardware at the commencement of project itself, not only for Phase 1, 2, 3 implementation, the hardware provided initially, should be adequate enough to meet the requirements till the end of 3 years and utilization of resources of such hardware provided should always be well within the threshold limit of 80% at any point of time; and there should not be any performance degradation.

3. If any performance degradation is noticed or if resource utilization exceeds 80% at any point of time during the contract period, the SI shall then at his cost provide additional resources as required, to bring the resources utilization well within 80%.

4. The SI shall undertake a benchmarking test to confirm the hardware capacity planning provided in the bid. If the hardware required as per benchmarking results is more than the actual hardware provided by the SI, the SI shall then provide the differential hardware resources at his cost immediately within a month after completion of benchmark test.

Stage 2

1. Subsequently, after completion of 3 years, the SI has to ensure that appropriate hardware and other resources are added based on the projected load and volumes and performance criteria for the next 2 years.

2. The SI has to ensure that the capacity planning and configuration proposed is capable enough of handling load and volume till the end of the contract period of 5 years.

3. The bank will only pay for these incremental resources as and when deployed by the SI as per the payment terms in this RFQ. If the load and volumes don’t increase, the configuration already deployed by the SI should continue till such time the load and volumes are breached.

The Bidder in his response will clearly indicate, phase wise, the requirement of both Hardware and software. The sizing suggested at each phase must be an integral part of the homogenous solution for the entire project to facilitate upgrading from one phase to another. It must meet the requirements of the bank at each phase as well as at the end of the project without any performance degradation. The SI in his response must clearly mention the deliverables at the commencement of each phase of the project.

The SI at all times has to ensure that the sizing done confirms to the service level requirements of the Bank. In the event, these requirements of the Bank are not met at any point during the contract period, the
SI would need to deploy additional resources to meet the performance levels, failing which liquidated damages would be levied as per this RFQ.

The SI also has to perform pro-active monitoring of the solution to ensure that before any breach happens they have sufficient time in procuring and installing the additional components. At no point in time should the bank be made to suffer on account of the SI’s delay to procure the additional resources.

The SI has to provide Storage Area Network (SAN) capacity to meet the RFQ & SLA requirements. All storage should be configured to be fully redundant and fault tolerant.

2.2.12.11 Disaster Recovery Center (DRC)

Disaster Recovery Planning

The solution provided by SI for the EDW SOLUTION must support Disaster Recovery plans as follows:

- Allow fail over as per the DR policy of the Bank
- Provide architecture and design for Disaster Recovery
- SI must detail out any licensing information related to Disaster Recovery design
- Provide Active-Passive Disaster Recovery
- Provide RTO of 2 hours (120 min)
- Provide the DC data to be automatically propagated online through asynchronous replication to disaster recovery/failover sites.
- Size the DR at 70% capacity of the DC (except storage which should be 100% capacity of production)

Disaster recovery plan should be defined as per the existing disaster recovery plan of IDBI Bank. The SI should ensure DR for 70% of primary production site solution (except storage which should be 100%) to cater to EDW SOLUTION applications in case of non availability of primary site. DR shall have capabilities to handle on-line queries, MIS and other reporting requirements including regulatory and statutory reporting. The SI has to propose appropriate architecture so that in case of disaster at primary site/production site, ETL and other tools shall continue to operate and DR site is to be made operational.

The SI must establish the DR for the EDW SOLUTION after completion and acceptance of all three phases (Phase I, Phase II, Phase III) as per the project timelines given in the RFQ.

2.2.13 Training

The SI will be responsible for training the Bank’s employees in the areas of implementation, operations, management, error handling, system administration etc. The Training should at least cover but not limited to the following Areas:

- Functionality available in the solution (BI/OLAP/Data Mining/ CRM, etc)
- Customization development
- Parameterization
- Extract, Transform and Load techniques
- Impact analysis
- Auditing techniques
- Advanced user training
• Advanced trouble shooting techniques
• Deployment of various products / packages as part of the solution
• Techniques of generating various MIS / EIS reports from the solution provided
• Development and deployment of new products using the proposed solution
• Using of all the auditing tools being provided
• Developing new audit reports / tools using the proposed solution
• Advanced training on the operating systems, database systems and network systems to be used by the proposed solution
• Training for report writer facility to create new reports and modify existing reports
• Training on MIS/BI
• System and Application administration at branches
• Log analysis and monitoring
• Incidence analysis and reporting
• DC DR Replication Implementation and Maintenance document
• OS administration guide
• Backup administration guide
• Archival & Purging - Implementation and Maintenance Guide

The Bank will be responsible for identifying the appropriate personnel for all the training requirements.

The SI will impart training to all the necessary users on the EDW SOLUTION as per schedule. The SI must ensure that proficient personnel conduct the training at the respective training Centers identified for the same.

The SI will be responsible to install the required applications / systems, training server at DC and also ensure connectivity to the training server, for the purpose of training at the training Centers. There will be no cost payable by the Bank for the application, database and operating system software installation at such training sites. The training hardware at the data Center should at a minimum support 100 concurrent users.

The SI will be responsible for providing the users with the requisite training material in both hard and soft copies for the core team/implementation training, technical training, end user training and train the trainers. The onus of preparing the training material will be on the SI.

The SI should provide training to personnel identified by Bank on functional and technical of EDW SOLUTION. The SI needs to refer to Annexure 02 – Masked Bill of Materials/Training tab for details.

The SI should also provide the following trainings

2.1.1.1 Core Technical Training
2.1.1.2 End - User Training
2.1.1.3 Top Management/Executive Training
2.1.1.4 Train the Trainers

Training should include training aids such as online tutorials, hard copies and soft copies of the manuals, etc.
2.2.14 Documents requirements from the SI

1. The SI and the bank to jointly maintain a repository of all project artifacts created as part of the project at the Bank’s premises including but not limited to project plan, architecture, design, code samples

2. The SI will be setting up this repository for the entire duration of the contract with the bank having read access to this repository at all times

3. Should there be a termination of contract this entire repository needs to be handed over to the bank by the SI as part of contract termination

4. The security, integrity and data protection of this repository, which is established in the Bank’s premises, is the responsibility of the SI

The SI must deliver, at the minimum, documentation on the following for each solution implementation:

- Business Requirements Document
- Detailed functional and technical scope document
- Solution Architecture
- Detailed Logical Design Document and Data Dictionary
- Strategy for ETL, Metadata, MDM, Data Governance, etc
- Strategy Document for Testing, Training and Acceptance
- Detailed Physical Design Document
- Data Mining
- Logical & Physical Data Model
- Software source code and customization documentation
- Integration Testing Plan
- System Performance Benchmarks
- Metadata Repository
- Test Specifications
- User Acceptance Reports
- Maintenance Document
- Configuration and User Manuals
- Training Plan
- User Training Manuals
- Licenses for all the software components
- DR Document
- Application Documentation: The following minimum documentation (hardcopy and soft copy) for all the proposed software applications/ hardware components must be made available in Bilingual (English and Hindi).
  - General functional description
  - Set up and installation guide
  - User guide including:
    - Screen layouts
    - Report layouts
    - Transaction processing rules
• Operation authorization descriptions
• Error correction procedure descriptions
• System administrator guide including:
  • Database administration guide
  • Data backup guide
  • System security and access guide
  • System audit trail guide
  • Glossary of terms
  • Meta Data Management and Maintenance Documentation
  • Technical manuals

The SI will be expected to deliver to the Bank for each installation site, one (1) physical copy and one (1) electronic copy of documentation for each of the deliverables and online context-sensitive help module included in the software to enable the Bank’s personnel to use and understand the operations of the deliverables. The Bank may make additional copies of the Bank-specific Documentation for their internal use.

2.2.14 Working hour and day definition and reference
Working Day: A working day would be any day any branch / office of the Bank is functioning
Business hours: Business Hours for the purpose of service standards would be 8.00 am to 10.00 pm., on all working days

2.2.15 Facilities Management and AMC / ATS
The SI will be the single point of contact and responsible for AMC, ATS, guarantees & warranties for all components, hardware, software, etc. While bidding for providing facilities management services, the products and solutions proposed by the SI by way of this RFQ should come with warranty as provided by the respective OEMs. Thereafter, the SI should provide AMC/ATS for these products and solutions (a warranty of 3 Years for Hardware and 1 Year for Software). The Bank expects the facilities management function to be carried out from the Bank’s premises.

The bidder must note that the helpdesk services and managed services as a part of facilities management should be available for all environments viz., production, development and test, training. The bidders are required to account for a minimum of 10 concurrent Help Desk Agent Licenses, a minimum of 10 L1 Help Desk Agents and a minimum of 15 L2 Help Desk Agents, starting from the acceptance of Phase 1 of the project, by the bank, for the entire contract period. Also, the Help Desk resources should be part of only the Help Desk team and not shared resources between the Help Desk and Development teams. However, the bidders should right size the number of Help Desk Agent licenses to meet the requirements provided in this RFQ. In case the RFQ requirements are not met, then the selected bidder has to provide additional Help Desk
Agent licenses at no additional cost to the bank. SI must refer to Section M – Payment Terms, for further
details on commencement of these services.

2.2.15.1 General understanding on Warranty, AMC / ATS
Bidders are bound by the following understanding of the Bank with regards to Warranties, AMC and/or ATS
pertaining to Software and Hardware:

1. Hardware Warranty
   a. Warranty starts post installation and commissioning Stage 1 itself
   b. The period of warranty is three years
   c. Consequently the AMC for Hardware procured for stage 1 has to be valid after the end of Stage 1 i.e.
      for 4th and 5th Year.
   d. AMC for Hardware procured for stage 2, i.e. in 4th year, has to be valid in the 5th, 6th & 7th year

2. Warranties pertaining to Software / Applications
   a. Warranty starts post final acceptance of the deliverables
   b. Phase I will be completed within five months from date of contract signing
   c. The period of warranty is one year
   d. During ATS, SI will be responsible for the following:

   • Overall maintenance and working of the EDW SOLUTION.
   • The Bidder should fix the bugs and carry out the necessary rectifications wherever necessary and deliver
     patches/ version changes effected. Provision should be available for version control and restoring the old
     versions in case of need by the Bank.
   • Bug fixing, enhancement, modifications, customization, patches, upgrades due to statutory, regulatory, industry,
     Bank specific changes ( including installation of new upgrades.).
   • Providing tools for creating knowledge repository for the bugs identified, resolution mechanism, version
     upgrade, future upgrade etc. of Application software, OS, RDBMS etc.
   • Providing appropriate antivirus software including prevention of denial of service for DC & DRC. The
     same should be managed with periodical updates.
   • Configuration changes, version up-gradations, performance monitoring, trouble shooting, patch
     installation, running of batch processes, database tuning, replacement / support, technical support for
     ETL process, application and data maintenance, taking backup of the database as required, recovery,
     query generation and management etc. of all software supplied under this RFQ.
   • Undertake immediate bug fix actions in the event of software failure causing an interruption of operation
     of the Data Warehouse systems as per the response / resolution times defined by Bank. During the event
     of any failure (software /hardware /network /etc), the solution should continue to function seamlessly.
   • Notify all the detected software errors and correct them as per the agreed Timelines.
   • Support the Bank in integrating any new applications to the EDW and provide support in extending the
     model and creating analytics / reports from the same.
   • The operational support staff should have onsite support experience for the EDW, BI, ACRM, Data
     Quality, Data Mining and other Application solutions.
   • Provide Bank with daily hardware utilization/performance monitoring reports and alerting Bank in case
     of any performance issues by suggesting future capacity planning by way of suitable solution or
hardware/software up-gradation requirements.

- Provide BCP/DR procedures and conduct DR drills in conjunction with the Bank’s policies/procedures.
- Routing the transactions through the backup system in case the primary system fails. Switching to the DR site in case of system failure.
- Service records must be maintained at the Helpdesk for software support. In addition, calls to the Helpdesk must be tracked including the disposition and subsequent resolution of problem. These records are to be reviewed monthly with the Bank.
- Bidder’s have to note that any Warranty pertaining to Hardware and Software/Applications that extends beyond the contract period due to the Hardware/Software/Applications supply towards the terminal years of the contract must be provided and supported by the Bidder without any additional cost.
- AMC/ATS will be paid by the bank yearly in advance to the SI

### 2.2.15.2 Facilities Management Services Requirements

This section describes, but does not limit, the services required by the Bank. The SI shall consider and envisage all services that will be required in the maintenance of these facilities. The SI agrees that these services and the management of these services will be provided for all the Head offices, Zonal/Regional offices, and branches of the Bank.

#### 2.2.15.2.1 Hardware Management

As a part of FMS the SI shall provide services relating to maintenance and support of computer hardware, servers and other peripherals.

The SI shall provide services, which include requirement analysis, assisting the Bank in hardware and system software platform acquisition, testing, verification, and installation. The SI accepts that these services allow access to business critical software. The SI agrees that services provided include implementation and maintenance of the server, desktop and peripherals as well as installation of the licensed software. The SI shall provide for maintenance of Hardware, including preventive Hardware support, as well as repair and / or replacement activity after a problem has occurred, Warranty service management, including coordination and Vendor management.

The SI shall provide a single-point-of-contact to End Users for the resolution of Hardware related problems or to request an equipment upgrade or consultation. If the Hardware supplied by the SI is to be replaced permanently the SI shall replace the equipment of same Make/Model/configuration or of higher configuration. However, the Bank may accept different make/model/configuration at its discretion if the original make/model/ configurations are not available in the market due to obsolescence or technological up-gradation, stoppage of the production of the same make/model/ configuration by the manufacturer or cessation / winding up of the Company.

SI shall provide Hardware maintenance services including preventive maintenance (e.g., running standard diagnostics, machine cleaning, checking cables and ports), corrective maintenance to remedy a problem, and scheduled maintenance required to maintain the Hardware in accordance with manufacturers’ specifications and warranties. In addition the following would be the responsibilities of the SI as part of this RFQ.
SI shall co-ordinate warranty repair or replacement service for the Hardware and process warranty claims, as applicable. The SI agrees that if the equipments are required to be taken outside the Bank premises the cost of transportation and other related costs will be borne by the SI.

SI shall request the dispatch of the appropriate Vendor maintenance provider for product/Hardware maintained under a third party agreement.

SI shall co-ordinate and schedule maintenance activities with the End User and appropriate support functions of the Bank (e.g. network support, facilities support, etc.).

SI shall provide recovery procedures to maintenance personnel of the Bank.

SI shall maintain accurate documentation on the current location and status of Hardware in the process of being repaired.

SI shall provide maintenance data, as reasonably requested by the Bank, to support replacement / refresh scheduling.

SI shall provide support and assistance, as required, to isolate complex network, operational and software problems related to the EDW SOLUTION.

SI shall update, or provide the information required for the Bank to update the asset management system with the Bank.

SI shall track and report observed Mean Time Between Failures (MTBF) for Hardware.

SI shall backup, remove, protect, and restore programs, data and removable storage media in a machine prior to presenting the machine for service.

The SI shall provide all maintenance services in accordance with the Service Levels given in RFQ document.

The Bank will not be liable to pay any additional amounts in respect of any sort of maintenance required during the tenure of the contract.

The activities that are expected to be provided by the SI have been listed below:

### 2.2.15.2.2 Server Management at DC and DR

**Server Management:**

- Support of the server operating system, system management software and operating system utilities, including minor upgrades (such as a release upgrade)
- Manage the operating system configuration
- Provide server maintenance service
- Manage system ID’s and domain structure and manage OS security
- Define and Manage print queues
- Administer file system directory distribution and replication
- Provide health check and trend reports

### 2.2.15.2.3 Server Operations – Major Incident Management:

- Managing the incident through service restoration
- Validating severity classification of the problem
- Determining the scope of the problem
- Facilitating the Service Recovery Team meeting
- Escalating the issue as required
- Conducting Root Cause Analysis
- Preparing restoration plans
2.2.15.2.4  Server Operations – System Operations:
Monitor hardware and software during in-scope service hours Administer and/or execute Service Management processes and procedures Perform basic problem determination on systems and components managed by SI which include:

- Hardware problems
- System software problems
- Network problems
- Evaluate planned changes to the server environment and advise requirements to support such changes
- Monitor status of system processes
- Monitor and respond to system alerts and events
- Monitor and respond to hardware alerts and events
- Monitor and maintain system error logs
- Performing required batch setup activities (ad hoc requests)
- Monitoring and responding to application alerts
- Monitoring and responding to application file system space issues

2.2.15.2.5  Server Planning:
- Configuration Management
- Performance Management
- Capacity Management

2.2.15.2.6  Storage Infrastructure Installation and Maintenance at DC and DR
- File Management:
  - Manage non-root application file systems
    - Modifying file system sizes
- Storage Environment Management:
  - SAN Switch Management
  - Manage SAN device configurations
  - Configure the disk storage arrays
  - Configure tape libraries

2.2.15.2.7  Backup/Restore:

The solution offered must include a back-up recovery system based on State of the art tape/disk libraries (LTO Gen4 or better) of adequate capacity providing for proper backup and recovery within a time window of 1-2 hrs for incremental back up and 8 hrs for a full back up. The Bidder must propose 200 tapes along with the Backup solution. The Hardware/Software component of this Back-up solution must provide for significant automation in the Back-up/Recovery operation and should require minimum Human intervention.
- Execute backup and recovery procedures
- Retrieve archived tapes and restore required files and data sets
- Performing mock system failure and then data restoration drills on periodic basis

1. The proposed solution must include capabilities to backup all data and metadata across all the sub systems of the proposed solution
2. The proposed solution should provide mechanism for incremental and full backups with zero down time
3. The proposed solution should provide Support for replicating data onto remote sites
4. The proposed solution should provide monthly validation of database backup. Service includes restoration of database from backup media and validation that all database components are present and not defective. An electronic report of the results is to be provided at completion of validation
5. The proposed solution must support mirrored devices
6. The full backup must be taken at the end of the week, whereas incremental backups must be taken every day. At any given point in time at least two full backups and a week of incremental backups must be maintained.

The system shall be configured so that backup is completed with zero downtime. Selected Bidder has to specify how backups can be performed with minimal impact to the performance of the on-line services

A full-scale backup and recovery system needs to be provided. The backup should also include ETL and OLAP Subsystems. It should contain the following capabilities.

- High performance: the backup needs to fit into the allotted timeframe. This may include on-line backups and should not degrade performance significantly.
- Simple Administration: the administration interface should provide tools that easily allow bank to identify objects to back up, create schedules, and maintain backup verification and logs for subsequent restore.
- Automated, lights-out operations: the backup and recovery facility must provide storage management services, automated scheduling, media and device handling, reporting, and notification.

2.2.15.2.8 Data Space Management

- Run disk checks and free up space by appropriately identifying and handling inefficiently utilized disk space
- Monitor disks for fragmented data and periodically run a defragmentation process, as appropriate
- Periodically monitor disk space utilization and take action to improve the same
- Install, configure, test and manage any tools that may be required for data space management, such as those for compressing/stacking data or re-blocking data
- Notify the affected end users before undertaking any data management actions

2.2.15.2.9 OS / Server Management categorized under Incident, Problem and Performance Management Services (Including but Not Limited To):

- Incident Management
- Monitoring service availability
- Monitoring resource usage i.e., CPU, memory, disk space usage
- Troubleshooting system alerts with knowledge base
- Antivirus definition update
- Patch Implementation
- Network reach ability
- Adherence to backup schedule
- Troubleshooting backup failures
- Account administration
- Service pack & patch updates
- OS Hardening
- Problem Management
- Closure of new incidents
- Liaise with Vendors for escalation
- Updating knowledge base
- Preparing root cause analysis
- Preparation of Preventive Maintenance calendar
- Configuring backup jobs
- Log analysis and monitoring
- Log file rotation
- Testing of patches and service packs
- Preparation of checklist
- Testing backup tapes for data reliability
- Restoration Drill
- Performance Management
- Monthly / Fortnightly call analysis
- Device rights control
- Preparation of capacity report
- Audit of log file archives
- Audit of administrator accounts
- Performance Tuning
- Defining Backup Policy
- System Administration

The SI is expected to provide for system administration services. Examples of these services are:

a. **Client account maintenance** - Creating users, groups, creating user accounts, disabling user accounts, modifying user accounts, etc. on the system;

b. **File / system / application access management** - Maintaining file and directory permissions on OS and application access management like creating user accounts at application level, assigning application access, setting application passwords, user lockout, etc.;

c. **Security monitoring and investigation** - Monitor physical security, Assess risks on a particular system [OS environment and user needs, Monitor network security, Monitor denial of service attacks, Bad bugs programmed threats, track logins, logouts, command runs, perform security audits, etc.;
d. **Performance optimization and reporting** – Process and Memory Management, Monitoring CPU performance, Monitoring Memory performance, Monitoring Input / Output performance, Monitoring Ethernet Traffic, etc.; Error detection and correction; Troubleshooting and client support

e. **Backup File Retention** – Creating backup schedule, performing backups and restoring files, Storing backups and managing media life expectancy for storage media, etc. Backups need to be taken by the SI for the entire period of FM. For this purpose the SI needs to factor the necessary backup tapes meeting industry-leading practices.

The SI has to carry out the DC/DRC failure testing Half Yearly along with the Bank where the operations will be carried out from DRC site.

### 2.2.15.3 IT Service Desk and Managed Services

The SI is expected to procure, implement, commission, and maintain an IT Service desk along with the necessary issue logging tool. The Bank will provide the necessary seating space, furnishing, desktops, and electrical connections for the same along with PSTN telephones with STD facility etc. The Bidder should provision and quote for all other equipments in order to make the IT Service desk operational. The IT Service Desk should act as a single point of contact for all users of the EDW SOLUTION whether for service requests, incidents or problems. It should encompass Helpdesk, Asset Management and Vendor Management. In addition, it should offer a focused approach for delivering integrated Service Management. It should provide an interface for other functions in IT Services Continuity Management like maintenance contracts, software licenses, Service Level Management, Availability Management, and Financial Management.

The SI shall provide efficient and prompt solutions to operational problems of end users concerning the application systems and IT infrastructure. SI shall implement effective helpdesk management procedures to leverage the knowledge gained in providing faster and better solutions, create knowledge bases and prevent recurrence of problems.

Bank shall at its own discretion and at random times will audit the production, development and test systems of the SI including desktops, laptops for data security.

<table>
<thead>
<tr>
<th>Area</th>
<th>Coverage</th>
<th>Minimum shifts expected (8 hours each)</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>L1, L2 and L3 IT service</td>
<td>Monday to Saturday between</td>
<td>2 shifts</td>
<td>Bidder is required to indicate the total number of resources, and other</td>
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<td>desk</td>
<td>business hours of 8 am to 10</td>
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<td>details in Annexure 02 – Masked Bill of Materials under FM manpower tab</td>
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<td>for L1 and L2 support only.</td>
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<td>Managed Services</td>
<td>24*7</td>
<td>3 shifts</td>
<td>Bidder is required to indicate the total number of resources, and other</td>
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<td>covering all areas</td>
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<td></td>
<td>details in Annexure 02 – Masked Bill of Materials under FM manpower tab</td>
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<td>mentioned in RFQ</td>
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<tr>
<td>Functional Support (Subject Matter Experts)</td>
<td>a. During Phase 1, 2 and 3</td>
<td>As required to meet stage 1 implementation timelines</td>
<td>Bidder is required to indicate the total effort and other details in Annexure 02 – Masked Bill of Materials under Implementation cost tab</td>
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<td>For activities covering</td>
<td>f. Post Phase 1, 2 and 3 until end of contract period</td>
<td>1 shift</td>
<td>Post the Phase 1, 2 and 3, the Bidder would need to retain key Project resources to meet RFQ requirements who would continue to support the Bank until end of contract period</td>
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<td>- Requirements study</td>
<td>Monday to Saturday between business hours of 10 am to 6 pm</td>
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<td>Bidder is required to indicate the total number of resources, and other details in Annexure 02 – Masked Bill of Materials under FM manpower tab</td>
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<td>- Development support</td>
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<td>- Production Release</td>
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<td>- Change request support</td>
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<td>- Etc</td>
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**Service Desk and Managed Services Topology**

Level 1 Service desk would need to be setup at the Bank’s Project Office

Level 2 Service desk would need to be setup at the Bank’s Project Office

Level 3 Service desk support should be available from the respective product/OEM as per the agreement between Bank and SI, and the back to back agreements between SI and their partners.

The SI’s Service desk support must integrate with the Bank’s internal support staff, external service providers and/or other agencies as appropriate. For all the Banks IT services, the SI shall provide the following integrated service support and help. At a minimum these services shall include:

- Establish a helpdesk as a Single Point of Contact for all services;
- The helpdesk should be available 24 hours a day, 365 days a year with response consistent with the service level to be agreed upon at the time of contract finalization;
- Providing telephonic and/or electronic mechanisms for problem reporting requests for service, and status updates; each seat should have an out-bound dialing facility
- Routing of non-SI supported actions to the appropriate service provider within 15 minutes after acknowledgement receipt of the trouble ticket of Bank-supported applications
- Tracking of problems from initial call to restore to service. This includes problems redirected to non-SI service providers;
- Notifying users of problem status and resolution;
- Monitoring systems to proactively determine, diagnose, and resolve problems. This includes notifying customers and all service providers of known problems and alerts;
- Provide reports that effectively summarize and communicate the performance and compliance with service levels defined in the Bank’s service level agreement (SLA) with the SI. The Bank will have the ability to directly generate standard and ad hoc reports as needed;
• Provide training for all productivity tools;

It is important for the SI to note that the resources proposed for the various levels of IT helpdesk should have adequate past experience in the relevant areas of support. The Bank will not accept any resources who do not have the necessary skill set or meet the requisite competency levels.

**The role based responsibilities of the IT Service Desk should include at a minimum:**

**Level One (L1) Support**

Serve as the IT Service desk front-end for all users and provide services request sorting, information and non-functional information, ticket routing.

L1 would typically address queries and all end user issues pertaining to:

- Business application related issues/queries,
- Enterprise applications (In-Scope), Operating System (Windows, Linux & Unix), Printing, Generic IT Queries
- Queries related to business process, reports generation, presentation layer applications, etc
- Other environmental software related to the EDW SOLUTION

The SI must provide for localized L1 helpdesk at the Bank premises. The SI must refer to Annexure 02 – Masked Bill of Materials for the details and levels of resources. The Bank reserves the right to increase or decrease the number of seats at L1 helpdesk depending on its requirements. The Bank also reserves the right to change the locations of helpdesks at its discretion. The SI should also note that the setup at the L1 helpdesk must provide for 1 supervisor and/or 1 support personnel from the Bank. The Bank expects the SI to provide for L1 support for all activities and services that are part of scope.

The key activities that the SI is expected to perform as part of Level 1 Helpdesk Support is:

**User Management**

- Creation or modification of user profiles
- Assessment in case of specific rights assignment
- Provision for assigning user rights only for certain fixed period
- Periodic user right monitoring (at known frequency) must be specified and implemented
- Categorization of requests into functional clarification, bug or change request.
- Functional clarification / work around to be provided by Level 1 support itself.
- Bug change requests to be logged and reported for further processing
- Provide telephonic and / or electronic mechanisms for problem reporting requests as well as for service and status updates.

**Level Two (L2) Support**

The Bank expects the SI to provide L2 support for all activities and services that are part of the scope.
The L2 support provided by the SI should be comprehensive and cover entire management and support of all the solutions provided by the SI (EDW SOLUTION and all third party solutions). The services specified herein are not exhaustive and only indicative.

- Provide continuous onsite support for the all applications being implemented and being procured through the SI
- Troubleshoot online processing or batch processing activity at various levels in the EDW SOLUTION
- Troubleshoot any query processing activity at various levels in the EDW SOLUTION
- Resolve the call within stipulated timeframe as defined in Service Level Agreement
- Coordinate with the L3 teams for resolution and provide necessary information as may be required by the team to resolve the issues
- Escalate the unresolved calls as per escalation matrix
- Automatically log in calls during escalation
- Provide the timeframe for providing a solution of resolution of the escalated calls

Prepare a root cause analysis document with the resolutions provided for major issues such as:

- Production issues
- Problems which have resulted in complete service disruptions or downtime
- Delayed response times
- Data / table corruptions
- System Performance issues (high utilization levels)
- To decide on preventive maintenance schedule with the Bank.
- Liaise with the L1 support personnel for the call information and resolution.
- All other activities as would be required by the SI to manage and maintain the solutions.
- Application database and presentation layer support
- Support and maintain all interfaces to the EDW and other solutions part of this scope document
- Modifications to existing scripts, reports
- Present to Bank management on the critical issues reported, resolved, solution provided and the suggested recommendations or leading practices as and when asked by the Bank or on a monthly basis whichever is earlier.
- Perform performance tuning of the applications mentioned in the Scope of Work of this document including database tuning. The Bank expects the SI to provide advice and points to be considered to the SI for performing any hardware/OS tuning required as part of the performance tuning.
- Perform the application audit on a half yearly basis.
- Rectify any corruption in the software.
- Ensure patch releases are ported to the production environment with no business disruption or business losses.
- Support quarterly BCP/DR drills.
- Provide application support from the Bank’s data centre as mentioned above for the Data centre and disaster recovery site.
- Routing the transactions through the backup system in case the primary system fails
- Providing BANK with daily hardware utilization reports and alerting BANK in case of any performance issues or hardware up-gradation requirements
- Support for integrating any applications that need to be interfaced with the EDW SOLUTION in the future
Level 2 service desk agents would need to be deployed by the SI at DC/DRC premise from where the Level 2 support is planned to be provided. The SI is expected to act upon the tickets routed from Level 1. The SI has to ensure that proficient and professional personnel are put to handle the L2 support and resolutions are provided on a proactive basis.

L2 agents are expected to address issues/queries related to the business applications (viz. EDW SOLUTION and all third party applications). L2 agents will need to assess the cause of the issue and accordingly resolve the same within the timelines mentioned in the SLA. The agents would also need to track problems from initial call to restore to service.

The minimum operational support staff for L2 should have onsite support experience for the following. The following table should serve as guidance as to the minimum expectation from the Bank. If the Bidder has an opinion that is contrary, it should be explained.

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Area for helpdesk support</th>
<th>No. of shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business Intelligence Tool</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>ETL plus CDC tool</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Data Quality plus MDM tool</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Data Mining</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Metadata Management Application</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Performance Management Application</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Corporate Function</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Customer Analytics tool</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Customer Relationship Management</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Applications for providing dashboards, scorecards through Smartphone’s, tablets, etc</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Archival Solution</td>
<td>1</td>
</tr>
</tbody>
</table>

The L2 helpdesk resources proposed should have adequate and relevant experience in the areas mentioned. The Bank has a right to review and reject resources whose competency levels are below expectations.

The scope for the on-site engineers will include:

- Configuration changes, version up-gradations (EDW and source and target applications), performance monitoring, trouble shooting, patch installation, running of batch processes, database tuning, and liaison with OEM for various support issues, taking periodic backup of the database, query generation, etc.

**Level Three (L3) Support**

Level 3: Critical code level changes or hardware failure related issues. This support is required for all components that are expected to be provided by the SI as part of this RFQ.
The SI has to provide the resolution / service as per the defined service levels in this RFQ. The SI has to make sure that the methodology proposed for addressing and resolving problems is aligned to the required and defined service levels.

The SI should staff the service desk with persons who are conversant with the solutions deployed and are capable of resolving routine problems and queries through the service desk application or over the phone. The staffing needs of the service desk will be decided by bank based on calls/ticket volumes and patterns.

Brief description of the envisaged activities to be performed by SI at L3 is enumerated as under. The services specified herein are not exhaustive and are only indicative.

- Resolve the call within the stipulated timeframe as defined under the service level agreements
- Communicate the status of the call to the Bank and accordingly update the status, resolution or workaround and date of resolution
- Prepare a root cause analysis document for issues referred to L3 support and provide to the Bank along with the resolution
- Liaise with the L2 support personnel for the call information and resolution.
- Provide version upgrades
- All other activities as would be required by the SI to manage and maintain the solutions.
- Perform Version Migration - The services specified herein are not exhaustive and only indicative.
  - Perform version migration as per the version release plan of OEM and agreed by the Bank.
  - Provide training to the Bank’s core functional and technical team members on the new version functionalities and technical aspects as and when version upgrades and migrations are performed.
  - For any version migration to be performed, the Bank and the SI will mutually draw up an implementation plan and schedule for the same.

Following is a minimum list of activities that the Bank expects as part of the overall Service Desk requirements as part of L1, L2 and L3.

- Call Logging
- Receive incidents, service requests, queries, change requests from End Users and IT through one of the agreed modes for communication
- Log Tickets in the Service Desk Tool on behalf of users calling service desk over phone
- Log Tickets with the correct category, severity, problem description, user information
- Call Routing
- Route the calls to the appropriate support team
- Route calls to the respective parties in case of issues pertaining to third party vendors
- Route Service Requests to the appropriate teams
- Escalate issues / tickets which are going beyond the service levels
- Escalate issues pertaining to Vendors non-performance or delays
- Escalate issues pertaining to users non-availability or non-cooperation
- Escalate customer complaints to the appropriate management staff for further action
- Track all the issues and send status updates on the progress
- Customer Notification
- Notify the users on the ticket with information on who is working on the ticket and the status of the ticket
- Notify the users on any outage in the Datacenters which may cause unavailability of a service for the end users
- Reporting & Documentation
- Provide periodic updates on the status of the tickets to the end users
- Prepare MIS for the Tickets
- Extract agreed and ad-hoc reports from the Service Desk tool and send it to the concerned groups / upload in the reporting portal
- Maintain up-to-date information on the customer contacts, Vendor contacts, management contacts, SLA matrix, Severity and categorization matrix
- Workspace Management
- Ensure the workspace is clean and has all the relevant information (contact details, escalation matrix, etc.) are easily retrievable

**Software support**

The SI shall provide complete technical support for software problems (all licensed software provided by the SI as a part of this tender or maintained by the SI as a part of this tender) and or questions, defect and non-defect related to Bank office automation products, systems and licensed applications.

The SI shall provide licensed software support including but not limited to problem tracking, problem source identification, problem impact (severity) determination, bypass & recovery support, problem resolution, management reporting & trend analysis and interfacing with other suppliers (as required) on behalf of the Bank.

SI shall provide a single-point-of-contact (via Helpdesk, E-mail address, web interface to log a service request) for Software support and respond to the initial request from the Bank within agreed service levels.

SI shall log any reported incident, identify it as defect or non-defect related and track it till resolution. For all incidents, the SI will ask the Bank to assign a severity rank.

For a defect related problem, depending on the Software, SI shall either:

- Issue defect correction information, a restriction, or a bypass (provided the problem can be reproduced in that Software's specified operating environment), OR
- During resolution of a reported problem, SI shall provide the Bank with periodic status updates and also provide the Bank with a (monthly/weekly) report detailing the disposition of each reported problem and other contents as desired by the Bank

The SI shall provide reasonable effort using available resources to assist the End Users at the Bank with Non-Standard Software support for problem determination and resolution. In the event of any dispute and/or the commencement of arbitration proceedings the SI shall continue all facilities management services.

**Application Management**

The SI should be able to provide Application Management services to manage the EDW SOLUTION software applications of the Bank as supplied by the SI. The SI should be able to synchronize Application Management with IT infrastructure management. Deliverables for Application support should include:
24*7 Performance Monitoring & Management of application.

- Installation & configuration of application
- High availability installation & configuration
- Application Patch management and version control.
- DR setup creation and DR management (DR synchronization, DR drill...etc)
- Capacity Management.
- Deployment of objects in Application server.
- Up-gradation & migration
- Trouble shooting Application server product related issues
- Troubleshooting Patch Management.
- Start, stop, and manage Application Server services.
- Configure and manage Application Web server.
- Configure and manage HTTP
- Configure and use monitoring tools provided for Application Server.
- Un-installation
- Performance management.
- Vendor management (Logging a call with product Vendor)
- Version migration, testing and implementation
- File Level Backup for Application Server
- Backup & restoration management of application server.
- Portal/content management.
- User management
- Support to known errors and problems
- Monitor web / Application server availability
- Perform quarterly DC – DR drills
- Monitor alert notifications, checking for impending problems, triggering appropriate actions.

SI is expected to provide relevant reports for the previous month in the 1st week of every month and same needs to be jointly reviewed by SI and Bank in next 3 working days. The reports should be benchmarked against the Service Levels defined in RFQ Document and Liquidated Damages should be calculated based on the level of deviation from Service levels defined. The SI is required to submit the list of reports to track performance on service levels for all managed services under scope of this tender.

**Patch Management**

- Rollout planning.
- Obtain Sign-off for Patch release implementation.
- Communication, preparation and training to the team for Patch implementation.
- Storage of controlled software in both centralized and distributed systems.
- Patch Release, distribution and installation
- Compliance & Adherence to Security Control Points as communicated by Bank.

**Operations Management**

**Assets Purchase**
The Bank will issue the purchase order on the SI. The SI in turn shall liaise with the OEMs to procure the material which includes software and hardware licenses. This arrangement does not absolve the SI of any responsibilities in terms of quality of goods delivered, timeliness of delivery or any other terms mentioned elsewhere in this RFQ. The licenses for all assets being procured by the bank will be in the name of Bank.
**Asset Reporting**
The SI shall provide periodic reports to support asset tracking, analysis, and strategic planning. The SI shall allow authorized Bank personnel to have electronic access and query capability to the asset databases on an ongoing basis; and

Asset tracking and inventory data must be provided to the Bank, mandatorily, in a Standard (ASCII, word, excel, etc.) format.

**Monitoring and tuning**
Server performance metrics shall include processor utilization, hard drive space utilization, and other critical operating system needs such as buffer space or swap space.

The SI shall implement proactive procedures to address trends identified from performance and monitoring data. The management system will produce standard reports that are to be provided to designate Bank contacts.

**Security**
This section is subject to Bank’s IT and Security Policy. This is to be reviewed at the time of implementation in line with latest available guidelines/policy.

- Access control to front end, back end and ETL need to be clearly defined and as per the existing policy
- Backup & Recovery plan to be well defined for all the data residing on the hardware
- Download of report/data to be provided in PDF format so that data cannot be tampered. Access to report in excel format can be provided to few selected power users and super users who need to further analyze these reports in excel SI to make available reports/data in all available format as per Banks requirements.
- Data Integrity checks need to be implemented at various stages of EDW and to be ensured that data presented in the report is same as the one in source system
- Metadata management solution to be implemented so that data can be tracked end to end
- Software development life cycle to be maintained for development of EDW
- SDLC phase need to be defined for EDW and required documentation for each of the phase needs to be maintained
- Version Control of software as well as the documentation needs to be maintained
- User Account Policy for EDW needs to be defined as per Bank information security policy
- User password policy for EDW needs to be defined as per Bank information security policy
- Audit parameters need to be acquired from Bank information security department and need to be maintained within EDW
- EDW implementation should be clearly segregated in Development, Test and Training environment along with Production. While production will have all the data and be fully secured, explicit guidelines for type (Real transaction data or randomly generated data) and history of data to be maintained needs to be defined as per the need basis for Development, Test and Training environment
- Disaster recovery plan should be defined as per the existing disaster recovery plan for IDBI Bank. The SI should give active-passive DR site solution to cater to data repository applications. The isolated and integrated DR needs must be complied.
- Software licenses security policy to be maintained as per the Bank information security policy
- Network security policy to be maintained as per bank network security policy
The solution should support passwords activation/deactivation, encryption, forced change after specific period of inactivity, storage of past passwords and advising users not to use them, expiry date parameterized.

The SI shall ensure that the entire solution including IT infrastructure of the Bank to be provided as part of this RFQ shall comply with the Security Policy of the Bank as approved by the competent authority, which shall be in conformity with the requirements of BS 7799, ISO 17799, ISO 27001, COBIT standards, ITIL, Information Technology Act, 2000, Reserve Bank of India and IDBI Bank guidelines.

The SI shall implement the Information Systems Security Policies (‘ISSP”) that address the security policies of the Bank as they exist at the time of Agreement initiation and adopt any updated, revised or expanded policies that the Bank implements during the life of the Agreement.

Bank needs to control the data accessibility and commands that can be executed by a user, according to their status and privileges. All access needs to be provided via personal identification and authentication. The system rights will be defined as per the role hierarchy within Bank for all types of users. The business users may need to be provided function/role/dept. based access to EDW SOLUTION. All users will need to register to be able to use the EDW SOLUTION. Access to the system must be through secured passwords. Logging of users accessing the system and monitoring of online activity needs to be provided as part of the solution. The Bank would like to maintain audit trails for addition, deletion and correction made by the user using the Metadata Repository. In addition the Bank would also like to allow for user permissions to be set by work area (or folder).

The activities that the SI shall address include but are not limited to:

- User Id Creation / deletion
- Password setting / resetting
- Creation of limited access shared space on servers
- Secured installation of assets, secured backup tape storage
- Destruction of data on failed hardware components (for example, data on a server hard drive that fails) and
- Confidential data protection methodologies.
- Modification of access rights

The SI shall secure network resources against unauthorized access from internal or external sources.

The SI shall assist the Bank in planning for security and related authorization, registration, and audit capabilities. This includes authentication capability (access rights and passwords), virus detection and eradication, logon administration and synchronization across servers and applications, and support for required security classifications.

The SI shall review the security policies, procedures and guidelines of the Bank for effectiveness and recommend improvements; identify the protection requirements for operating system and application resources.

SI shall implement an access control program, which will satisfy the security standards and practices of the Bank as defined in the Procedures Manual

SI shall provide access to system resources to the authorized End Users at the Bank

SI shall establish, change, deactivate, and remove logon IDs and associated access authorizations.
SI shall establish a process, with concurrence from the Bank, to reset user passwords

SI shall reset logon ID passwords and disclose passwords to authorized personnel

SI shall use the system access granted by the Bank only to the extent necessary to perform the Services

SI shall periodically review access authorizations and remove those for which approval no longer exists

SI shall manage system access to the Server platform

SI shall synchronize security information across multiple servers to provide consistent security control

SI shall maintain security controls for dial-in services and add users to the services as requested by the Bank

SI shall restrict physical access to Servers and infrastructure devices and other secured areas to authorized personnel only

SI shall implement controls which protect printed output and portable storage media (for example, tapes and disk packs) from unauthorized access

SI shall notify the Bank of any security violations requiring action from the Bank.

**Anti Virus**

SI shall provide and maintain virus avoidance, detection and elimination software for Servers. SI shall conduct periodic virus scans for Servers to monitor for virus propagation and perform virus detection and eradication. The SI shall propose the necessary application and hardware for maintaining the antivirus solution. The antivirus solution should have provision for testing the updates before they are applied on any environment.

**Security incident reporting**

The SI shall promptly report to the Bank any significant computer or network security incidents occurring on any systems. If an incident is confirmed, the SI shall provide all necessary assistance and access to the affected systems so that a detailed investigation can be conducted and solutions applied are documented. A weekly report to be furnished by SI regarding any incident occurred during the week.

Further, the SI shall track the number of security incident occurrences resulting in a user's loss of data integrity, denial of service, loss of confidentiality or that renders the user(s) unproductive for a period of time.

Security logs and audit information shall be handled according to the Bank information systems security policies and procedures. Serious incidents or incidents that could possibly involve law enforcement will also be reported.

For less significant incidents, the SI shall identify, track, and report the number of incident occurrences on the SI supported system.

Incidents to be logged include, but are not limited to, scan, probe, isolated viruses, and unsuccessful penetration.
SI performance metrics and management

SI performance will be monitored and recorded as necessary over the duration of the contract with respect to satisfactory fulfillment of all contractual obligations. Performance assessments comprise of:

- Delivery of services;
- Condition of delivered equipment;
- Compliance with service levels;
- Availability of services within established timelines; and
- Customer satisfaction ratings, and adequate servicing of the arrangement and all aspects which the arrangement has stipulated, and prompt, complete and satisfactory resolution of any contractual discrepancies other than those resulting from Acts of God.

The SI is to assemble and create regular reports on the performance of services using automated tools, in order to assist in the effective management of the Service Agreement and enable continuous improvement of the in-scope services that the Bank receives. Reports must be compiled and distributed to the Bank’s management in an agreed upon electronic format. Tools for measuring performance of SLA have to be provided by the SI.

Reports must be compiled and published on all functions, including performance.

Reports must include the measurement of the SI’s actual performance against the required service levels.

The SI is to implement a management structure to facilitate communications between the SI and the Bank and address and resolve concerns escalated either by the SI or the Bank.

Routine meetings and reporting processes must be defined to ensure a smooth interface and timely resolution of issues.

The Bank’s managerial and technical professionals will administer the Bank’s relationship with the SI and exercise the Bank’s retained authorities. The Bank will define interfaces as appropriate, such that Bank single points of contact are defined for each service obtained from the SI. The Bank requires a single interface to coordinate the delivery of all services from the SI.

The Bank will not resolve issues or disputes between SI's personnel and any sub-contractors retained by the SI.

For operational services such as problem resolution, help desk inquiries, and the like, there must be routine and continuous interaction between the SI's employees and the Bank's end-user community. The SI's employees are extensions of the Bank's IT organization and will be a significant interface between such organization and the Bank's end-user community. This operational interface will determine the satisfaction of the Bank's employees with the services delivered by the SI.

The SI is expected to continuously measure and improve its service delivery and the Bank's employee satisfaction with those services.

Warranty

The products & services offered must include comprehensive on-site warranty as provided by the OEM from the date of installation and acceptance of the solution by the Bank including all software, hardware,
parts, media, patches, updates and licenses. The Warranty will commence from the date of acceptance. No parts, accessories of the systems like print heads etc. should be excluded from such warranty; and

SI shall be fully responsible for the manufacturer's warranty in respect of proper design, quality and workmanship of all hardware, equipment, accessories etc. covered by the tender. SI must warrant all hardware, equipment, accessories, spare parts etc. against any manufacturing defects during the warranty period.

During the warranty period SI shall maintain the systems and repair / replace at the installed site, at no charge to the Bank, all defective components that are brought to the SI's notice.

Warranty should not become void, if Bank buys, any other supplemental hardware from a third party and installs it within these machines under intimation to the Vendor. However, the warranty will not apply to such supplemental hardware items installed.

In the event of system breakdown or failures at any stage, protection available shall be specified. This would include the following:

- Diagnostic for identification
- Protection of data entered
- Recovery / restart facilities
- Backup facilities

The SI shall carry out Preventive Maintenance (PM), including cleaning of interior and exterior, of all hardware and testing for virus, if any, once in a calendar quarter and should maintain proper records at each site for such PM. Failure to carry out such PM will be a breach of warranty and the warranty period will be extended by the period of delay in PM.

For implementing different versions of Application Software, if adjustments / change in the configuration are to be made in base memory, the same should be carried out by the Vendor as a part of warranty.

If the Operating System or additional copies of Operating System are required to be installed/reinstalled/de-installed, the same should be done at no additional cost during the period of contract. The SI shall provide or develop with the assistance of Bank:

- Technical Standards;
- Security Requirements;
- Operating Procedures;
- Recovery Procedures;
- Design update and upgrade a logical network configuration which addresses (for example) the number of routers and any other information required to complete site preparation activities;
- Provide and upgrade the network, server and PC environment that will meet the Service Levels specified; and
- Perform an inventory of warranties and licenses in place as of the Start Date.

The SI shall ensure that the warranty complies with the agreed Technical Standards, Security Requirements, Operating Procedures and Recovery Procedures.
The SI shall develop and maintain an inventory database to include the registered hardware warranties and software licenses existing as of the Start Date and the warranties and licenses for hardware and software including license renewal dates:

- Procured through the SI, or
- Procured by the Bank with notification to the SI for inclusion in such database

The SI shall perform warranty and license registration, if any, with the appropriate manufacturer, for hardware and software:

- Procured through the SI, or
- Procured by the Bank with notification to the SI for inclusion in such database

SI shall monitor warranties to check adherence to preventive and repair maintenance terms and conditions.

SI shall provide the Bank with access to asset control information.

SI shall provide to the Bank, as reasonably requested, reports that aid the Bank in performing asset management and financial management functions of the Bank as these relate to hardware leases and warranties and software licenses.

SI shall maintain data regarding entitlement for software upgrades, enhancements, refreshes, replacements and maintenance; and

SI shall provide technical information as reasonably requested by the Bank for preparation and implementation of budgets and cost benefit analysis.

As far as possible, the equipment should be repaired at site. Where the equipment is taken for repairs outside the Bank, a substitute should be provided and data, if any, should be transferred to the substitute machine besides creating back-up in one of the system’s at the Bank’s office and the data in the machine should be got deleted and hard disk should be degaussed. The cost for transportation of equipment will be borne by the SI in case it is taken off-site for repair.

Updates & Upgrades

Given that the data warehouse solution will consist of a number of software components, it is expected that over the project duration of the solution, improvements, additions and enhancements to functionality will occur. An update is a bug fix or patch for the software. An upgrade is a major change or software release. An upgrade can also be an increase in system capacity based on an increased amount of data, activity, or storage.

Mean time between failures (MTBF)

If during warranty period, any equipment has a hardware failure on four or more occasions in a period of less than three months or six times in a period of less than twelve months, it shall be replaced by equivalent or higher-level new equipment by the SI at no cost to the Bank. However, if the new equipment supplied is priced lower than the price at which the original item was supplied, the differential cost should be refunded to the Bank.

For any delay in making available the replacement and repaired equipments for inspection, delivery of equipments or for commissioning of the systems or for acceptance tests / checks on per site basis, Bank reserves the right to charge a penalty.

Asset Moves (Relocations)

The SI shall perform Asset Moves for all equipment supplied by it as a part of this RFQ.
The SI shall place emphasis on minimal disruption to the business of the Bank during asset movement scheduling. The SI shall schedule branch/department/office moves and Move Add and Change (‘MAC’) activity on Servers to other than normal business hours to minimize the impact on business operations of the Bank.

The SI shall provide a single-point-of-contact for all MAC requests;

The SI shall

- Implement a process to provide for authorized approval of all MAC requests prior to submission by the End User
- Ensure that all MAC requirements are clearly defined in each authorized request
- Coordinate any ‘Third Party Vendor’ activity required to affect a MAC;
- Be responsible for the completion of site preparation requirements, prior to the scheduled MAC date;
- Establish and communicate to the Bank the escalation procedures for situations where site preparation requirements have not been completed within the defined time frames or in accordance with specifications
- Provide required host, server, and network connectivity;
- Provide the necessary addressing standards and allocations
- Provide a designated staging area for displaced hardware and software
- Define the procedures for disposal of displaced hardware and software
- Be responsible for all regulatory requirements associated with the disposal of displaced hardware and software
- Log and track all MAC activity from receipt of request through completion;
- Schedule and coordinate MAC and Refresh activity with End Users and the appropriate business organizations at the Bank (e.g., network operations, facility services, LAN administration, etc.);
- Implement a mutually agreed to process to be specified in the Procedures Manual for managing MAC activity;
- Perform all MAC activity according to the specified Service Levels;
- Backup data on End User Machines prior to relocation, if required
- Reload all software and data from an existing End User Machine to the new End User Machine and purge existing data from the de-installed machine, if required
- Following a MAC or Refresh, perform the appropriate configuration and testing (Power On Self-Test)
- Run additional diagnostics if, during an Add, the Power On Self-Test fails to execute;
- Test network connectivity to a defined logon screen, if required;
- Provide basic orientation (approximately 15 minutes) to the End User, if required;
- Obtain End User sign-off that the MAC activity has been performed in accordance with the requirements specified in the MAC request;
- Move all displaced hardware and software and excess packing materials to designated staging area at the Bank;
- Update the information necessary in the asset management system following any MAC activity. The updation will be manual for non-network connected assets; and
- Provide a monthly report summarizing the MAC activity for the previous month.

Asset tracking

The SI must use an asset management system to identify, track, and report all IT assets of the Bank, including hardware, software, licenses and data communication component.

- The SI shall act as the focal point for obtaining equipment details and for receiving and providing asset management data.
- The SI shall provide for performing asset tracking, and the services include performing an initial inventory of Hardware and Software to validate or establish the data base and defining the process...
for tracking Hardware and Software throughout the life cycle from procurement through disposal, including any changes performed during the useful life of the asset

- SI shall perform an initial inventory of Hardware and Software to validate or establish a baseline asset inventory, affix an inventory tag and input the required information into the asset tracking database, for example, configuration (hardware, software, and network connectivity), status, location, and ownership
- SI shall develop and maintain an asset/inventory-tracking database
- SI shall establish a process, as required, to gather data regarding newly acquired assets or any changes to existing assets and
- SI shall perform a periodic physical inventory and audits in accordance with the guidelines specified in the Procedures Manual and provide reasonable assistance in resolving any discrepancies.
- SI shall provide for all costs, including travel, incurred by the SI in providing the FM function. The Bank will not be liable to pay any cost, expenses, charges, etc. under any circumstances.

2.3 Leveraging/Utilization of existing Bank applications

The Bank intends to leverage the existing investments in IT. The following requirements are to be met while the SI proposes his response.

2.3.1 Bank has its own Risk Management Solution i.e. IRMA from which risk scores and other relevant data would be brought into EDW for relevant analysis.

2.3.2 Other application details are furnished in section F, sub-section 5.

2.4 End of Sale

The bank expects the SI to propose components/products/tools/technologies that are effective and not declared as end of sale within the contract period.

1. No single component quoted as part of this solution should be declared as End of Sale. The System Integrator has to get an undertaking from the OEM confirming this for each component quoted as part of the solution.

2. Should any components be announced End of Sale during the contract period the SI will have to replace the same with an equivalent or higher specification product.

3. The SI has to ensure that the support for products proposed should be in effect for the entire contractual period and minimum of 2 years after contract period.
I. PROJECT TIMELINE

- Implementation timeline (Summary)

<table>
<thead>
<tr>
<th>Phase &amp; Stage</th>
<th>Activity</th>
<th>Individual Activity Duration</th>
<th>Total Duration from date of acceptance of PO</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAGE 1</td>
<td>Delivery of Hardware and components for DC</td>
<td>1 month</td>
<td>1 month</td>
</tr>
<tr>
<td>Phase I – DC Hardware setup</td>
<td>Completion of Installation of Hardware and other components in DC including Development, Testing &amp; Training environments Note: Bank and its representatives would be conducting an inspection and acceptance testing of the Hardware delivered and installed.</td>
<td>3 weeks</td>
<td>2 month</td>
</tr>
</tbody>
</table>

Implementation timeline (Detailed)

The implementation of this project is planned to be in the following phases. The duration indicated is the time period required for the completion of the indicated activity.
Phase I – Pilot

Design, Mapping, implementation of PDM, ETL integration with core applications, UAT of the data from CBS as a source for the following deliverables

1. Operational Reports related to subject areas : Retail Banking, Transaction Banking and Corporate Banking like (90 reports):
   - Daily Business Position (Covering Loans, Deposits, CASA etc.)
   - Productivity Analysis
   - Closure Analysis
   - TAT Analysis
   - ATM Monitoring Analysis
   - Transaction Failure Analysis
   - Asset exposure by Industry

2. Dashboards related to subject areas : Retail Banking, Transaction Banking and Corporate Banking like (27 Dashboard)
   - Fund Flow Analysis
   - Settlement Analysis
   - NPA Analysis (Sector, Industry, Movement etc.)
   - Channel performance analysis

3. Analytics related to following subject areas as per Annexure 01 - Functional Requirements:
   - Customer Profiling
   - Customer Segmentation Analysis (by Age, Demography, Net worth, Spend Pattern)
   - Product Analysis – Deposits, Retail Credits, Loans & Advances

4. Corporate Function for:
   - Budgeting & Planning
   - Analysis of restructured advances
   - NPV calculation for restructured loans
   - Probable doubtful advances

Pilot Go live of the Dashboards/Reports which form a part of the requirement as mentioned above

<table>
<thead>
<tr>
<th>Phase I – Pilot</th>
<th>5 months</th>
<th>5 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I – Pilot go live on production</td>
<td>5 months for Phase I – Pilot go live</td>
<td>5 months from date of Acceptance of PO</td>
</tr>
</tbody>
</table>

Phase I – Sustenance

Sustenance start

6 months to 60 months

STAGE I
Phase II – Design & Development

<table>
<thead>
<tr>
<th></th>
<th>3 months</th>
<th>3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Define, validate and complete functional requirements across the Bank as per the Annexure 01 – Functional Requirements for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Customer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Profitability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Collections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Performance Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- OCRM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
b. Develop and complete the following for the Bank as per the requirements defined for phase II
   - Logical Data Model (Inclusive of customization of industry standard model)
   - ETL
   - Data Quality
   - Business Intelligence design
Semantic modeling
Complete source system study for source to data mapping for data warehouse
Finalization of the comprehensive design document and sign-off from the Bank
Data Cleaning Strategy document and signoff from Bank as an outcome of the Data Quality

<table>
<thead>
<tr>
<th>Phase II – Integration</th>
<th>Setup ETL processes from source systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Setup Data Quality tools</td>
</tr>
<tr>
<td></td>
<td>PDM development based on the design defined in Phase II – Design for Customer, Profitability, Product, Corporate Functions, Risk, Collections, OCRM, Performance Management and Reports</td>
</tr>
<tr>
<td></td>
<td>Integration of Bank’s Operational CRM with EDW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase II – Go-Live</th>
<th>Go live of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Customer</td>
</tr>
<tr>
<td></td>
<td>b. Profitability</td>
</tr>
<tr>
<td></td>
<td>c. Product</td>
</tr>
<tr>
<td></td>
<td>d. Risk</td>
</tr>
<tr>
<td></td>
<td>e. Collections</td>
</tr>
<tr>
<td></td>
<td>f. OCRM</td>
</tr>
<tr>
<td></td>
<td>g. Performance Management</td>
</tr>
<tr>
<td></td>
<td>h. Reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase II – Testing</th>
<th>SIT, UAT of all the applications as part of phase II including applicable signoffs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phase II – Training Setup</th>
<th>Setup of the training applications and commencement of training for Go live</th>
</tr>
</thead>
</table>

Phase II go live on production for the remaining functionalities not covered under Phase I pilot for following:
- Customer
- Profitability
- Product
- Risk
- Collections
- Performance Management
- Reports
- OCRM

8 months for Phase II go live.
8 months from data of acceptance of PO

STAGE I
Phase II - Sustenance
Sustenance start
9 months to 60 months

Phase III – Design, Development
Define and validate functional requirements across the Bank as per the Annexure 01 – Functional Requirements for
- Risk Analytics
- Data Mining & Analytics (Predictive modeling)
- Analytical CRM

6 months
10 months
Develop the following for the Bank as per the requirements defined for phase III
- Logical Data Model
- ETL
- Business Intelligence design
- Semantic modeling

Complete source system study for source to data mining

Finalization of the comprehensive design document and sign-off from the Bank

<table>
<thead>
<tr>
<th>Phase III – Testing &amp; Go Live</th>
<th>SIT, UAT of all the applications as part of phase III including applicable signoffs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase III go live on production</td>
<td>2 months for Phase III go live after Phase II</td>
</tr>
<tr>
<td>Phase III - Sustenance</td>
<td>11 months to 60 months</td>
</tr>
<tr>
<td>STAGE 2</td>
<td>36 month onwards</td>
</tr>
<tr>
<td>Phase IV – DC Upgrade a. Upgrade of DC with appropriate hardware and other resources are added based on the projected load and volumes and performance criteria for the next 2 years.</td>
<td>1 month 37 months</td>
</tr>
<tr>
<td>Phase IV – DRC Setup a. Delivery of hardware &amp; components for DRC setup of the EDW SOLUTION</td>
<td>1 month 1 week 37 months 1 week</td>
</tr>
<tr>
<td>b. Completion of Installation of Hardware and other components in DRC</td>
<td>2 months 39 months 1 week</td>
</tr>
<tr>
<td>c. DC &amp; DRC replication setup and acceptance by Bank</td>
<td>3 weeks 40 months</td>
</tr>
<tr>
<td>d. DC &amp; DRC drill completion</td>
<td>2 month 42 months</td>
</tr>
</tbody>
</table>

**Delivery, implementation and Roll out**

The Selected Bidder shall be responsible for delivery; implementation and rollout of all the solutions required under this RFQ and also must agree to the time duration specified in Section I: Project Timelines of this document.

In the event of SI’s failure to deliver and / or implement all required components of a fully functional system (pertaining to the scope of the project) within the stipulated time schedule or by the date extended by the Bank, unless such failure is due to reasons entirely attributable to the Bank, it will be a breach of contract. In such case, the Bank would be entitled to charge a penalty or will have the right to terminate the contract, as specified in this RFQ.
J. PROJECT IMPLEMENTATION AND METHODOLOGY

The implementation of the SCOPE of WORK as per this RFQ has to abide by the following requirements.

a. DEVELOPMENT METHODOLOGY

The SCOPE OF WORK laid out in this RFQ requires the SI to understand the complex nature of the project and hence should use a strong methodology that should be followed strictly.

1. The SI should follow a suitable SDLC methodology waterfall/ iterative/ Agile/ proprietary methodology, etc. as part of SI’s response.

2. The methodology should clearly lay out the overall steps from Initiation to Closure of this engagement. The methodology should address development, customization, Managed services, Facilities’ management services, hardware/ software installation/ configuration services. Each of the steps should detail the input, process and output in each steps. The SI should further detail how their tools/templates can be used to leverage them effectively. The SI should further provide the deliverables and sign off process for each of the deliverables at various stages.

3. The SI should submit the detailed timeline as part of the response in alignment with the Section I – Project Timeline.

4. The SI should ensure all process templates as per their CMMI/Quality certification is adhered to and provide to capture and prevent risks and issues.

b. INSTALLATION AND IMPLEMENTATION

The SI needs to ensure that the scope of work for implementation of the software includes creating master data at the Data Center of the Bank by downloading from existing systems namely ETL as a part of EDW SOLUTION, functional requirements specifications study, data conversion, live cut-over, customization, configuration, installation, implementation and integration of the software. The precise nature and scope of the activities and functions to be undertaken for installation and implementation of the licensed software have been detailed and set out in Section H of this RFQ document.

c. HARD WARE SIZING
The SI has to size and provide required hardware as per the delivery schedule as per SECTION I – Project Timelines mentioned in the RFQ. In the event of noticing any performance issues due to inadequate sizing of the Hardware, the SI must provide additional hardware as necessary at their cost till expiry of warranty period or till 6 months after completion of project whichever is later.

d. ACCEPTANCE TESTING

The Bank will carry out the acceptance tests for testing of software, hardware and peripherals, system software, network equipment, if any, other equipment and other IT infrastructure supplied by the SI as a part of the EDW SOLUTION. The SI shall assist the Bank in all acceptance tests to be carried out by the Bank.

The SI shall follow the following steps for all packaged applications delivered to meet the SCOPE OF WORK. The Testing overall includes two types of deliverables

I. Testing prepackaged/preconfigured deliverables include packaged analytical applications, pre-configured hardware etc. The testing steps for this follow the following activities.

   a. Base testing
   b. Gap analysis to gaps
   c. Customization process
   d. Pre – UAT
   e. Deployment
   f. Acceptance

II. Testing of developed deliverables for ETL, Data warehouse, ODS, DQ Store, Data quality, data delivery, Reporting, Dashboards, Scorecards, Ad-hoc scripts, Metadata management scripts, Data governance workflow scripts, security and accessibility scripts, backup and archival scripts and any additional scripts required to meet the requirements for the EDW SOLUTION. The acceptance testing of developed deliverables follow the following 3 steps after successful completion of all testing processes namely unit testing, Integration testing and system testing before getting ready for this Pre-UAT

   g. Pre – UAT
   h. Deployment
   i. Acceptance

1. The external testing agency proposed by the SI should be responsible for preparing test data, test plan, test cases, and test strategy for all types of testing. These documents will be reviewed by the bank and any suggestions /changes are to be made by the SI. The successful completion of testing includes meeting the expected results in all the test cases and satisfying all the requirements of the Bank.

2. The SI will be responsible for maintaining appropriate program change control and version control for all the modifications / enhancements carried out during the implementation / testing phases.

3. The SI will be responsible for providing and updating system & user documentation as per the modifications.
4. In all cases, the SI shall have the sole responsibility for bearing all additional charges, costs or expenses incurred in correcting, reworking or repairing the defective or non-conforming hardware/software, unless such failure is due to reasons entirely attributable to the Bank.

5. The SI shall prepare and plan the Acceptance testing methodology, which at the minimum include test cases, test data, test strategy, which shall be reviewed by the Bank. The Bank after review may suggest changes for incorporating in the testing methodology.

6. The SI shall provide resources for testing. The bidder must indicate the minimum number of resources that he will provide for testing and such resources should be available till completion of Phase III of the project.

Delivering Base Version

1. The SI shall first deliver the base version of the software and the SI will assist the bank to conduct a preliminary test to ascertain the extent to which the software has met business requirements as furnished in the RFQ for generation of reports, statements, dashboards, scoreboards and for carrying out analysis and other requirements.

2. The testing also includes testing to ascertain whether the response time, the bandwidth usage & performance of the application software are as per the expectations of the Bank.

Identifying GAPS

1. The Bank and the SI shall proceed to arrive at Gaps and the customization required meeting all the requirements of the Bank.

2. The SI should create a GAP analysis document and deliver to the Bank. The Bank shall review and propose any changes or modifications. The SI and the Bank agree on the changes before the document can be signed off by the Bank. Once the document is signed off the SI can proceed making the customization as laid out in the document.

Customization process

1. The SI shall ensure that the software provided as a part of the EDW Solution meets all the requirements described in detail in this RFQ and to carry out all such customization or development work as may be required by the Bank within the total cost proposed by the SI.

2. The SI shall provide all the MIS reports as per the requirements of the Bank. The precise scope of the customization and development work to be undertaken by the SI shall be as per the requirements of the Bank as described in the above mentioned Appendices or Annexure.

3. The SI shall carry out all the customization related work at the Project Office of the Bank or offsite in case the customization cannot be carried out at the Bank premises.

4. The Bank shall be a party to the Functional Specifications requirement sign-off, Installation sign-off, Implementation sign-off, User acceptance test and User acceptance test sign-off.

5. The SI shall install and commission the software for customization and User Acceptance Test as per Project Plan to be agreed with the Bank failing which the SI shall be liable to pay the Bank penalty to be defined as per this RFQ.
6. The SI shall provide all tools, testing instruments, drivers, consumables, etc. required to install and customize and test the software free of any fees or charges or any expenses.

7. The SI shall document and submit to the Bank all the testing activities, procedures and results.

8. The SI shall be required to ensure that the software provides interfaces to the other application systems at the Bank as specified in Appendix 03: Applications Profile.

9. The SI shall provide the Bank weekly progress report on the bugs/problems reported/points taken up with schedule of date of reporting, date of resolving, and status for all kind of bugs and problems whether reported by branch/Head Office or SI staff. In case of disputes relating to resolution of problem relating to any site, the SI is required to send the copy of call report pertaining to each visit of each of the engineer to the said site indicating the purpose of call, when called, when visited, when problem was resolved, how resolved, etc.

Pre – User Acceptance Test

1. The SI after customizing software as per Gap analysis will deliver the customized software to the Bank for conducting pre – User Acceptance Test in a Non-production environment.

2. It is mandatory for the System Integrator to hire and propose an external testing agency for conducting the functional testing of the EDW SOLUTION. This agency has to be reputed and should have experience of having performed functional testing in one Public Sector Bank in India in areas of core banking functionalities or Data warehouse functionalities. The Bank will have the discretion to engage this agency during the implementation stages.

3. Acceptance testing shall broadly cover the testing of the ETL tools, Database & BI application tools, and all such other applications and tools to verify the EDW SOLUTION conformity with the business & technical requirements and Gap analysis Report, Bandwidth and response time.

4. During the testing, the Bank will notify the SI at regular intervals the Bugs/findings in writing.

5. The SI shall fix the Bugs and carry out the necessary rectifications wherever necessary and deliver patches/version towards changes effected. The Bank shall test patches / version to ascertain the changes made, bugs fixed and to ensure that there is no regression in the software.

6. The Bank shall accept the application software only after the critical or major Bugs are fixed, which are then ready for PRODUCTION Implementation.

7. All the testing will be carried out with the resources provided by the SI.

Production Implementation

1. The bank or the external testing agency shall carry out verification and validation in production.

2. 30 days after successful conclusion of the deployment into PRODUCTION Environment or after fixing the critical or major bugs whichever is later, the EDW SOLUTION shall be accepted by the Bank.
3. In the event the solution provided by the SI does not meet the acceptance test and criteria; SI would at the discretion of the Bank have to re-perform the services to the satisfaction of the Bank. Non adherence to the acceptance criteria may result in termination.

Completeness of the project

1. The project will be deemed as completed only after project scope and requirements are met in full and the EDW SOLUTION meets all technical specifications and delivers all the functional requirements, as per the terms of RFQ.

2. The project will be deemed incomplete when the mutually agreed acceptance and completion criteria are incomplete or not met or not fulfilled. The Bank reserves the sole right to accept or reject the acceptance of any product / service in the event the agreed acceptance and completion criteria are not met by the SI.

PROJECT REVIEW:

The progress in the project implementation of EDW SOLUTION will be closely monitored and reviewed periodically by the following committees:

a. Operational Committee Weekly
b. Standing Committee Fortnightly
c. Steering Committee Monthly

Escalation Matrix

The bank as well as the system Integrator will decide an escalation matrix to resolve any issues that may crop up during implementation of the project. Both the bank and system integrator including the consortium members shall inform the names of the persons and their telephone numbers for the escalation matrix to be effective.

The members of the three committees will be finalized after selection of the bidder for the project.
K. RESPONSE TO RFQ

1. Bidder’s response

1.1. Preparation of Bids

1.1.1. The bidder must use the entire information furnished in the RFQ including scope, detailed requirements, functional and technical specifications, other annexure, other appendices and other terms and conditions to submit their response.

1.1.2. The bidder has to submit the response to the bid in Technical Bid indicating the response to the technical requirement specifications and functional requirement specifications.

The bidder responses must submit original set of technical submissions along with the soft copies. This copy bid would be the duplicate hard copy of the bidder submissions and would be used for reference in case there is any discrepancy in the submission set. Over and above this the Bidder must also provide a soft copy of the bid in a CD – R or DVD – R. The technical bid, submitted cannot be withdrawn/modified after submission of bids. The bid must be submitted in hardcopy and soft copy as mentioned above in MS Word and MS Excel in font size MS 12.

1.1.3. The Bidder, before submitting his response to the functional requirements in the Technical Bid, should thoroughly go through the instructions given by the Bank for filling up the Annexure 01 – Functional Requirements.

The bank has classified each of the requirements as critical. The Bidder, in his response, is required to provide an appropriate score to each of the requirement as per the following table.

<table>
<thead>
<tr>
<th>BS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature. Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>A</td>
<td>Alternative available. The required feature can be made available through a work around</td>
</tr>
</tbody>
</table>
C | Customization required. Bidder will provide the customization within the stipulated date as informed by Bank

U | Unavailable. Functionality is not available and will not be provided by the bidder.

Based on the bidder’s response, Bank shall evaluate the response and allot marks for the requirements. The bank, as a part of bid evaluation, will also request the bidder to make a presentation/Demo and during such presentation/demo will verify the responses of the bidder.

1.1.4. The Bidder, before submitting his response to the Demo Scripts in the Technical Bid, should thoroughly go through the instructions given by the Bank for filling up the Annexure 16 – Demo Scripts.

The bank has classified each of the requirements as critical. The bidder, in his response, is required to provide an appropriate score to each of the requirement as per the following table.

<table>
<thead>
<tr>
<th>BS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature. Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>U</td>
<td>Unavailable. Functionality is not available and will not be provided by the bidder.</td>
</tr>
</tbody>
</table>

The Demo Scripts are different from the Demonstration asked in the Evaluation of the Functional Requirements in Annexure 01 – Functional Requirements. While the Evaluation of the functional capabilities highlight solution strengths, the Demo Scripts help in evaluating end to end process for achieving end user result. The Bidder would have to create a real world simulation to demonstrate the line items as a process and not in a piece meal basis.

Based on the bidder’s response, Bank shall evaluate the response and allot marks for the requirements.

1.1.5. The bidders, before submitting his response to the Technical Requirements in the Technical Bid, should thoroughly go through the instructions given by the Bank for filling up the Annexure 18 - Minimum Technical Specifications for EDW Solution.

The bank has classified each of the requirements as critical. The bank expects the bidder to comply with all the technical requirements and if these cannot be met as a standard feature then the bidder is expected to provide an alternative available. The bidder, in his response, is required to provide an appropriate score to each of the requirement as per the following table:

<table>
<thead>
<tr>
<th>BS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature. Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>A</td>
<td>Alternative available. The required feature can be made available through a work around</td>
</tr>
</tbody>
</table>
Based on the bidder’s response, Bank shall evaluate the response and allot marks for the requirements. The bank, as a part of bid evaluation, will also request the bidder to make a presentation/Demo and during such presentation/demo will verify the responses of the bidder.

1.1.6. The bidder must provide the most critical requirements mandatorily. The Bidder must provide all customizable requirements essential for pilot implementation before pilot sign off and others before completion of each phase.

1.1.7. Under no circumstances, the bidder while giving their response should change the information furnished by the bank under technical, functional and other requirements in any of the columns.

The bidder’s response is to be submitted in sealed covers as detailed in Section K Clause no 1.1

1.1.8. The technical response is to be organized in a structured and neat manner as per Section K clause No. 2.4.

1.2. **Numbering of pages**

All pages of the bid including Brochures are to be numbered as Page --- (current page) of --- (total pages) in a seriatim along with proper index. The numbering shall be done separately for Technical Bid, and not section-wise.

The incomplete bid, conditional bid, bid not conforming to the terms and conditions, bid not submitted as per the terms of the RFQ are liable for rejection by the Bank.

1.3. **Authorized Signatory**

The bidder shall submit the bid authenticated by an authorized person from any of their offices in India, preferably from Mumbai office. The bidder's authorized signatory shall authenticate by sign and seal, each page of the Bid in original and photocopies including brochures/ pamphlets/ write-up etc. Bids with eraser/over writing/cutting are liable to be rejected. If required, the corrections can be made by scoring out entries and writing afresh and the authorized signatory should authenticate.

1.4. **Cost of preparing the Bids**

The cost of preparing the response to this RFQ will be the responsibility of the bidder and the Bank will not be liable for any cost incurred by the bidder.

1.5. **Clarification on RFQ document**

Prospective bidders requiring any clarification with respect to this RFQ may seek a clarification from Bank in writing and the following personnel may be contacted for the purpose:

1) Mr. Manishi Chatterjee, DGM – MIS

(m.chatterjee@idbi.co.in) Tel: 022-6655 2041

2) Mr. Nandkumar Kadam, Consultant

(nandkumar.kadam@idbiintech.com) Tel: 022-6159 2497
Mailing Address: Mr. Manishi Chatterjee, DGM-MISD, 3rd Floor, IDBI Tower Cuffe Parade 400005

The Bank may hold a pre-Bid meeting for any request or queries for clarification on the Bid documents, from the prospective Bidders. The Bank shall respond in writing vide e-Mail/Letter/Fax to any request for clarification on the bidding documents, from the prospective Bidders, which it receives not later than the date specified in schedule of events as mentioned in document control sheet. Further, the Bank may also respond by e-mail/letter/fax to all clarifications, without identifying the source of the inquiry. The Bank shall not be responsible for any external agency delays in above communication.

Any clarification given by the Bank shall be final, conclusive and binding on the Bidders.

1.6. Pre-bid Meeting

The Bank will also hold a pre-bid meeting at the specified time and venue as per the schedule of events to clarify the queries raised by the bidders. No change in date and time will be entertained and the Bank will hold the meeting even if some bidders choose to be absent during the meeting. No individual consultation other than the pre-bid meeting shall be entertained.

No more clarifications other than those sought during or before the above meeting shall be entertained. No oral consultation other than during meeting is entertained.

The clarifications of the Bank including the queries raised by bidders would be sent to all the bidders and this is binding on all bidders and such clarifications will become part and parcel of RFQ. The bidders must note to give their responses by taking the clarifications given by the bank also, into consideration.

The response to the bid should not carry any sections like clarifications, 'as orally told', to be discussed’, interpretations and assumptions. With the submission of the Bid, the bidder acknowledges that they have carefully studied and understood the RFQ in complete.

1.7. Addendum to RFQ

The Bank may modify the RFQ by issuing addenda for any reason, at any time prior or later to final date of submission of response to RFQ. Any addenda to RFQ shall be part and parcel of original RFQ document. All eligible bidders will be notified of the addenda and it will be binding on them.

1.8. Normalization of bids:

The Bank may go through a process of technical evaluation and normalization of the bids to the extent possible and feasible to ensure that Bidders are more or less on the same technical ground. The re-submissions can be requested by the Bank in the following two manners

- Revised submissions of the entire bid in the whole
- Revised submissions for a part of the bid as necessary

The Bank can repeat this normalization process at every stage of bid submission till the Bank is satisfied. The Bidders agree that they have no reservation or objection to the normalization process and all the Bidders will, by responding to this RFQ, agree to participate in the normalization process and extend their co-operation to the Bank during this process. The Bidders, by submitting the response to this RFQ, agree to the process and conditions of the normalization process.

1.9. **Language of Bid**

Technical bid shall be submitted in English Language in font size of not less than 12 in two original sets along with the soft copies, as per this RFQ.

1.10. **Validity of Bids**

The bids shall remain valid for a period of 180 days from the last date of opening of technical bids.

All responses including technical bids would be deemed to be irrevocable offers/proposals from the Bidders and shall, if accepted by the Bank, form part of the final contract between the Bank and the SI.

1.11. **Consortium details**

Where a consortium is proposed to bid for the RFQ, the Bank will deal with only the Bidder as a single point of contact. The bid would be a consortium bid if:

The Bidder is proposing (as part of the solution) some products/services, which are not owned by him;

In the case of a Consortium, the following rules will be applicable:

- The Bidder is required to provide proof that he is authorized to bid with the products that he does not own/deal and the Bidder must also confirm that all the members of the consortium are agreeable for terms of the RFQ offered by the Bidder. The bidder must also furnish letters from other members in support of the above and consortium details as per Annexure 09 – Consortium Details.

- The System Integrator (SI) will be responsible for delivering all contractual services end to end that includes all consortium members including himself and will be a single point of contact.

- The Bidder will be the single point of contact/reference to the Bank. The Bank will enter into agreement with the selected Bidder only. However, the Bidder as well as other Partners/Associates/Consortium members/OEMs must confirm to the Bank that they are willing to enter into back to back agreement that is in conformity with the deliverables and other service/uptime commitments the bidder makes to the Bank in its response to the RFQ. If requested, the System Integrator must share a copy of the back to back agreement with the Bank. Bidders have to confirm the same as per Annexure 13 – Technical Offer Covering Letter.

- The bank expects the System Integrator (SI) not to sub contract any of its services to fulfil his contractual obligations.
1.12. **Bidders Quote/Offer**

All responses received after the due date/time would be considered late and would be rejected. All responses should be in English language.

Bidders are requested to attach a letter from an authorized signatory attesting the veracity of information provided in the responses. Unsigned responses would be treated as incomplete and are liable to be rejected.

The Bidders are required to quote for all the components mentioned in the Section E - Project Scope, Objective & Goal of this document. In case any Bidders does not quote for any of the components, the response would be deemed to include the quote for such unquoted components. It is mandatory to submit the technical details in the formats given along with this document duly filled in, along with the offer. The Bank reserves the right not to permit changes in the technical specifications and not to evaluate the offer in case of non-submission of the technical details in the required format or partial submission of technical details.

Based on the Bank’s requirements as listed in this document, the Bidders should identify the best-suited solution that would meet the Bank’s requirements and quote for the same. In case the Bidder quotes for more than one solution (for example one quote for software x and y and another quote for software x and z) then the response would be considered as improper and liable to be rejected. The Bidders should not give options to the Bank to select from his offer. The Bidder is expected to select the best option and quote for the same in his offer. (For example the Bidder should not quote for two database servers for a single requirement, one xyz and other abc, and leave it to the Bank to choose any one of them.)

Each offer should specify only a single optimal solution, which is cost-effective and meet the entire tender specifications. It is the responsibility of the Bidder to decide the best suitable solution.

The Bidder must furnish requirements as per the formats provided in the RFQ document.

While submitting the bid, the bidder may note

- Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

- If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

2. **Submission of Bids**

2.1. **Bid in Sealed Covers**

2.1.1. **Technical Bid**

The Technical Bid containing the response to both technical and functional requirements for EDW & BI project is to be sealed in a separate Envelope superscripted on the top of the cover as “TECHNICAL BID FOR EDW SOLUTION”.

Page 121 of 176
The bidder should include Annexure 02 – Masked Bill of Material as a part of the technical submission

The Technical Bid must contain EMD as per Annexure 04 - Bank Guarantee format in lieu of DD towards EMD. Bank Guarantee format valid for a minimum period of 6 months (with a claim period of 3 months) and renewal thereafter till the finalization of the bidder.

Soft copy of the response to the technical bids should also be provided in MS excel/MS word. The soft copy to be placed in Technical Bid. The bidder should certify that the contents of the soft copy are same as that provided in hardcopy. In case of any discrepancies between the two, the bid is liable to be rejected or hardcopy will be relied upon for evaluation.

2.1.2. Overall Bid

The sealed envelope containing Technical Bid for EDW SOLUTION shall be submitted in another sealed envelope super-scribed on the top of the envelope as: “REQUEST FOR QUALIFICATION FOR SUPPLY, INSTALLATION, IMPLEMENTATION, INTEGRATION AND MAINTENANCE OF ENTERPRISE DATA WAREHOUSE, BUSINESS INTELLIGENCE AND CRM PROJECT (EDW SOLUTION)” against RFQ No. IDBI/PCell/RFQ/14-15/03

The envelope is to be delivered to the bank, as per Section K clause 2.5 against acknowledgement.

The Bidder shall take care to submit the Bid properly filed so that the papers are intact. The bidder shall submit the bid in suitable capacity of the file such that the papers do not bulge out and tear during scrutiny. The Bids, which are not sealed as indicated above, are also liable to be rejected.

2.2. Earnest Money deposit

- The Bidder shall furnish earnest money deposit of INR Rs 1,00,00,000/- (Rs. One Crore Only) in the form of Bank Guarantee as per Annexure 04 – Bank Guarantee format in lieu of DD towards EMD valid for a minimum period of 6 months (with a claim period of 3 months) and renewal thereafter till the finalization of the bidder.
- No interest will be payable on EMD under any circumstances
- The BG for EMD should be placed in the Technical Bid cover only
- Submission of EMD in other than Technical bid cover is entirely at the risk of the bidder and in all such cases the bid is liable to be rejected on grounds of non submission of EMD.
- The Technical Bid will be evaluated only for those bidders who submit EMD in the same cover.
- The EMD of the Bidders not qualified under Technical Bid will be returned within 2 months after declaration of technically shortlisted bidders. The EMD of other bidders will be returned upon the selected bidder signing the contract and furnishing the performance guarantee.
- The EMD may be forfeited or the Bank Guarantee may be invoked:
  - If the Bidder withdraws its Bid during the period of Bid validity specified in the RFQ; or
  - If the Bidder makes any statement or encloses any form which turns out to be false, incorrect and or misleading at any point prior to signing of contract and such
information/suppression is material in the opinion of the Bank or
- If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of Bid validity;
  
  (i) Fails or refuses to execute the Agreement, if required; or
  
  (ii) Fails or refuses to furnish the performance security, in accordance with the conditions of RFQ.

2.3. Compliance Statement.

The Bidder shall certify the compliance or deviation of all clauses, terms conditions and specifications stipulated in RFQ, as per Annexure 07 – Conformity Letter. The Data sheet as per Annexure-06 -Compliance Statement Comments on RFQ Terms & Conditions shall also be submitted.

Non-submission of duly filled & signed conformity letter and Data Sheet will make the bid liable for rejection.

The bidder shall not just indicate that details are enclosed and submit brochures, manuals, documents etc. Instead, they shall detail their reply for each clause in Annexure-06 and they shall also indicate the Page number in the bid, at which additional information are enclosed in the brochures, manual, documents etc. The bidder shall ensure correctness of referred page nos.

2.4. Organization of Bid

2.4.1 TECHNICAL BID (in a sealed cover containing the following)

- Duly signed covering letter by the authorized signatory as per Annexure 13 Table of Contents
- Letter with details of authorized signatories/Power of Attorney’s in the name of the authorized signatories who can represent the Bidder/s with regard to the obligations under the RFQ or Contract
- Undertaking letter as per Annexure 05 – Bid Undertaking Letter.
- Application money DD
- Demand Draft/Bank Guarantee towards Earnest Money Deposit as per Annexure 04
- Executive summary of bidder’s Response
- Bidder’s response to Functional requirements as per Annexure 01
- Bidder’s response to Demo Scripts as per Annexure 16
- Bidder’s response to Technical Requirements as per Annexure 18
- Detailed Technical write up covering the Detailed Scope of Work

- Compliance Statement as per Annexure 06
- Conformity letter as per Annexure 07
- Conformity letter to Hardcopy as per Annexure 08
- Letter from Hardware OEM for sizing adequacy as per Annexure 10
- Project Roles for SI as per Annexure 15
- Bandwidth requirements as per Annexure 17
- EDW Project Team profiles as per Annexure 19
- Project management report
2.5. Delivery of Bids

The Bidder should submit the responses by hand at the designated address mentioned at the time and place specified in the Schedule of Events. Where the Bids are submitted by hand, the delivery of them may be made to any of the officers mentioned below:

*The Bidder should submit the responses by hand only at the designated address* at the time and place specified in the Schedule of Events. *The responses should not be submitted by post or by courier.*

The bids, which are received after the above mentioned date and time, will be rejected by the bank.

Any bid delivered after the stipulated time will not be taken up for evaluation. The bids sent through post/courier will not be evaluated

*The Bids shall be addressed to place as mentioned in the document at the time mentioned in schedule of event:*

3. Opening of Bids

3.1. Date of Opening of Technical Bids.

- The Technical Bid shall be opened in the presence of bidders at the time and place specified in the Schedule of Events. The Bidder representative may be present during the Bid opening at our office address mentioned above well in time along with the authorization letter from the company.

- The bidders may note that no further notice will be given in this regard. Further, in case the bank does not function on the aforesaid date due to unforeseen circumstances or holiday then the bid will be accepted up to time as mentioned in the Schedule of Events.

- The Bank however reserves the right to change the date & time for opening of Technical Bid without assigning any reason whatsoever. In case there is a change in the schedule the same will be intimated to the bidders by means of Post or Courier or telephone or fax or e-mail or telex, etc. for enabling them to be present during the Bid opening.

- During opening of Technical bid, the bidders’ authorized representative may attend the opening and those who are present shall sign a register evidencing their attendance.
• After opening, the bidder’s names and the submission/non submission of application money, EMD, and such other details relating to the Bid will be announced.

• The bids that are not accompanied with application money and EMD in Technical Bid shall be rejected.

• The rejection or acceptance of the bid will be done only after evaluation at the discretion of the bank.

• During evaluation of the bids the bank may seek from the bidder clarifications on the bid submitted by the Bidder. The request for such clarification and the response from the bidder shall be in writing.

3.2. Examination of Bids

The Bank will do preliminary examination of bids to know whether they are complete in all respects, whether any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order.

If the bidder does not accept the correction of such errors as per the above criteria, their bid will be rejected and the EMD will be forfeited.

The Bidders at no point in time can excuse themselves from any claims by the Bank whatsoever for their deviations in confirming to the terms and conditions, payments schedules, time frame for implementation etc. as mentioned in the RFQ documents circulated by the Bank. Bidders shall be fully responsible for deviations to the terms & conditions, project schedule etc. as proposed in the RFQ.

Bank will only pay for items procured and used by the Bank. Bank will not pay or is not bound to pay for items not procured or used by the Bank. The Bidder cannot compel the Bank to procure or pay for items not desired by the Bank.

The Annexure 02 – Masked Bill of Materials is an indicative list of items used for the purpose of bidder evaluation. The procurement of the items quoted by the Bidders in the Annexure 02 – Masked Bill of Materials will be decided by the Bank based on the requirements from time to time during the period of the contract. The Bidder cannot compel the Bank to procure any or all the items quoted by them in Annexure 02 – Masked Bill of Materials.

The Bank would like to expressly state that any assumptions, terms, conditions, deviations etc. which the Bidder includes in any part of the Bidder’s response to this RFQ, will not be taken into account either for the purpose of evaluation or at a later stage, unless such assumptions, terms, conditions, deviations etc. have been accepted by the Bank and communicated to the Bidder in writing. The Bidder at a later date cannot make any plea of having specified any assumptions, terms, conditions, deviations etc. in the Bidder’s response to this RFQ.

During the preliminary examination, the Bank will also verify whether the Bidder has responded in full to the RFQ or whether it is partial or conditional.

The bids that are incomplete or conditional are liable to be rejected.
L. EVALUATION METHODOLOGY

Evaluation methodology
The evaluation will be a two stage process.

The stages are:

1. General Eligibility Criteria
2. Technical bid evaluation

The objective of evolving this evaluation methodology is to facilitate the selection of the most optimal solution that appropriately meets the business requirements of the Bank. The bidders would be screened based on General Eligibility Criteria. Post qualification of a Bidder on these criteria, bid would be evaluated on technical soundness. All bids shall be evaluated by an Evaluation Committee set up for this purpose by the Bank. The evaluation shall be on the basis of quality of the solution & services offered.

The Bidder needs to comply with all the eligibility criteria mentioned in section L, sub-section 1, to be evaluated in Stage 1. Non-compliance to any of these criteria would result in outright rejection of the Bidder’s proposal. The Bidder is expected to provide proof for each of the points for eligibility evaluation. The proof provided has to be in line with the details mentioned in “Annexure 23 – General Eligibility criteria compliance” Eligibility Evaluation Details. Any credential detail mentioned in “Annexure 23 – General Eligibility criteria compliance” and not accompanied by relevant proof documents will not be considered for evaluation. All credential letters should be appropriately bound, labeled and segregated in the respective areas. There is no restriction on the number of credentials a Bidder can provide.

The decision of the Bank would be final and binding on all the Bidders to this document. The Bank may accept or reject an offer without assigning any reason what so ever.

The technical proposals will be subjected to evaluation at the first stage post qualification of general eligibility criteria. The bidders scoring less than 80 marks (cut-off marks) out of 100 marks in the technical evaluation shall not be considered for the second stage for inviting financial bids. Once the evaluation of technical proposals is completed, the bidders who score more than the prescribed cut-off score will only be short-listed for submission of commercial bids which will be asked separately by the Bank.

1. General Eligibility Criteria

The bidder meeting the General Eligibility Criteria as per Annexure 23 will be considered for technical evaluation.

Technical Bid Evaluation

The Technical bid would be rated on a total score of 100 with the major areas as follows and the ranking of Technical score (T) would be derived for each Bidder
<table>
<thead>
<tr>
<th>#</th>
<th>Functional &amp; Technical Evaluation Phase</th>
<th>Sub Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Credential Strengths</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Functional features evaluation of SOLUTION</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Demo Scripts</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Technical features evaluation of SOLUTION</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Proposed Solution Presentation &amp; Approach</td>
<td>15</td>
</tr>
<tr>
<td>6</td>
<td>Solution Architecture &amp; Adherence</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

1. **Credential Strengths**

The weightage for this section is 5 marks.

The Bidder will have to go through Appendix 02 – Credential strengths in detail. Each SI having credentials as stated in Appendix 02 – Credential Strength, will get marks as given in Appendix 02 – Credential Strength.

Note: Bidders can use Annexure 14 – SI Experience Format for providing the supporting documents as follows

i. Certificate from organization on their letterhead for “completion” or “in progress” for the specific line item as per Annexure 14 – SI Experience Format and OEM references

ii. Self declaration by SI clearly mentioning the Organization name, Product name and implementation details as specified in Annexure 14 -SI Experience Format. Bank would make a reference call with the client organization confirming the details. The SI has to provide the client contact details for the same.

2. **Functional Evaluation & Scoring**

The weightage for this section is 40 marks. The total scores arrived will be scaled according to the total marks allotted for this Sub section.

a. **Functional Scoring (to be scored by the Bidder)**

i. The functional requirements are in the form of a table which is given as Annexure 01 – Functional Requirements. The bidders should award itself the marks in the column “BS” and provide qualitative remarks in the column “Bidder Comments (BC)”. Each of the line items mentioned in Annexure – 01 carries max 10 marks. The functional heads with the maximum marks are as per below:

<table>
<thead>
<tr>
<th>#</th>
<th>Functional Areas</th>
<th>No. of req. line item</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer</td>
<td>112</td>
<td>1120</td>
</tr>
<tr>
<td>2</td>
<td>Profitability</td>
<td>73</td>
<td>730</td>
</tr>
<tr>
<td>3</td>
<td>Product</td>
<td>185</td>
<td>1850</td>
</tr>
<tr>
<td>4</td>
<td>Corporate Function</td>
<td>89</td>
<td>890</td>
</tr>
<tr>
<td>5</td>
<td>Risk</td>
<td>78</td>
<td>780</td>
</tr>
<tr>
<td>6</td>
<td>Collections</td>
<td>47</td>
<td>470</td>
</tr>
</tbody>
</table>
The Response for each of the line items under each functional head should be as per the table below.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature. Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>C</td>
<td>Customization required. Bidder will provide the customization with the stipulated date as informed by Bank</td>
</tr>
<tr>
<td>A</td>
<td>Alternative available</td>
</tr>
<tr>
<td>U</td>
<td>Unavailable. Functionality is not available and will not be provided by the bidder.</td>
</tr>
</tbody>
</table>

b. **Product demonstration as part of Functional evaluation**

Product Demonstration Scoring (to be scored by the Bank during product demonstration)

The Evaluation Committee decided by the bank would be scoring the functional sheet already scored by the bidder and would be appropriately assigning the final marks based on the demonstration arranged by the bidder in a simulated environment at the Bank’s premises.

3. **Demo Scripts**

The total weightage for this section is 15 marks. The total scores arrived will be scaled according to the total marks allotted for this Sub section.

a. **Demo Scripts (to be scored by the Bidder)**

ii. The demo scripts are in the form of a table which is given as Annexure 16 – Demo Scripts. The bidders should award itself the marks in the column “BS” and provide qualitative remarks in the column “Bidder Comments (BC)”. Each of the line items mentioned in Annexure – 16 -Demo Scripts carries max 10 marks. The subject areas with the maximum marks are as per below:

<table>
<thead>
<tr>
<th>#</th>
<th>Subject Areas</th>
<th>No. of req. line item</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer Profitability</td>
<td>48</td>
<td>480</td>
</tr>
<tr>
<td>2</td>
<td>Planning</td>
<td>39</td>
<td>390</td>
</tr>
<tr>
<td>3</td>
<td>CRM Analytics</td>
<td>29</td>
<td>290</td>
</tr>
<tr>
<td>4</td>
<td>Risk Analytics</td>
<td>36</td>
<td>360</td>
</tr>
<tr>
<td>5</td>
<td>Treasury Analytics</td>
<td>34</td>
<td>340</td>
</tr>
<tr>
<td>6</td>
<td>Collections</td>
<td>11</td>
<td>110</td>
</tr>
<tr>
<td>7</td>
<td>Customer Single View</td>
<td>56</td>
<td>560</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>253</strong></td>
<td><strong>2530</strong></td>
</tr>
</tbody>
</table>
iii. The Response for each of the line items under each functional head should be as per the table below.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature .Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>U</td>
<td>Unavailable. Functionality is not available and will not be provided by the bidder.</td>
</tr>
</tbody>
</table>

b. **Product demonstration as part of Demo Scripts**

Product Demonstration Scoring (to be scored by the Bank during product demonstration)

- Through this the SIs would need to simulate a real world cycle from end to end using the structures, data and processes and multi user workflows. This would need to be demonstrated to the Evaluation Committee in the Bank premises. The evaluation would be done based upon Annexure 16 – Demo scripts.

- Please note that the Demo Scripts are different from the Demonstration asked in the Evaluation of the Functional Requirements. While the Evaluation of the functional capabilities highlight solution strengths, the Demo Scripts help in evaluating end to end process for achieving end user result.

4. **Technical Evaluation & Scoring:**

The total weightage for this section is 20 marks. The total scores arrived will be scaled according to the total marks allotted for this Sub section

a. **Technical Scoring (to be scored by the Bidder)**

i. The technical requirements are in the form of a table which is given as Annexure 18 – Minimum Technical Specifications for EDW Solution. The bidders should award itself the marks in the column “BS” and provide qualitative remarks in the column “Response”. Each of the line items mentioned in Appendix 01 - Technical Specification for Data archival Solution carries max 10 marks. The subject areas with the maximum marks are as per below:

<table>
<thead>
<tr>
<th>#</th>
<th>Technical Areas</th>
<th>No. of req. line item</th>
<th>Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ETL</td>
<td>81</td>
<td>810</td>
</tr>
<tr>
<td>2</td>
<td>DW-ODS-DM</td>
<td>133</td>
<td>1330</td>
</tr>
<tr>
<td>3</td>
<td>Data Quality plus MDM</td>
<td>83</td>
<td>830</td>
</tr>
<tr>
<td>4</td>
<td>Business Intelligence</td>
<td>100</td>
<td>1000</td>
</tr>
<tr>
<td>5</td>
<td>Data Mining</td>
<td>40</td>
<td>400</td>
</tr>
<tr>
<td>6</td>
<td>Data Governance</td>
<td>13</td>
<td>130</td>
</tr>
<tr>
<td>7</td>
<td>Metadata Management</td>
<td>27</td>
<td>270</td>
</tr>
<tr>
<td>8</td>
<td>OCRM</td>
<td>53</td>
<td>530</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>530</td>
<td>5300</td>
</tr>
</tbody>
</table>
ii) The Response for each of the line items under each technical head should be as per the table below.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard feature .Required features readily available and to be provided by the bidder</td>
</tr>
<tr>
<td>A</td>
<td>Alternative available</td>
</tr>
</tbody>
</table>

b. Product demonstration as part of Technical evaluation

Product Demonstration Scoring (to be scored by the Bank during product demonstration)

The Evaluation Committee decided by the bank would be scoring the technical sheet already scored by the bidder and would be appropriately assigning the final marks based on the demonstration arranged by the bidder in a simulated environment at the Bank’s premises.

5. Proposed Solution Presentation & Approach:

Based on the Bidder’s technical presentation, maximum of 15 marks will be allotted to them. The Evaluation Committee decided by the bank would be scoring the presentation made by the bidders at Bank’s premises across the areas laid out in the table below.

The areas that the Bidders must cover in the presentation include the following:

<table>
<thead>
<tr>
<th>Evaluation of the Bidder Presentation for IDBI Bank Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDW Solution architecture and design</td>
</tr>
<tr>
<td>Execution Methodology</td>
</tr>
<tr>
<td>Adherence to Timelines</td>
</tr>
<tr>
<td>Execution Competency(Solution Accelerators, Functional &amp; Technical Competency)</td>
</tr>
<tr>
<td>Approach and Resource Commitment for Managed Services and Helpdesk Services</td>
</tr>
<tr>
<td>People Profiles of all key personnel as part of this project</td>
</tr>
</tbody>
</table>

6. Solution Architecture and Adherence

The Bank evaluation committee based on the Bidders technical proposal, interactions, presentations during evaluation and the understanding of the solution architecture proposed would score the bidders. A maximum of 5 marks is allocated to this section. The scoring would be based on the Appendix 05 - Solution Architecture and Adherence. The total marks obtained as per the Appendix 05 - Solution Architecture and Adherence would be proportioned to 5 marks and the final score would be arrived for this section for each bidder.
**M. PAYMENT TERMS**

The term of the contract will be five years. The SI should provide hardware in two stages. Hardware to be provided during stage I should be sized for three years by considering functional & technical requirements as per Phase I, II and III mentioned above. Further, it should also factor the growth till the completion of three years from commencement of pilot implementation.

The incremental hardware under Stage II should be provided within three months immediately on completion of three years to meet the requirements up to the end of the contract period.

However, if it is found that the hardware is not sized adequately or the hardware utilization goes beyond the threshold limit of 80%, the SI has to provide additional hardware at no additional cost to meet the performance parameters set by the Bank.

The SI must accept the payment terms proposed by the Bank as proposed in Section M – Payment terms.

The scope of work is divided in different areas and the payment would be linked to delivery and acceptance. All/any payments will be made subject to LD/compliance of Service Levels defined in the RFQ document.

**Procedure for claiming payments**

The SI’s requests for payment shall be made to the Bank in writing accompanied by Original Invoice detailing the systems, software delivered, installed and accepted by the bank.

The payments shall be made within 30 days from the date of receipt of valid claims that are supported by original invoice, original Proof of Delivery (POD), acceptance by the bank and upon fulfillment of other conditions stipulated in the contract. The invoices and other documents are to be duly authenticated by SI.

On receiving each payment, the SI shall submit a stamped receipt for the payment received including TDS. The payment after deducting applicable TDS will be released by the Bank. All payments will be made only by electronic transfer of funds either by NEFT or RTGS. The SI therefore has to furnish the bank account number to where the funds have to be transferred for effecting payments.

Payments as per the schedule given below will be released only on acceptance of the order and on signing the agreement/contract by the selected bidder and also on submission of performance guarantee through a DD or Bank Guarantee as per Annexure 04 – Bank Guarantee in lieu of DD towards EMD.
<table>
<thead>
<tr>
<th>Deliverables</th>
<th>% OF PAYMENT</th>
<th>STAGES (On completion of the activities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware stage I</td>
<td>50%</td>
<td>Delivery, successful Installation and acceptance of the Hardware with Environment SW after post delivery audit, O/S and submission of invoice with Proof of Delivery and other documents. Or On completion of one month from the date of successful installation and acceptance by the bank of Hardware/Software and submission of invoice with Proof of Delivery and other documents.</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>On Completion of Phase I</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>On completion of Phase II</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>One year post completion of Phase III or on production of Bank Guarantee on completion of phase III for an amount equivalent to the payment prescribed</td>
</tr>
<tr>
<td>Hardware Stage II</td>
<td>50%</td>
<td>On Delivery of the hardware</td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>On successful Installation, commissioning and acceptance of the Hardware and any other software and submission of invoice with Proof of Delivery and other documents and installation</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>After completion of the warranty period or against a Bank Guarantee for the equivalent amount valid for the warranty period.</td>
</tr>
<tr>
<td>Database systems &amp; BI</td>
<td>100%</td>
<td>On successful installation and commissioning of the Database systems and BI on submission of invoice with proof of delivery.</td>
</tr>
<tr>
<td>ETL &amp; Data Model</td>
<td>15%</td>
<td>Delivery of Base version of all application software and on successful completion of current state assessment, gap analysis and system specification definition Phase and on submission of Invoice and proof of Delivery.</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>On successful completion of customization and testing</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>On successful release of customized software to</td>
</tr>
<tr>
<td>Deliverables</td>
<td>% OF PAYMENT</td>
<td>STAGES (On completion of the activities)</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>production</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>On successful completion of Phase I and acceptance and sign off by the Bank and on submission of Invoice.</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>On successful completion of Phase II and acceptance and sign off by the Bank and on submission of Invoice.</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>On successful completion of Phase III and EDW SOLUTION and acceptance and sign off by the Bank and on submission of Invoice.</td>
</tr>
<tr>
<td>All other applications and software</td>
<td>50%</td>
<td>Delivery of Base version of all application software and on successful completion of current state assessment, gap analysis and system specification definition Phase and on submission of Invoice and proof of Delivery.</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>One month after successful completion of Phase II.</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>One month after successful completion of Phase III.</td>
</tr>
<tr>
<td>Solution Implementation cost</td>
<td>40%</td>
<td>One month after successful completion of Phase I and on submission of Invoice and proof of Delivery.</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>On successful completion of Phase II of the project</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>On successful completion of Phase III of the project</td>
</tr>
<tr>
<td>Customization cost</td>
<td>The effort for customization for items marked as “C” would be payable on successful implementation and Bank sign’s off of all the items marked as “C”;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Items marked as &quot;C&quot; refer to items in Annexure 01 - Functional Requirements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The cost of customization of gaps identified during product demonstration, current state study, training, functional requirements specifications study, system testing, user acceptance testing should be included by the Bidder as Implementation effort. The workaround provided by the SI may be acceptable to the Bank as a temporary solution but the Bank may still</td>
<td></td>
</tr>
<tr>
<td>Deliverables</td>
<td>% OF PAYMENT</td>
<td>STAGES (On completion of the activities)</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>insist on a particular functionality to be made</td>
<td></td>
<td>On delivery, installation and implementation of the hardware along with Environment Software and DB and submission of invoice and proof of delivery.</td>
</tr>
<tr>
<td>available as a regular feature of the software in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>which case the Bank shall decide the priority.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishment of Development and test environment</td>
<td>40%</td>
<td>On delivery, installation and implementation of the hardware along with Environment Software and DB and submission of invoice and proof of delivery.</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>Installation of EDW SOLUTION and making the systems available for development and testing and on acceptance by the Bank.</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>One year after acceptance or after completion of the warranty period whichever is later or against a Bank Guarantee for the equivalent amount valid equivalent period.</td>
</tr>
<tr>
<td>Establishment of Training environment</td>
<td>40%</td>
<td>On delivery, installation and implementation of the hardware along with OS and DB and submission of invoice and proof of delivery.</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>Installation of EDW SOLUTION and making the systems available for training and on acceptance by the Bank.</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>One year after acceptance or after completion of the warranty period whichever is later or against a Bank Guarantee for the equivalent amount valid for the equivalent period.</td>
</tr>
<tr>
<td>Charges for Testing Team</td>
<td>15%</td>
<td>On testing the base version and submitting the gap analysis</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>On testing and submission of test report on customized EDW SOLUTION</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>On sign off and release to production</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>On completion and sign off of Phase I</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>On completion and sign off of Phase II</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>On completion and sign off of Phase III</td>
</tr>
<tr>
<td>Establishment of Helpdesk environment</td>
<td>90%</td>
<td>On providing the infrastructure including resources</td>
</tr>
<tr>
<td>Deliverables</td>
<td>% OF PAYMENT</td>
<td>STAGES (On completion of the activities)</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>On completion and sign off of the Phase III of the project.</td>
</tr>
<tr>
<td>Training</td>
<td>90%</td>
<td>Will be paid as and when each batch of training is completed</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>Thereafter, On Completion and sign off of the Phase III or submission of Bank guarantee for equivalent amount extending up to the completion and sign off of phase III</td>
</tr>
<tr>
<td>AMC/ATS</td>
<td>100% (Quarterly Upfront)</td>
<td>The AMC/ATS shall commence on completion of the warranty period (3 years for hardware and One year for software/services). AMC of the hardware procured in second phase will start post the expiration of warranty i.e. 3 years from the date of purchase as per second phase.</td>
</tr>
<tr>
<td>Managed Services</td>
<td></td>
<td>The SI shall provide managed services towards database administration, system administration, development and application support. The managed services during the implementation of the project i.e., up to successful completion of Phase III shall be included by the bidder under implementation costs. The facilities management costs towards managed services will therefore commence after successful completion of Phase III of the project and sign off by the Bank. The bidder must note that the managed services should be available for all environments viz., production, development and test, training. The amount shall be paid monthly in arrears.</td>
</tr>
<tr>
<td>Helpdesk Services</td>
<td></td>
<td>The SI shall provide helpdesk services towards creation of infrastructure and commencement of EDW SOLUTION. The helpdesk services during the implementation of the project i.e., up to successful completion of Phase III shall be included by the bidder under implementation costs. The facilities management costs towards helpdesk services will therefore commence after successful completion of Phase III of the project and sign off by the Bank. The amount shall be paid monthly in arrears Technical Helpdesk – 6 Months Functional Helpdesk – Permanent</td>
</tr>
<tr>
<td>Deliverables</td>
<td>% OF PAYMENT</td>
<td>STAGES (On completion of the activities)</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Monitoring and performance</td>
<td>50%</td>
<td>On Delivery of the solution/tools/appliances</td>
</tr>
<tr>
<td>performance measurement tools</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>On successful Installation, and acceptance of the solution/tools/appliances and submission of invoice with Proof of Delivery and other documents and installation</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>After completion of the warranty period or against a Bank Guarantee for the equivalent amount valid for the warranty period.</td>
</tr>
<tr>
<td>Escrow</td>
<td></td>
<td>On Mutually agreed terms with the escrow agent</td>
</tr>
</tbody>
</table>

Note: Successful Completion refers to the sign off from the Bank

Technically Short listed bidder will provide the detailed unmasked Bill of Material

The fees payable by the Bank to SI shall be inclusive of all costs such as insurance, taxes (including service tax, as per the rates applicable), custom duties, levies, cess, transportation, installation, (collectively referred to as “Taxes”) that may be levied, imposed, charged or incurred and the Bank shall pay the fees due under this RFQ and subsequent agreement after deducting any tax deductible at source (“TDS”), as applicable. The Bidder will need to provide the details for the tax rates as considered in the pricing. This will be used for subsequent tax changes.

From the date of placing the order till the delivery of the systems, if any changes are brought in the duties such as excise/customs etc., by the Government resulting in reduction of the cost of the systems, the benefit arising out of such reduction shall be passed on to the Bank.

If there is any delay in delivery of the hardware, software, other applications/solutions ordered on account of the Bidder, then any increase in tax rate has to be borne by the bidder. However if any decrease in the tax rates, then the taxes at actual will be paid.

The Bank shall pay each undisputed invoice raised in accordance with this RFQ and subsequent agreement, within thirty (30) Working Days after its receipt unless otherwise mutually agreed in writing, provided that such invoice is dated after such amount have become due and payable under this RFQ and subsequent agreement.

Any objection / dispute to the amounts invoiced in the bill shall be raised by the Bank within reasonable time from the date of receipt of the invoice. Upon settlement of disputes with respect to any disputed invoice(s), the Bank will make payment within thirty (30) Working Days of the settlement of such disputes.

All out of pocket expenses, traveling, boarding and lodging expenses for the entire Term of this RFQ and subsequent agreement is included in the amounts and the SI shall not be entitled to charge any additional costs on account of any items or services or by way of any out of pocket expenses, including travel, boarding and lodging etc.

All the payments becoming due during each of the quarters of the contract period will be paid after the end of the respective quarter. The first quarter for this purpose will end after 3 months from date of signing of the contract or master agreement with the Bank.
N. LIQUIDATED DAMAGES

Time is the essence of the contract and the bank expects the SI to complete the project as per the implementation plan specified in the RFQ. If the SI fails

i. to deliver any or all hardware/software; or
ii. to complete the installation and commissioning as per the time schedule given in RFQ; or
iii. to commence services within the time specified as per the terms of the RFQ; or
iv. to perform the services and extend the support that meets the requirements as stipulated in the RFQ within the time specified in the RFQ; or
v. to maintain the uptime of the solution/component of the solution;

The Bank shall without prejudice to its other rights and remedies under and in accordance with the terms of the RFQ levy liquidated damages from payments due to the SI.

Inability of the SI either to provide the requirements as per scope or to meet the timelines as specified would attract liquidated damages.

For calculation of LD,

1. During Implementation:

1. The project contract price for calculation of LD is the order value excluding AMC/ATS charges and facilities management charges.

2. The overall LD during implementation will be to a maximum of 10% of the contract value.
   - If the SI fails to complete installation/implementation after delivery of the hardware as per the timelines for each phase prescribed in the RFQ; or
   - If the SI fails to install and implement all Software’s proposed as per the timelines for each phase prescribed in the RFQ; or
   - If the SI fails to provide customizations of software and applications as provided in his response or the gap found during evaluation

the bank would impose liquidated damages at the rate of 0.5% of order value of respective deliverable including installation & implementation charges as applicable for each calendar week of delay or part thereof.
   - If the SI fails to deliver end user requirements as per the scope under each phase the bank would impose liquidated damages at the rate of 0.5% of project contract price for each calendar week of delay or part thereof. If the SI fails to commence helpdesk and managed services as per the timelines stipulated in the RFQ then the bank would impose liquidated damages at the rate of 0.5% of order value of the respective services for each calendar week of delay or part thereof.

4. Part of week will be considered as full week.

5. For the purpose of liquidated damages scheduled completion date will be taken as date of issuance of acceptance certificate / sign off.

6. This would be in addition to any penalties levied on account of the system not meeting the defined service levels.
7. The Bank will use the hardware delivery schedule and project schedule provided by the SI as part of the RFQ response for applying the Liquidity Damages clauses.
2. After acceptance of product (Hardware & Software), if during usage in production any malfunctioning is noticed, the SI, within a reasonable timeframe as per the terms of the RFQ, shall rectify/replace the same to comply with the specifications/requirements, failing which, the Bank shall impose liquidated damages equivalent to a sum of one half of one percent (0.5%) of the cost of non-performing product. However the cap for LD is 5% of cost of non-performing product.

3. At any point during the Contract period the Resources allocated to the project for implementation, helpdesk, resources for testing, resources for managed services, SMEs, Domain experts, any other representative proposed by the SI should have adequate and relevant work experience in the relevant areas. The Bank has the right to review and reject resources whose competency levels are below expectations. On request by the Bank the SI has to produce details as per Annexure 19 - EDW Project Team profiles for the resources allocated to the project. In the event of non-adherence to the request of submitting profiles of the resources and obtaining Bank’s approval or failure of the SI to replace rejected resources with required competency expectations, the Bank shall impose liquidated damages equivalent to a sum of one half of one percent (0.5%) per week for each calendar week of delay or part thereof, of the implementation cost during implementation period of Phase 1, 2 and 3 and a sum of one half of one percent (0.5%) per week for each calendar week of delay or part thereof, of the total of FM Manpower cost post Phase 1, 2 and 3 of the RFQ till all the obligations of the SI are met.

4. Severity Definition during Live operations due to Infrastructure/Functional issues of the EDW SOLUTION

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>Type of Infrastructure</th>
<th>Function / Technology</th>
</tr>
</thead>
</table>
| Severity 1 | Criteria               | a. Any problem due to which 300 or more users cannot access the EDW SOLUTION infrastructure system or;  
b. EDW SOLUTION infrastructure System is unavailable for use or;  
c. Any problem due to which the Severity 1 infrastructure of the EDW SOLUTION is not available to the Bank’s users or does not perform according to the defined performance and query processing parameters required as per the RFQ or;  
d. Showstoppers involving major functional failure in the application. There are no usable workarounds available to troubleshoot the problem |
|            | Infrastructure & Systems | Infrastructure related to providing application systems to the Bank users comprising of but not limited to the following:  
a. EDW SOLUTION Enterprise Storage Array and SAN Switches  
b. EDW SOLUTION Tools / Application Servers  
c. EDW SOLUTION Database Servers / Appliance  
d. EDW SOLUTION Web servers  
e. EDW SOLUTION Backup solution |
| Severity 2 | Criteria               | a. Any problem due to which 10 to 300 users cannot access the EDW SOLUTION infrastructure system or;  
b. Any incident which is classified as “Severity 1” for which an acceptable workaround has been provided by the Bidder or;  
c. Any problem due to which the Severity 2 infrastructure of the EDW SOLUTION is not available to the Banks users or does not perform according to the defined performance and query processing parameters required as per the RFQ or;  
d. Users face severe functional restrictions in the application irrespective of the cause. |
### LEVEL

<table>
<thead>
<tr>
<th>Type of Infrastructure</th>
<th>Function / Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key business infrastructure, systems and support services comprising of but not limited to the following:</td>
<td></td>
</tr>
<tr>
<td>a. EDW SOLUTION Test &amp; Development and Training Infrastructure and Application</td>
<td></td>
</tr>
<tr>
<td>b. Helpdesk Infrastructure and Application</td>
<td></td>
</tr>
<tr>
<td>c. Anti Virus Infrastructure and Application</td>
<td></td>
</tr>
<tr>
<td>d. EDW SOLUTION Infrastructure Performance Monitoring Application</td>
<td></td>
</tr>
<tr>
<td>e. Infrastructure for providing access of dashboards, scorecards, etc. through mobility devices</td>
<td></td>
</tr>
<tr>
<td>f. Single Sign On Infrastructure</td>
<td></td>
</tr>
</tbody>
</table>

#### Severity 3 Criteria

- a. Any problem due to which 1 to 10 users cannot access the EDW SOLUTION infrastructure system or;
- b. Any incident which is classified as “Severity 2” for which a acceptable workaround has been provided by the Bidder or;
- c. Moderate functional restrictions in the application irrespective of the cause. Has a convenient and readily available workaround.

| Type of Infrastructure | a. All other residuary EDW SOLUTION Infrastructure not defined in “Severity 1” and “Severity 2” Infrastructure & Systems |

5. **Severity classification during UAT in Phase 1, 2 and 3**

<table>
<thead>
<tr>
<th>Severity</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td><strong>For UAT:</strong> Fatal Errors like General Protection Fault, system hangs and testing cannot proceed till error is fixed</td>
</tr>
<tr>
<td>High</td>
<td><strong>For UAT:</strong> Serious Program behavior inconsistent to functional requirements, or data rendered inconsistent and testing cannot proceed in that area till error is fixed</td>
</tr>
<tr>
<td>Medium</td>
<td><strong>For UAT:</strong> Minor errors to be corrected, but testing can proceed with work around solutions</td>
</tr>
<tr>
<td>Low</td>
<td><strong>For UAT:</strong> Suggestions/ Comments. Improves user-interface or functionality. General remarks not necessarily meant for improvement</td>
</tr>
</tbody>
</table>

6. The SI understands that the testing agency will deliver their testing services in accordance with the Project timeline detailed in “PROJECT TIMELINE” the main RFQ dated June 16, 2014. In order to achieve the satisfactory and timely results and execution, the SI will have to ensure the adequacy and experience of the testing resources that will be allocated to the EDW SOLUTION testing project to the full satisfaction of the Bank. In case of breach of the above by the SI, the Bank shall impose liquidated damages equivalent to a sum of one half of one percent (0.5%) of the cost of the testing agency per calendar week or part thereof, of delay till all the obligations of the SI are met.

**Important Note:**

The response and resolution by the Bidder pertaining to UAT related defects/gaps of Critical, High, Medium & Low would strictly be to meet the Section I: Project Timeline and go live requirements of the Bank.
2. Post Implementation:

During post implementation, liquidated damages will be levied for non-compliance to the uptime requirements. The intent of prescribing LD for uptime is with the view to ensure high availability of services at all times to the Bank. The overall LD post implementation period will be to a maximum of 10% of the AMC/ATS payable.

3. Uptime rules:

Wherever the SI monitors onsite, the downtime calculation starts from the time hardware/software/tool/solution etc. fails leading to denial of service. As long as there is no denial service to the bank, downtime does not arise.

Wherever bank monitors, the downtime starts from the time of reporting by the bank.

The SI should guarantee a minimum of uptime of 99.5% per month for the EDW SOLUTION and execute Service Level Agreement accordingly. The uptime will be calculated on monthly basis. Liquidated damages will be charged as below:

<table>
<thead>
<tr>
<th></th>
<th>Where the downtime is up to 216 minutes (Uptime above 99.5%)</th>
<th>NIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Where the downtime is above 216 minutes but less than or equal to 432 minutes (Uptime between 99%-99.5%)</td>
<td>Rs.10,000/- for every 30 minutes or part thereof for the downtime exceeding 216 minutes</td>
</tr>
<tr>
<td>3</td>
<td>Where the downtime is above 432 minutes but less than or equal to 864 minutes (Uptime between 98%-99%)</td>
<td>Rs 80000 + Rs.15,000/- for every 30 minutes or part thereof for the downtime exceeding 432 minutes</td>
</tr>
<tr>
<td>4</td>
<td>Where the downtime is above 864 minutes</td>
<td>No AMC/ATS charges will be paid for that month</td>
</tr>
<tr>
<td>5</td>
<td>On those days where the downtime exceeds 60 minutes (either continuously or total)</td>
<td>Additional Rs.25,000/- will be charged on those days</td>
</tr>
</tbody>
</table>

The right to levy the liquidated damages is in addition to and without prejudice to other rights / remedies available to the bank such as termination of contract, invoking performance guarantee and recovery of amount paid etc.

Liquidated damages of Rs.10,000/- shall be charged for every non-conformance with the service response and resolution time table as specified below:
<table>
<thead>
<tr>
<th>Issue Classification</th>
<th>For All Periods  (Post 30 days of Go-Live )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response Time</td>
</tr>
<tr>
<td>Severity 1</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Severity 2</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Severity 3</td>
<td>120 minutes</td>
</tr>
</tbody>
</table>

The bank reserves the right to recover the liquidated damages from any payment to be made under this contract for EDW SOLUTION.

While framing the rules of uptime and LD, the bank is guided by the following principles:

1. No double LD/ripple effect
2. Calculation of LD is simple
P. TERMS & CONDITIONS

1. Indemnity

The SI hereby indemnifies the Bank, and shall always keep indemnified and hold the Bank, its employees, personnel, officers, directors, agents and representatives (hereinafter collectively referred to as “Personnel”) save and harmless from and against any and all losses, liabilities, claims, actions, charges, costs and expenses (including attorneys' fees) resulting directly or indirectly from or in any way arising out of any claim, suit or proceeding brought against the Bank as a result of:

- Bank’s authorized / bona fide use of the Deliverables and /or the Services provided by SI under this RFQ; and/or
- an act or omission of the SI, including its employees, agents, subcontractors in the performance of the obligations of the SI under this RFQ; and/or
- claims made by employees or subcontractors or subcontractors’ employees, who are deployed by the SI, against the Bank; and/or
- breach of any of the term of this RFQ or breach of any representation or false representation or inaccurate statement or assurance or covenant or warranty of the SI under this RFQ; and/or
- any or all Deliverables or Services infringing any patent, trademarks, copyrights or such other Intellectual Property Rights; and/or
- breach of confidentiality obligations of the Bank contained in this RFQ; and/or
- Negligence or gross misconduct attributable to the SI or its employees or subcontractors.

If advised by the Bank, the SI shall at its own cost and expenses defend and settle any claim, litigations, suits, judgments, actions against the Bank.

The SI shall compensate the Bank for such financial loss, direct, suffered by the Bank if the SI fails to fix bugs and/or provide the modifications / enhancements / customization as required by the Bank as per the terms and conditions of this RFQ and subsequent Agreement and to meet the service levels.

The provisions under this clause shall survive the termination of the Contract.
1.1 Limitation of Liability

(a) The Parties acknowledge that circumstances may arise where on account of a breach by SI of the terms of this RFQ and subsequent Agreement, or other contractual or tortuous claim, the Bank may be entitled to damages from SI.

SI’s aggregate liability shall be subject to an overall limit of the Total Project Cost during the execution of the Project (Contract period)

(b) The limits specified in Sub-Clause (a) above shall not apply to:

(i) claims made by the Bank for claims relating to the loss of or damage to real property and tangible personal property and for bodily injury or death which is caused by sole gross negligence or sole willful misconduct of the SI or its employees;

(ii) claims against the Bank resulting from misconduct or gross negligence of the SI, its employees and subcontractors or from infringement of patents, trademarks, copyrights or such other Intellectual Property Rights or breach of confidentiality obligations;

(c) The Bank shall not be held liable for and is absolved of any responsibility or claim/litigation arising out of the use of any third party software or modules supplied by the SI as part of this RFQ. The Bank may be entitled to damages from SI on account of this.

In no event shall the Bank be liable for any indirect, incidental or consequential damages or liability, under or in connection with or arising out of this RFQ and subsequent agreement or the hardware or the software delivered hereunder, howsoever such liability may arise, provided that the claims against customers, users and service providers of the Bank would be considered as a direct claim.

(d) In circumstances where the SI indemnifies the Bank against any claims of infringement of any Intellectual Property rights, the SI must at its own expense promptly:

1) Procure the unrestricted right for the Bank to continue using and receiving the same; or

2) Make or procure on Bank’s behalf such alterations, modifications, adjustments or substitutions to all or any parts of the same so that it becomes non-infringing without affecting the relevant part of Deliverables or Services or prejudice their compliance with their terms of the specifications or requirements of RFQ; or

3) Substitute a non-infringing version of the infringing item of at least functional equivalence conforming to applicable requirements under the RFQ.

(e) If SI is unable to provide any of the forgoing alternatives, the Bank may at its own option terminate forthwith the subsequent Agreement to be entered into with the SI.

(f) The Parties hereby acknowledge that SI shall not be responsible for any special, incidental, indirect and consequential damages.
(g) SI will, upon payment or satisfaction of such indemnity in full, be subrogated to all rights of the Bank with respect to the claims to which such indemnification relates.

**Extension of Contract Post Expiry**

Considering the effort and investments required in the arrangement, and the complexities involved in the project and other relevant factors, the Bank has the option of revisiting or renewing the arrangement after the expiry of the contract period, on mutually agreed terms. However, SI has no right to claim renewal or extension of the contract beyond the contract period.

**Reduction of prices.**

The Bank expects the benefits from any un-anticipated decrease in technology infrastructure costs, over the term of the contract due to reduction of prices, efficient use of IT infrastructure / reduction of statutory charges, etc. and operations management methods that yield more efficient operations, to be passed on through re-negotiation. No conflict between the System Integrator and the Bank will cause cessation of services.

1.2 **Bank Indemnification Obligation**

Bank will defend, indemnify and hold harmless the SI from and against any third party suit, proceedings damages, judgments, cost and expenses (including reasonable attorney fees) relating to any infringement claim by a third party to the extent based on any content or other materials provided to the SI by or on behalf of Bank or the access and use by the SI of any Bank provided software or material in connection with the SI's performance of services hereunder. SI shall complete the functional setup in the stipulated timeline but shall not be held responsible for delays and failures for reasons solely attributable to the Bank.

2. **Termination of Contract**

I. The Bank reserves the right to terminate the contract placed on the SI in the following circumstances:

   a. The SI commits a breach of the terms and conditions of the Bid/Contract and fails to remedy such breach for a period of 30 days, following receipt of written notice from the Bank specifying the breach or breaches setout below:

      i. Failure to furnish the performance guarantee within the time stipulated in RFQ.

      ii. Delay or deficiency in the completion or implementation of the Project or any activity contemplated under this RFQ and subsequent Contract within the applicable times schedules.

      iii. Non conformity of the Deliverables or Services with the terms and Specifications of the RFQ as observed during post delivery audit or otherwise.

      iv. Serious discrepancy in the quality of service / hardware / software expected during the implementation, rollout and subsequent maintenance process.
v. An Insolvency Event occurs in relation to the SI or it ceases to carry on its business or substantially the whole of its business; or

vi. There is a change of control of the SI (and for these purposes change of control means there is a change in the legal, beneficial or equitable ownership of 50% or more of the aggregate of all voting equity interests in the SI) and the person or persons acquiring control of the SI are persons whom Bank reasonably consider to be competitors of Bank or organizations about which Bank has reasonable grounds for believing will not be able to meet the material obligations contained in the bid/contract.

vii. Breach of terms of Contract by the SI which in the opinion of the Bank is material.

The Bank also reserves the right to cancel the AMC or ATS and terminate the respective agreements for the same, if the Services provided by the SI are not satisfactory and recover any payment made by the Bank for the provision of AMC or ATS, not rendered to the Bank. In the event of any deficiency, defect or inadequacy of the Deliverables or Services, provided by SI to the Bank, the Bank can call upon the SI to procure the same or similar Deliverables or Services, from alternative sources at the risk, cost and responsibility of SI. In the event of failure of SI to remove or rectify the deficiency, defect or inadequacy of the Deliverables or Services, to the satisfaction of the Bank, the Bank reserves the right to procure the same or similar Deliverables or Services from alternative sources at the risk, cost and responsibility of SI. In addition, the SI will have to bear excess costs up to 15% of the undelivered/defective goods and services.

b. In the event that SI does not perform satisfactorily or there is a delay in the performance of its obligations under the bid, the RFQ, the AMC or the ATS, the Bank reserves the right to source the remainder of the Deliverables and Services from another entity of its choice by giving three months notice of the same to SI. In the event of a termination of the contract by Bank in accordance with the above terms, SI shall fully compensate the Bank for any expenditure incurred by the Bank in executing or obtaining the execution of the remainder of the Project.

c. In the event of a termination of the Contract by the Bank, SI shall do all such acts or deeds as may be required to fully compensate the Bank for all expenditure incurred by the Bank in executing or obtaining the execution of the Project, till such time of termination and for any removal and / or relocation that may be required by the Bank following such termination. The Bank shall not bear any liability in this regard. If the agreement is cancelled during the term of the AMC or ATS, if contracted, the Bank shall deduct payment on pro-rata basis for the unexpired period of the Contract.

d. In the event of the Bank communicating its intention to terminate the Contract, SI shall continue to render such Services as it is required to under this RFQ/bid and subsequent Contract, including but not limited to Facilities Management, support and maintenance for the Deliverables for a period up to six months following notice of intention to termination, until such time that the Bank indicates that it has been able to make
alternative arrangements for the provision of such Services, in accordance with the terms, including those pertaining to payment, contained herein.

i. **Other Rights or Remedies**

Termination of the contract in whole or part is without prejudice to any other rights or remedies that either Party may have under the RFQ and the subsequent Agreement including the invocation of the performance guarantees by the Bank, and does not affect any accrued rights or liabilities of either Party at the date of termination.

ii. **Effects of Termination**

Notwithstanding termination of the RFQ and the subsequent contract in whole or in respect of any parts of the Services and/or Deliverables for any reason, the contract continues to be in force to the extent necessary to give effect to those of its provisions which expressly or impliedly have effect after termination; and

Where Bank terminates any Part of the Services and/or Deliverables, the Parties shall continue to perform their respective obligations under the contract in connection with that portion of the Services and/or Deliverables in respect of which there has been no termination.

iii. **Consequence of Termination**

I. If Bank terminates the contract in whole or in respect of any part of the Project in accordance with its terms, it will incur no liability to SI as a result of such termination, other than:

   i. the Charges or any other amounts due to SI up to the date of termination;
   
   ii. amounts payable for any Services already performed at the date of the termination;
   
   iii. amounts payable for Services yet to be performed but which the parties agree not to terminate;
   
   iv. in the event of partial termination, amounts payable for other portions of the Project and
   
   v. The Reverse Transition Fees payable as per reverse transition plan subject to Reverse Transition Services being provided to the satisfaction of the Bank.

II. In case of any loss or damage due to default on the part of the SI in performing any of its obligations with regard to executing the Service(s) under the Contract/Agreement, the SI shall compensate Bank for any such loss, damages or other costs, incurred by Bank. Additionally, the sub SI and other members of its team shall continue to perform all its obligations and responsibilities under the Contract/Agreement in an identical manner as were being performed hitherto before in order to execute an effective transition and to maintain business continuity. All third parties shall continue to perform all/any functions as stipulated by Bank and as may be
proper and necessary to execute the service(s) under the Contract/Agreement in terms of the Bid and the Contract/Agreement.

III. In the event of termination of the Contract/Agreement due to any cause whatsoever, [whether consequent to the stipulated term of the Contract/Agreement or otherwise], Bank shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the Service(s) which the SI shall be obliged to comply with and take all available steps to minimize loss resulting from that termination/breach, and further allow the next successor SI to take over the obligations of the erstwhile SI in relation to the execution/continued execution of the scope of the Contract/Agreement.

IV. In the event that the termination of the Contract/Agreement is due to the expiry of the term of the Contract/Agreement, a decision not to grant any (further) extension by Bank, the SI herein shall be obliged to provide all such assistance to the next successor SI or any other person as may be required and as Bank may specify to enable the successor to adequately provide the Service(s) hereunder, even where such assistance is required to be rendered for a reasonable period that may extend beyond the term/earlier termination hereof.

V. Nothing herein shall restrict the right of Bank to invoke the Performance Bank Guarantee and other guarantees, securities furnished, enforce the Indemnity and pursue such other rights and/or remedies that may be available to Bank under law or otherwise.

VI. The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of the Contract/Agreement that are expressly or by implication intended to come into or continue in force on or after such termination.

The SI understands the largeness of this Project and that it would require tremendous commitment of financial and technical resources for the same from the SI for the tenure of this tender and subsequent Agreement. The Parties therefore agree and undertake that an exit at any point in time resulting due to expiry or termination of this tender and subsequent Agreement for any reason whatsoever would be a slow process over a period of six (6) months, and only after completion of the SI’s obligations under a reverse transition mechanism. During this period of Reverse Transition, the SI shall continue to provide the Deliverables and the Services in accordance with this tender and subsequent Agreement and shall maintain the agreed Service levels.

Upon Bank’s request, with respect to (i) any agreements for maintenance, disaster recovery services or other third-party applications/solutions, and any Deliverables not owned by the SI, being used by SI to provide the Services and (ii) the assignable agreements, SI shall, use its reasonable commercial
endeavors to transfer or assign such agreements and SI Equipment to Bank and its designee(s) on commercially reasonable terms mutually acceptable to both Parties.

Upon Bank’s request in writing, SI shall be under an obligation to transfer to Bank or its designee(s) the Deliverables being used by SI to perform the Services free and clear of all liens, security interests, or other encumbrances.

As part of Reverse Transition Services, Bank shall have the right, and SI shall not object to or interfere with such right, to contract directly with any SI’s subcontractor.

Procedure for transition and migrating to the new System Integrator is as follows:

- Time frame for parallel run
- Skill transfer mechanism and in specific cases the human resources requirement
- Reverse Transition Plan

Reverse Transition Services are the services provided by SI to Bank during the reverse transition period which will start after completion of the 6 months period to facilitate an orderly transfer of the Services to Bank or to an alternative third party service provider nominated by Bank. Where Bank elects to transfer responsibility for service delivery to multiple Bidders, Bank will nominate a services provider who will be responsible for all dealings with such Bidders regarding the delivery of Reverse Transition Services.

The Reverse Transition Services, to be provided by the SI to the Bank shall include the following:

**Software**

The SI shall ensure that all Software Vendors shall enter into separate annual maintenance agreements for maintenance of their respective Software provided under this RFQ and subsequent contract, upon commercially reasonable term and terms and conditions as available currently to the SI or better than the same.

The SI shall provide appropriate training to the Bank’s personnel or its designee to enable them to maintain the Software provided under this RFQ and subsequent contract. SI shall ensure that if any data migration is required, the same shall be carried by the SI and a handover to be provided for the smooth transition of the operations.

**Hardware**

The SI shall provide a list of sub-contractors used by the SI for maintaining the hardware (including inter alia, servers, PC’s, networking, switches, routers etc.) under this RFQ and subsequent contract and shall ensure that all such sub-contractors shall enter into separate annual maintenance agreements for maintenance of the hardware maintained under this RFQ and subsequent contract, upon commercially reasonable terms and conditions as available currently to the SI or better than the same.
Knowledge transfer

The SI shall provide such necessary information, documentation to the Bank or its assignee, for the effective management and maintenance of the Deliverables under this RFQ. SI shall provide documentation (in English) in electronic form of all existing procedures, policies and programs required to support the Services. Such documentation will be subject to the limitations imposed by SI’s Intellectual Property Rights of this RFQ and shall include:

- Operational run book for EDW SOLUTION
- Listing of all events being monitored and the monitoring frequency
- Listing of all third (3rd) party Vendors that have been directly relevant to the provision of the Services and that may be the subject of a request by Bank or the replacement service provider for assignment, cancellation or renovation

Parallel Run

The SI agrees that the parallel-run shall continue for a period of Six Months, post the notice period of three months, during which the SI shall adequately supervise the hand-over of the various components of the SI’s functions under this RFQ.

SI must consult with Bank on any Third Party Contracts between SI and Third Parties that are necessary or useful for Bank or a Third Party to perform the Services and arrange for transfer or assignment of such Third Party Contracts that Bank wishes to have transferred or assigned to Bank or a Third Party designated by Bank on commercially reasonable terms mutually acceptable to both Parties.

Warranties

All the warranties held by or in the name of the SI shall be assigned or transferred “As Is” in the name of the Bank. The SI shall execute any and all such documents as may be necessary in this regard.

The Parties shall return confidential information and will sign-off and acknowledge the return of such confidential information.

SI shall provide all other Services as may be agreed by the Parties in connection with the Reverse Transition Services. However, in case any other services, in addition to the above are needed, the same shall be scoped & priced. Reverse Transition Services shall be charged based on SI’s then current time and materials rates.

The SI recognizes that considering the enormity of the Assignment, the Transition Services listed herein are only indicative in nature and the SI agrees to provide all assistance and services required for fully and effectively transitioning the Services provided by the SI under this tender and subsequent Agreement, upon termination or expiration thereof, for any reason whatsoever.
3. Compliance with Laws

Compliance with all applicable laws: The SI shall observe, adhere to, abide by, comply with and notify the Bank about all laws in force or as are or as made applicable in future, pertaining to or applicable to them, their business, their employees or their obligations towards them and all purposes of this RFQ and shall indemnify, keep indemnified, hold harmless, defend and protect the Bank and its employees/officers/staff/ personnel/representatives/agents from any failure or omission on its part to do so and against all claims or demands of liability and all consequences that may occur or arise for any default or failure on its part to conform or comply with the above and all other statutory obligations arising there from.

Compliance in obtaining approvals/permissions/licenses: The SI shall promptly and timely obtain all such consents, permissions, approvals, licenses, etc., as may be necessary or required for any of the purposes of this project or for the conduct of their own business under any applicable Law, Government Regulation/Guidelines and shall keep the same valid and in force during the term of the project, and in the event of any failure or omission to do so, shall indemnify, keep indemnified, hold harmless, defend and fully compensate the Bank and its employees/ officers/ staff/ personnel/ representatives/agents from and against all claims or demands of liability and all consequences that may occur or arise for any default or failure on its part to conform or comply with the above and all other statutory obligations arising there from and the Bank will give notice of any such claim or demand of liability within reasonable time to the SI.

This indemnification is only a remedy for the Bank. The SI is not absolved from its responsibility of complying with the statutory obligations as specified above. Indemnity would exclude indirect, consequential and incidental damages. However indemnity would cover damages, loss or liabilities suffered by the Bank arising out of claims made by its customers and/or regulatory authorities.

4. Assignment

The SI agrees that the SI shall not be entitled to assign any or all of its rights and or obligations under this RFQ and subsequent Agreement to any entity including SI’s affiliate without the prior written consent of the Bank.

The SI will ensure that the resources assigned to the project will not be replaced without obtaining the prior written permission of the Bank. In case the resources are replaced under unavoidable circumstances, the SI will provide a written notice of one month in advance to the Bank and will make available an equal or more qualified replacement.

SI agrees to plan for adequate resources for activities and ensures that there shall be minimum overlap of responsibilities amongst the assigned project resources.

In the event the proposed solution fails to meet the SLA service levels and the scope and objectives of the RFQ (and addenda), the SI agrees to upgrade, modify or replace the solution within the agreed contract price.

The SI and OEM ensure that these resources are on the ground in the project on a full time onsite basis. The bank may verify the same through a review of resumes by reviewing the details of
National Skills Registry ID (maintained by NASSCOM) and organizational photo id, timesheets or by taking an undertaking from the SI & OEM and any other means necessary.

In case of any change in the constitution of the Bank, including but not limited to merger, amalgamation, take over, consolidation etc. whether by operation of law or otherwise, the RFQ and subsequent agreement shall continue with the successor entity as if it was the original party thereto. Further, the Bank shall be entitled to assign/transfer whole or part of the rights under the RFQ and subsequent agreement with written notice to SI and no consent of /from SI shall be necessary, and the assignment shall be binding on SI from the date of such notice.

5. **Insurance**
   The SI shall procure insurance coverage to include comprehensive general liability insurance, third party accident insurance and all risk property insurance in respect of the Deliverables and the Services provided by the SI under this RFQ and subsequent Agreement to insure the Deliverables and the Bank against losses arising out of this RFQ and subsequent Agreement and such insurance shall be valid throughout the period of the contract and pay all premia and other sums payable for that purpose. The insurance policies shall be taken in the joint names of SI and the Bank. The SI shall cause its insurers to issue certificates of insurance evidencing that the coverage and policy endorsements required under this RFQ are maintained in force and that not less than thirty (30) days’ written notice shall be given to the Bank prior to its expiry. Any modification or cancellation of the insurance policies shall be done only with the prior written consent of the Bank. The SI shall provide copies of the insurance certificates to the Bank. The insurers selected by the SI shall be of good standing and authorized to conduct business in all jurisdictions in which this tender and subsequent Agreement is to be performed.

In the case of loss or damage or other event that requires notice or other action under the terms of any insurance coverage, the SI shall be solely responsible to take such action. The SI shall provide the Bank with contemporaneous notice and with any other information that the Bank may request regarding such event. The Bank shall provide to the SI reasonable assistance and co-operation, at the SI’s expense, with respect to any insurance claim. The SI shall not hold the Bank responsible for rejection of the insurance claims of the SI by the insurer.

The SI’s obligation to maintain insurance coverage hereunder shall be in addition to, and not in lieu of, the SI’s other obligations hereunder, and the SI’s liability to the Bank shall not be limited to the amount of coverage required hereunder.

6. **Inspection of Records**
   All SI records with respect to any matters covered by this RFQ and subsequent agreement shall be made available to the Bank or its designees at any time during normal business hours, as often as the Bank deems necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Said records are subject to examination. The Bank may demand and upon such demand being made, Bank shall be provided with any document, data, material or any other information, which it may require, to enable it to assess the progress of the Services. Bank may appoint an auditor, who would conduct the necessary audit and submit its findings to the Bank. The cost of the audit will be borne by the Bank. The scope of such audit would be limited to Service Levels being covered under this RFQ and subsequent
contract, and financial information would be excluded from such inspection, which will be subject to the requirements of statutory and regulatory authorities. Any deviations or contravention identified as a result of such audit/assessment would need to be rectified by the SI. The SI’s records and sites managed for the Bank shall also be subject to Regulator/ Bank inspection. Such audit should not be conducted more than once a year. The designees of the Bank shall not be a competitor of SI.

7. Escrow Mechanism
The Bank and the SI shall mutually agree to appoint an escrow agent to provide escrow mechanism for the deposit of the source code for all the software applications of EDW SOLUTION supplied/procured by the SI to the Bank in order to protect its interests in an eventual situation. In case of a disagreement between the Bank and the SI regarding appointment of an escrow agent, the Bank shall appoint an escrow agent in its entire discretion which shall be final and binding on the SI. The Bank and the SI shall enter into a tripartite escrow agreement with the designated escrow agent, which will set out, inter alia, the events of the release of the source code and the obligations of the escrow agent. Costs for the Escrow will be borne by the Bank. As a part of the escrow arrangement, the SI is also expected to provide a detailed code documentation of all the software applications of EDW SOLUTION which have been duly reviewed by an external independent organization. Source Code of any Proprietary software (whether SI owned or owned by a 3rd party) shall not be deposited in any Escrow.

The Escrow arrangement suggested by the SI shall not be binding on the Bank. The Bank reserves the right to explore alternate escrow mechanisms based on the Bank's existing practices. The Bank and the SI may enter into such escrow arrangement that is mutually agreed upon by the two parties.

8. Publicity
The SI shall not make any press releases or statements of any kind including advertising using the name or any service marks or trademarks of the Bank regarding the contract or the transactions contemplated hereunder without the explicit written permission of the Bank. The SI shall not, use the Bank's name as a reference, without the express written permission of the Bank first being obtained, and then only strictly in accordance with any limitations imposed in connection with providing such consent. The Bank agrees not to use the SI’s trade or service marks without the SI’s prior written consent.

9. Solicitation of Employees
During the term of the Contract and for a period of two years after any expiration of the contract period, termination or cancellation of the Contract, whichever is later, both the parties agree not to approach, attempt to approach, entice or make any offer to hire, solicit, or accept solicitation (either directly, indirectly, or through a third party) for their employees who were directly involved in this contract, except as the parties may agree on a case-by-case basis. The parties agree that for the period of the contract and two year thereafter, neither party will cause or permit any of its directors or employees who have knowledge of the agreement to directly or indirectly solicit for employment of the key personnel working on the project contemplated in this proposal except with the written
consent of the other party. The above restriction would not apply to either party for hiring such key personnel who (i) initiate discussions regarding such employment without any direct or indirect solicitation by the other party (ii) respond to any public advertisement placed by either party or its affiliates in a publication of general circulation or (iii) has been terminated by a party prior to the commencement of employment discussions with the other party.

The non-solicitation obligations in the clause shall be applicable for the duration for the contract and two years thereafter.

10. Monitoring and Audit
Compliance with security best practices may be monitored by periodic computer security audits performed by or on behalf of the Bank or Regulatory authorities. The periodicity of these audits will be decided at the discretion of the Bank. These audits may include, but are not limited to, a review of: access and authorization procedures, physical security controls, backup and recovery procedures, security controls and program change controls. To the extent that the Bank deems it necessary to carry out a program of inspection and audit to safeguard against threats and hazards to the confidentiality, integrity, and availability of data, the SI shall afford the Bank's representatives access to the SI’s facilities, installations, technical resources, operations, documentation, records, databases and personnel. The SI must provide the Bank access to various monitoring and performance measurement systems (both manual and automated). The Bank has the right to get the monitoring and performance measurement systems (both manual and automated) audited without prior approval / notice to the SI.

11. Guarantees
SI shall guarantee that the software and allied components used to service the Bank are licensed and legal. All hardware and software must be supplied with their original and complete printed documentation.

The SI also undertakes to keep all the licenses in force till the expiry of the contract period by renewing them as and when necessary.

Warranty

The warranty shall not apply in the event that failure of a deliverable to conform to its corresponding specifications has resulted from modification of the deliverable after delivery by the SI if such modification was not made by or on behalf of the SI.

12. Force Majeure
Either party shall not be liable or responsible for failure to perform or delay in performance of any of its obligations under this RFQ or subsequent agreement if such failure or delay is due to or attributable solely to Force Majeure. For purposes of this Clause, "Force Majeure" means Acts of God acts of war, and natural calamities.
If a Force Majeure situation arises, the party affected by such event shall promptly notify the other party in writing of such event and the cause thereof within fifteen calendar days. Unless otherwise directed by the Bank in writing, the SI shall continue to perform SI’s obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

In such a case, the time for performance shall be extended by Bank. If the duration of delay continues beyond a period of one month, the parties shall hold consultations with each other in an endeavor to find a solution to the problem and in the event of not finding a solution; Bank shall be entitled to terminate the Contract without being responsible or liable to any damages. Notwithstanding the above, decision of Bank shall be final and binding upon the SI.

13. Resolution of Disputes
The Bank and the SI shall make every effort to resolve amicably, by direct informal negotiation between the respective project managers of the Bank and the SI, any disagreement or dispute arising between them under or in connection with the contract.

If the Bank project manager and SI project manager are unable to resolve the dispute they shall immediately escalate the dispute to the senior authorized personnel designated by the SI and Bank respectively.

If after thirty days from the commencement of such negotiations between the senior authorized personnel designated by the SI and Bank, the Bank and the SI have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolution through formal arbitration.

All questions, claims, disputes or differences arising under and out of, or in connection with the contract or carrying out of the work whether during the progress of the work or after the completion and whether before or after the determination, abandonment or breach of the contract shall be referred to arbitration by a sole Arbitrator acceptable to both parties failing which the number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as the presiding arbitrator. The Arbitration and Reconciliation Act, 1996 or any statutory modification thereof shall apply to the arbitration proceedings and the venue of the arbitration shall be Mumbai. The arbitration proceedings shall be conducted in English language. Subject to the above, the courts of law at Mumbai alone shall have the jurisdiction in respect of all matters connected with the Contract. The arbitration award shall be final, conclusive and binding upon the Parties and judgment may be entered thereon, upon the application of either Party to a court of competent jurisdiction. Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides.
Notwithstanding the existence of a dispute, and/or the commencement of arbitration proceedings, (a) the SI shall not be entitled to suspend the Service(s) as specified under the RFQ and the subsequent agreement and (b) without prejudice to exercise of any other rights and remedies that either party may have under the RFQ and the subsequent agreement including the invocation of the performance guarantees by the Bank, and termination of the Contract.

If a notice has to be sent to either of the parties following the signing of the contract, it has to be in writing and shall be first transmitted by facsimile transmission by postage prepaid registered post with acknowledgement due or by a reputed courier service, in the manner as elected by the Party giving such notice. All notices shall be deemed to have been validly given on (i) the business date immediately after the date of transmission with confirmed answer back, if transmitted by facsimile transmission, or (ii) the expiry of five days after posting if sent by registered post with A.D., or (iii) the business date of receipt, if sent by courier.

14. Data Acquisition and Data Cleaning
The SI factors all effort to liaise, interact, develop tools, correspond etc. with the source system Vendors to obtain the data as desired by the EDW SOLUTION. Also, source system vendors should provide source data in the format agreed between the SI and the Bank and the responsibility of getting this data from the existing source system vendors is with the SI. The Bank will liaise on behalf of the SI, but the responsibility will be with the SI including any payments to the existing vendors for the same.

It is the bank's responsibility to provide any missing data elements. SI will develop a utility to input missing data element, but ownership of getting the missing data lies with the bank.

15. Annual Technical Support
SI agrees to be responsible for the following during ATS: Bug fixing, enhancement, modifications, customization, patches, upgrades due to statutory, regulatory, industry, Bank specific changes (including installation of new upgrades).

16. End of Sale
SI agrees to replace any components if announced at the End of Sale during the contract period with an equivalent or higher specification product within the contract price quoted as part of the response to this RFQ.

17. Governing Law and Jurisdiction
This RFQ document shall be governed and construed in accordance with the laws of India. The courts of Mumbai alone and no other courts shall be entitled to entertain and try any dispute or matter relating to or arising out of this RFQ document.
19. Corrupt and Fraudulent practice

As per Central Vigilance Commission (CVC) directives, it is required that Bidders / Suppliers / Contractors observe the highest standard of ethics during the procurement and execution of such contracts in pursuance of this policy:

“Corrupt Practice” means the offering, giving, receiving or soliciting of anything of values to influence the action of an official in the procurement process or in contract execution

“Fraudulent Practice” means a misrepresentation of facts in order to influence a procurement process or the execution of contract to the detriment of the Bank and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Bank of the benefits of free and open competition

The Bank reserves the right to reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

The Bank reserves the right to declare a bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract if at any time it determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

20. Other terms:

The Parties agree to amend the Contract from time to time to align with the legislative, regulatory, legal and judicial changes affecting the purpose, project, services, and the parties.

20. Waiver

No failure or delay on the part of either party relating to the exercise of any right, power, privilege or remedy provided under this RFQ or subsequent agreement with the other party shall operate as a waiver of such right, power, privilege or remedy or as a waiver of any preceding or succeeding breach by the other party nor shall any single or partial exercise of any right, power, privilege or remedy preclude any other or further exercise of such or any other right, power, privilege or remedy provided in this RFQ or subsequent agreement all of which are several and cumulative and are not exclusive of each other or of any other rights or remedies otherwise available to either party at law or in equity.

21. Violation of Terms

The Bank clarifies that the Bank shall be entitled to an injunction, restraining order, right for recovery, specific performance or such other equitable relief as a court of competent jurisdiction may
deem necessary or appropriate to restrain the SI from committing any violation or enforce the performance of the covenants, obligations and representations contained in this RFQ. These injunctive remedies are cumulative and are in addition to any other rights and remedies the Bank may have at law or in equity, including without limitation a right for recovery of any amounts and related costs and a right for damages.

22. Addition / Deletion of qualified offerings

Both parties agree that the intent of this tender is to establish an initial set of service offerings. The Bank recognizes that, as the use of these services expands, it is possible that additional services and/or service categories will be needed. In addition, the Bank recognizes that from time to time hardware and software products that are provided as part of SI services will be upgraded or replaced as technology evolve. Replacement and/or supplemental hardware and software products that meet or exceed the minimum proposal requirements may be added with the prior approval of the Bank. For this purpose, a Change Order Procedure will be followed. Bank may request a change order in the event of actual or anticipated change(s) to the agreed scope of work, services, deliverables and schedules. The SI shall prepare a change order reflecting the actual or anticipated change(s) including the impact on deliverables schedule. The SI shall carry out such services as required by the Bank. The terms of the contract would apply to such incremental deliverables and services.

The SI shall agree that the price for incremental offering cannot exceed the original proposed cost and the Bank reserves the right to re-negotiate the price. At the unit rates provided for TCO calculations the Bank has the right to order as much as it wants at those rates. However, this excludes the hardware to be provided by the SI at their cost due to under sizing.

The Bank is under no obligation to honor such requests to add service categories or amend this contract.

As a method for reviewing SI services and Bank requirements, the Bank will sponsor regular reviews to allow an exchange of requirements and opportunities.

All quantities mentioned in this RFQ are indicative. The quantities of components to be procured as part of this tender can be varied by the Bank. This also includes the right to modify the number of source systems, targets, reports & statements, dash boards, score cards, concurrent users etc.

The scope as defined in the RFQ is what is covered in the commercial proposal, and anything not explicitly mentioned in scope would be treated as out of scope

23. Third Party Components

The SI shall specify any third-party software, tools, products or materials required for performing the services or incorporated into or provided in connection with a deliverable ("Third-Party
Components”). The SI shall be responsible for obtaining appropriate license for such Third-Party Components and for paying applicable license fee.

24. Information ownership
All information processed, stored, or transmitted by SI equipment belongs to the Bank. By having the responsibility to maintain the equipment, the SI does not acquire implicit access rights to the information or rights to redistribute the information. The SI understands that civil, criminal, or administrative penalties may apply for failure to protect information appropriately.

25. Privacy and security safeguards
The SI shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the SI under this contract or existing at any Bank location. The SI shall develop procedures and implementation plans to ensure that IT resources leaving the control of the assigned user (such as being reassigned, removed for repair, replaced, or upgraded) are cleared of all Bank data and sensitive application software. The SI shall also ensure that all subcontractors who are involved in providing such security safeguards or part of it shall not publish or disclose in any manner, without the Bank's prior written consent, the details of any security safeguards designed, developed, or implemented by the SI under this contract or existing at any Bank location.

26. Confidentiality

“Confidential Information” means any and all information whether oral or written that is or has been received by the SI ("Receiving Party") from the Bank ("Disclosing Party") and that: relates to the Disclosing Party; is disclosed in circumstances where the Receiving Party would reasonably understand that the disclosed information would be confidential or is prepared or performed by or on behalf of the Disclosing Party by its employees, officers, directors, agents, representatives or consultants.

Without limiting the generality of the foregoing, Confidential Information shall mean and include any information, data, analysis, compilations, notes, extracts, materials, reports, drawings, designs, specifications, graphs, layouts, plans, charts, studies, memoranda or other documents, or materials relating to the licensed software, the modules, the program documentation, the source codes, the object codes and all enhancements and updates, services, systems processes, ideas, concepts, formulas, methods, know how, trade secrets, designs, research, inventions, techniques, processes, algorithms, schematics, testing procedures, software design and architecture, computer code, internal documentation, design and function specifications, product requirements, problem reports, analysis and performance information, business affairs, projects, technology, finances (including revenue projections, cost summaries, pricing formula), clientele, markets, marketing and sales programs,
client and customer data, appraisal mechanisms, planning processes etc. or any existing or future plans, forecasts or strategies in respect thereof.

“Confidential Materials” shall mean all tangible materials containing Confidential Information, including, without limitation, written or printed documents and computer disks or tapes, whether machine or user readable. Information disclosed pursuant to this clause will be subject to confidentiality forever.

Nothing contained in this clause shall limit SI from providing similar services to any third parties or reusing the skills, know-how and experience gained by the employees in providing the services contemplated under this clause, provided further that the SI shall at no point use the Bank’s confidential information or Intellectual property.

The Receiving Party shall, at all times regard, preserve, maintain and keep as secret and confidential all Confidential Information and Confidential Materials of the Disclosing Party howsoever obtained and agrees that it shall not, without obtaining the written consent of the Bank disclose or publish the same. Confidentiality provision must apply to both the parties and must be mutual. The confidentiality obligations shall survive the expiry or termination of the agreement between the SI and the Bank and for a period of 2 years thereafter. In the event of earlier termination of the Contract, the Parties hereby agree to maintain the confidentiality of the Confidential Information for a further period of two years from the date of such termination.

The Receiving Party shall be responsible for ensuring that the usage and confidentiality by its directors, partners, advisers, agents or employees, sub contractors and contractors is in accordance with the terms and conditions and requirements of this RFQ; or

Unless otherwise agreed herein, use of any such Confidential Information and materials for its own benefit or the benefit of others or do anything prejudicial to the interests of the Disclosing Party or its customers or their projects.

In maintaining confidentiality hereunder the Receiving Party on receiving the Confidential Information and Materials agrees and warrants that it shall:

(i) Take at least the same degree of care in safeguarding such Confidential Information and materials as it takes for its own confidential information of like importance and such degree of care shall be at least, that which is reasonably calculated to prevent such inadvertent disclosure, (ii) Keep the Confidential Information and Confidential Materials and any copies thereof secure and in such a way so as to prevent unauthorized access by any third party, and

(iii) Limit access to such Confidential Information and materials strictly on a "need to know" basis to those of its directors, partners, advisers, agents or employees, sub contractors and contractors who are directly involved in the consideration/evaluation of the Confidential Information and bind each of its directors, partners, advisers, agents or employees, sub contractors and contractors so involved to protect the Confidential Information and materials in the manner prescribed in this document.
(iv) Maintain and use the Confidential Information only for the purposes of the Contract and only as permitted herein.

(v) Upon discovery of any unauthorized disclosure or suspected unauthorized disclosure of Confidential Information, promptly inform the Disclosing Party of such disclosure in writing and immediately return to the Disclosing Party all such Information and materials, in whatsoever form, including any and all copies thereof.

(vi) The Receiving Party who receives the confidential information and materials agrees that on receipt of a written demand from the Disclosing Party immediately return all written Confidential Information, Confidential materials and all copies thereof provided to, or produced by it or its advisers, as the case may be, which is in Receiving Party’s possession or under its custody and control.

(vii) Immediately destroy all analyses, compilations, notes, studies, memoranda or other documents prepared by it or its advisers to the extent that the same contain, reflect or derive from Confidential Information relating to the Disclosing Party.

(viii) Immediately expunge any Confidential Information relating to the Disclosing Party or its projects from any computer, word processor or other device in its possession or under its custody and control.

(ix) I immediately furnish a certificate signed by its director or other responsible representative confirming that to the best of his/her knowledge, information and belief, having made all proper enquiries the requirements of this paragraph have been fully complied with.

The rights in and to the data / information residing at the Bank’s premises, even in the event of disputes shall at all times solely vest with the Bank.

The SI represents and agrees that during the Term of this RFQ and subsequent contract or until the Bank takes over the Deliverables from the SI, whichever is earlier, the Bank shall not be responsible for any loss/damage (including malfunctioning or non-functioning of Deliverables) caused to the Deliverables for any reason whatsoever. In such an event, the SI shall promptly repair and/or replace the non-performing Deliverable with a suitable replacement, if required, without affecting the service level standards in this RFQ. Confidential Information does not include information which:

(i) Any information that is publicly available at the time of its disclosure or becomes publicly available following disclosure as a matter of law (other than as a result of disclosure by the Disclosing Party contrary to the terms of this document);

(ii) Any information which is independently developed by the recipient without breach of the Contract/ this RFQ or acquired from a third party not subject to the obligation of confidentiality with respect to such information;

or
(iii) Any disclosure required by law or by any court of competent jurisdiction, the rules and regulations of any recognized stock exchange or any enquiry or investigation by any governmental, statutory or regulatory body which is lawfully entitled to require any such disclosure provided that, so far as it is lawful and practical to do so prior to such disclosure, the recipient shall promptly notify the other Party of such requirement with a view to provide the other Party an opportunity to obtain a protective order or to contest the disclosure or otherwise agree to the timing and content of such disclosure.

(iv) the recipient knew or had in its possession, prior to disclosure, without limitation on its confidentiality;

The Confidential Information and Confidential Materials and all copies thereof, in whatsoever form shall at all times remain the property of the Disclosing Party and its disclosure hereunder shall not confer on the Receiving Party any rights whatsoever beyond those contained in this RFQ or subsequent agreement.

The confidentiality obligations shall survive the expiry or termination of the agreement between the SI and the Bank.

27. Technological advancements

The SI shall take reasonable and suitable action, taking into account economic circumstances, at mutually agreed terms, and the Service Levels, to provide the Services to the Bank at a technological level that will enable the Bank to take advantage of technological advancement in the industry from time to time.

28. Intellectual property rights

The SI claims and represents that it has obtained appropriate rights to provide the Deliverables upon the terms and conditions contained in this RFQ. The Bank agrees and acknowledges that save as expressly provided in this RFQ, all Intellectual Property Rights in relation to the Software and Documentation and any adaptations, translations and derivative works thereof whether protectable as a copyright, trade mark, patent, trade secret, design or otherwise, provided by the SI during, in connection with or in relation to fulfilling its obligations under this RFQ belong to and shall remain a property of the SI or its licensor.

During the Term of this Project and, if applicable, during the Reverse Transition Period, Bank grants SI a right to use at no cost or charge the Software licensed to the Bank, solely for the purpose of providing the Services.

The SI shall be responsible for obtaining all necessary authorizations and consents from third party licensors of Software used by SI in performing its obligations under this Project. The SI shall also be responsible for renewal of all such licenses from time to time during the contract period. The SI shall quote for all such renewals in the commercial bid and in case the SI fails to quote for renewal of any licenses in the bid, the SI shall renew such licenses at his cost and the bank shall not pay for other than the commercials mentioned in the price bid. The SI shall under no circumstances, allow
any license to expire and allow any software to be out of support during the contract period. If a third party's claim endangers or disrupts the Bank’s use of the Software, the SI shall at no further expense, charge, fees or costs to the Bank, (i) obtain a license so that the Bank may continue use of the Software in accordance with the terms of this tender and subsequent Agreement and the license agreement; or (ii) modify the Software without affecting the functionality of the Software in any manner so as to avoid the infringement; or (iii) replace the Software with a compatible, functionally equivalent and non-infringing product.

The Bank acknowledges that in performing services under the Contract, the SI may use SI's proprietary methodology, processes, ideas, knowhow and technology or any improvements thereof ("SI Pre-Existing IP"). SI agrees that except with prior consent of the Bank, SI shall not embed or incorporate any product, independent utilities, tools, programs or components that are or were developed or owned by the SI prior to or independent of the services performed hereunder or any enhancements or improvements thereof made as part of the services hereunder. Notwithstanding anything to the contrary contained in the Contract, the SI shall continue to retain the ownership and title to all SI Pre-Existing IP and nothing contained herein shall be construed as preventing or restricting the SI from using SI Pre-Existing IP in any manner and the assignment provisions set forth in the contract shall not apply to SI Pre-existing IP or any improvements thereof. To the extent that any SI Pre-Existing IP or a portion thereof is incorporated or contained in a deliverable under the Contract, the SI hereby grants to the Bank a non-exclusive, perpetual, royalty free, fully paid up, irrevocable license, with the right to sublicense through multiple tiers, to use, copy, install, perform, display, modify and create derivative works of any such SI Pre-Existing IP in connection with the deliverables in which they are incorporated or embedded. The foregoing license does not authorize the Bank to separate SI Pre-Existing IP from the deliverable in which they are incorporated for creating a standalone product for marketing to others.
• Terms of Reference for the Contract

❖ Definitions:

➢ System Integrator: System Integrator is the finally selected Bidder who will be contracted with the Bank to provide the EDW SOLUTION post the detailed RFQ evaluation by the Bank.

❖ Conditions:

➢ The System Integrator (SI) should take overall responsibility for all the deliverables as part of this RFQ response.

➢ For the other tools/applications/products proposed for Data Quality, Data Mining, Physical Data Model the System Integrator (SI) must propose industry standard tools which have been implemented in large BFSI organizations.

➢ The Bidder will be the single point of contact/reference to the Bank. The Bank will enter into agreement with the selected Bidder only. However, the Bidder as well as other partners must confirm to the Bank that they are willing to enter into back to back agreement that is in conformity with the deliverables and other service/uptime commitments the bidder makes to the Bank in its response to the RFQ. If requested, the System Integrator must share a copy of the back to back agreement with the Bank.

➢ The Bidder & its partners must also have experience in studying existing databases/Bank’s systems and in gathering the requirements and in supply/installation/integration/implementaiton of the solution including the design and construction of the Enterprise wide Data Warehouse solution suitable to the Bank.

➢ The Bidder should submit a detailed scope, approach and deliverables along with a detailed implementation plan of the understanding of the Bank’s requirements as per this RFQ, bidders capabilities including that of its partners product description/solution in respect of the EDW SOLUTION including methodology of implementation.

➢ The Bidder should furnish at least one comprehensive case study of the Data Warehouse solution deployed by them in an organization of similar magnitude giving the details of the complete system architecture including hardware, software, ETL, Data Quality, Database, Business Intelligence, Analytics, Data Mining Tools, Access controls and Security.

➢ The Bidder has to give demonstration/presentation of the proposed solution and also arrange for the visits to the sites where their solution has been implemented, if requested by Bank. In cases where the sites are located abroad the bank may make enquiries based on the references furnished by the bidder.
• OTHER INSTRUCTIONS TO THE BIDDERS:

The response should be submitted in a structured format as per the checklist appended and it should be paginated. Each page of the application should be signed by person/s on behalf of the organization, having necessary authorization / Power of Attorney to do so, duly affixing the company seal. Applications containing false or inadequate information are liable for rejection. Copy of Power of Attorney or Authorization Letter from the company should be furnished along with the Bid.

A pre-Bid meeting of the Bidders will be held as per the schedule of event to clarify any point/doubt raised by them in respect of this RFQ. No separate communication will be sent for this meeting. All communications regarding points requiring clarifications and any doubts shall be given in writing to the Deputy General Manager, as mentioned in the schedule of events. No interim enquiries will be entertained.

The Sealed envelope containing the response to RFQ along with the required documents shall be super scribed on the top of the envelope with “REQUEST FOR QUALIFICATION FOR SUPPLY, INSTALLATION, IMPLEMENTATION, INTEGRATION AND MAINTENANCE OF ENTERPRISE DATA WAREHOUSE, BUSINESS INTELLIGENCE AND CRM PROJECT (EDW SOLUTION)”. The RFQ response should be handed over to the authorized contact person mentioned in the document.

The RFQ will be opened in the presence of the applicants. The Bidder’s authorized representative may be present during the bid opening at our office address mentioned above well in time along with the authorization letter from the company. The applicants may note that no further notice in this regard will be given. Further, in case the Bank does not function on the aforesaid date due to unforeseen circumstances or Holiday, then the RFQ will be accepted as mentioned in the schedule of Events and RFQs will be opened as mentioned in the schedule of Events. The response not received in conformity with the above will not be evaluated.

This RFQ is not an offer by IDBI Bank but an invitation to get the response from the interested bidders for short listing the bidders for Bank’s requirements. No contractual obligations whatsoever shall arise from the RFQ process.

IDBI Bank reserves the right to accept / reject any or all RFQ response received in response to this advertisement without assigning any reasons, whatsoever. No offer can be modified or withdrawn by a bidder after submission of Bid/s.

The Bank may modify the RFQ by issuing addenda for any reason, at any time prior to final date to submission of response to RFQ. Any addendum to RFQ shall be part and parcel of original RFQ document. The addenda shall be uploaded in the Bank’s website and the same will be binding on the bidders.

During the process of scrutiny, evaluation and comparison of offers, the Bank may, at its discretion, seek clarifications from all bidders/any of the bidders on the offer made by them. The request for such clarifications and the bidder’s response will necessarily be in writing and it should be submitted within the time stipulated by the Bank. In the event of any of the bidders fails to submit the response for clarification sought within the time stipulated, their bid is liable to be rejected.

Bidders have to mandatorily submit the softcopy of RFQ response in a CD-R, which is super scribed as ‘Softcopy of RFQ for Empanelment of Vendors for Enterprise-wide Data Warehouse and Business
Intelligence Solution’. In case of any mismatch between the softcopy and hardcopy of the RFQ response, the hardcopy of RFQ response will be treated as valid response.

Jurisdiction of the Court-The jurisdiction of the Court is Mumbai.

All terms and conditions, payments schedules, time frame for implementation, expected service levels as per this tender will remain unchanged unless explicitly communicated by the Bank in writing to the System Integrator. The Bank shall not be responsible for any judgments made by the Bidder with respect to any aspect of the Assignment. The System Integrator shall at no point be entitled to excuse themselves from any claims by the Bank whatsoever for their deviations in confirming to the terms and conditions, payments schedules, expected service levels, time frame for implementation etc. as mentioned in this RFQ.

The Bank and the SI covenants and represents to the other Party the following:

- It is duly incorporated, validly existing and in good standing under as per the laws of the state in which such Party is incorporated.
- It has the corporate power and authority to enter into Agreements and perform its obligations there under. The execution, delivery and performance of
- under Agreements by such Party and the performance of its obligations there under are duly authorized and approved by all necessary action and no other action on the part of such Party is necessary to authorize the execution, delivery and performance under an Agreement.

The execution, delivery and performance under an Agreement by such Party:

- Will not violate or contravene any provision of its documents of incorporation;
- Will not violate or contravene any law, statute, rule, regulation, licensing requirement, order, writ, injunction or decree of any court, governmental instrumentality or other regulatory, governmental or public body, agency or authority by which it is bound or by which any of its properties or assets are bound;
- Except to the extent that the same have been duly and properly completed or obtained, will not require any filing with, or permit, consent or approval of or license from, or the giving of any notice to, any court, governmental instrumentality or other regulatory, governmental or public body, agency or authority, joint venture party, or any other entity or person whatsoever;

To the best of its knowledge, after reasonable investigation, no representation or warranty by such Party in this tender and subsequent Agreement, and no document furnished or to be furnished to the other Party to this tender and subsequent Agreement, or in connection herewith or with the transactions contemplated hereby, contains or will contain any untrue or misleading statement or omits or will omit any fact necessary to make the statements contained herein or therein, in light of the circumstances under which made, not misleading. There have been no events or transactions, or facts or information which has come to, or upon reasonable diligence, should have come to the attention of such Party and which have not been disclosed herein or in a schedule hereto, having a direct impact on the transactions contemplated hereunder.

The SI undertakes to provide appropriate human as well as other resources required, to execute the various tasks assigned as part of the project, from time to time. The Bank would not assume any expenses incurred by
the Bidder in preparation of the response to this RFQ and also would not return the bid documents to the Bidder.

Bank will not bear any costs incurred by the Bidder for any discussion, presentation, demonstrations etc. on proposals or proposed contract or for any work performed in connection therewith.

- **Other RFQ Requirements**

This RFQ may undergo change by either additions or deletions or modifications before the actual award of the contract by the Bank. The Bank also reserves the right to change any terms and conditions of the RFQ and its subsequent addenda as it deems necessary at its sole discretion. The Bank will inform all Bidders of the changes, if any.

The Bank may revise any part of the RFQ, by providing a written addendum to all the System Integrator (SI) s at stage till the award of the contract. The Bank reserves the right to issue revisions to this RFQ at any time before the award date. The Bank reserves the right to extend the dates for submission of responses to this document.

Bidders shall have the opportunity to clarify doubts pertaining to the RFQ in order to clarify any issues they may have, prior to finalizing their responses. All questions are to be submitted to the RFQ coordinator at the address mentioned in Section B – Schedule of Events, and should be received by the point of contact no later than the timeline specified. Responses to inquiries and any other corrections and amendments will be distributed to all Bidders by fax or in electronic mail format.

**Preliminary Scrutiny** – The Bank will scrutinize the offers to determine whether they are complete, whether any errors have been made in the offer, whether required technical documentation has been furnished, whether the documents have been properly signed, and whether items are quoted as per the schedule. The Bank may, at its discretion, waive any minor non-conformity or any minor deficiency in an offer. This shall be binding on all Bidders and the Bank reserves the right for such waivers and the Bank’s decision in the matter will be final.

**Clarification of Offers** – To assist in the scrutiny, evaluation and comparison of offers, the Bank may, at its discretion, ask some or all Bidders for clarification of their respective offers. The Bank has the right to disqualify the Bidder whose clarification is found not suitable to the proposed project.

**Erasures or Alterations** – The offers containing erasures or alterations will not be considered. There should be no hand-written material, corrections or alterations in the offer. Technical details must be completely filled up. Correct technical information of the product being offered must be filled in. Filling up of the information using terms such as “OK”, “accepted”, “noted”, “as given in brochure / manual” is not acceptable. The Bank may treat the offers not adhering to these guidelines as unacceptable. The proposals should be in the template that is recommended and provided in this RFQ.

**Bidders presentation** – Bidders are requested to be prepared to demonstrate the proposed solution, make presentations, as part of the final evaluation in accordance with the responses given for the identified requirements, any time after the last date for submissions of bids.
Right to Alter Quantities – The Bank reserves the right to alter the requirements specified in the tender. The Bank also reserves the right to delete one or more items from the list of items specified in the tender. The Bank will inform all Bidders about changes, if any.

Details of Sub-contracts, as applicable – If required by the Bank, SI should provide complete details of any sub-contractors used for the purpose of this engagement. It is clarified that notwithstanding the use of sub-contractors by the SI, the SI shall be solely responsible for performance of all obligations under the RFQ irrespective of the failure or inability of the subcontractor chosen by the SI to perform its obligations. The SI shall also have the responsibility for payment of all dues and contributions, as applicable, towards statutory benefits for its employees and sub-contractors. The above clause is only relevant for agreements between the System Integrator (SI) and other OEMs. The System Integrator (SI) is not permitted to subcontract any of its services to other third party service providers unless specified within this RFQ.

If the Bank is not satisfied with the technical specifications in any tender and observes major deviations, the technical bids of such Bidders may be disqualified. No further discussions shall be entertained with such Bidders in respect of the subject technical bid.

Bank site will not be accepted as complete if any part of hardware, software, other components etc. are not delivered, and if delivered not installed, and operational zed free of any additional cost to the Bank. In such an event, the supply and installation will be termed incomplete and will not be accepted and warranty period will not commence besides Bank’s right to invoke the penalties which will be prescribed in the contract.

There will be an acceptance test by the Bank or its nominated consultants after installation of the systems/equipment. In case of discrepancy in hardware / software supplied/configured, the Bank reserves the right to cancel the entire purchase contract and the SI should take back their equipment at their costs and risks. The test will be arranged by the SI at the sites in the presence of the officials of the Bank and / or its consultants. The warranty for the equipment’s (including software and hardware provided by the SI pursuant to this tender and subsequent Agreement) will commence after acceptance testing. The tests will involve trouble-free operation of the complete system during UAT apart from physical verification and testing. There shall not be any additional charges for carrying out this acceptance test. The Bank will take over the system on successful completion of the above acceptance test. The Installation cum Acceptance Test & Check certificates jointly signed by SI’s representative and Bank’s official or any consultant / auditor appointed by the Bank should be received by the Bank’s IT Department, along with invoice etc. for scrutiny before taking up the request for consideration of payment.

The SI should offer maintenance support at the Bank DC and DRC locations. The SI is responsible for managing the activities of its personnel or the personnel of its subcontractors/franchisees and will be accountable for both. The SI shall be vicariously liable for any acts, deeds or things done by their employees, agents, contractors, subcontractors etc. which is outside the scope of power vested or instructions issued by the Bank. SI shall be the principal employer of the employees, agents, contractors, subcontractors etc. engaged by the SI and shall be vicariously liable for all the acts, deeds or things, whether the same is within the scope of power or outside the scope of power, vested under the purchase contract to be issued for this tender.

No right of any employment shall accrue or arise, by virtue of engagement of employees, agents, contractors, subcontractors etc. by the SI, for any assignment under the purchase contract to be issued for this tender. All remuneration, claims, wages, dues etc. of such employees, agents, contractors, subcontractors etc. of SI shall be paid by SI alone and the Bank shall not have any direct or indirect liability or obligation, to pay any charges, claims or wages of any of SI’s employee, agents, contractors, and subcontractors. The SI shall hold
the Bank, its successors, Assignees and Administrators fully indemnified and harmless against loss or liability, claims actions or proceedings, if any, that may arise from whatsoever nature caused to the Bank through the action of its employees, agents, contractors, subcontractors etc. However, the SI would be given an opportunity to be heard by the Bank prior to making of a decision in respect of such loss or damage.

The Bank shall inform the SI of all known breaches and claims of indemnification and shall grant the SI sole authority to defend, manage, negotiate or settle such claims; and make available all reasonable assistance in defending the claims (at the expense of the SI). The written demand by the Bank as to the loss / damages mentioned above shall be final, conclusive and binding on the SI and SI shall be liable to pay on demand the actual amount of such loss / damages caused to the Bank.

In respect of demands levied by the Bank on the SI towards breaches, claims, etc. the Bank shall provide the SI with details of such demand levied by the Bank.

For the purposes of this Clause, the indemnity may be restricted to the areas mentioned, i.e., “claims arising out of employment, non-payment of remuneration and non-provision of statutory benefits by the SI to its employees, its agents, contractors and sub contractors.”

RFQ Indemnity would be limited to court or arbitration awarded damages and shall exclude indirect, consequential and incidental damages. However indemnity would cover damages, loss or liabilities suffered by the Bank arising out of claims made by its customers and/or employees and/or regulatory authorities.

However, there are other indemnities such as indemnity for IPR violation, confidentiality breach, etc., that the SI is expected to provide as per the RFQ.

The SI’s designated representative and local office will be the contact point for the Bank. The delivery and installation status of equipment’s should be reported on a weekly basis. SI should ensure that the hardware delivered to the Bank including all components and attachments are brand new. In case of software supplied with the system, the SI should ensure that the same is licensed and legally obtained with valid documentation made available to the Bank.

The SI shall procure adequate and appropriate number of all users specific software licenses for the Bank, its offices and its branches based users at DC, DRC/branches and offices as the case may be. SI shall also provide other licenses for applications, operating system and database as required by the Bank to successfully utilize the solution. The SI shall provide the licenses for all software being a part of its proposed solution to the Bank.

SI shall indemnify, protect and save the Bank against all claims, losses, costs, damages, expenses, action, suits and other proceedings, resulting from infringement of any patent, trademarks, copyrights etc. or such other statutory infringements under any laws including the Copyright Act, 1957 or Information Technology Act 2000 in respect of all the hardware, software and network equipment’s or other systems supplied by them to the Bank from whatsoever source, provided the Bank notifies the SI in writing as soon as practicable when the Bank becomes aware of the claim however, (i) the SI has sole control of the defense and all related settlement negotiations (ii) the Bank provides the SI with the assistance, information and authority reasonably necessary to perform the above and (iii) the Bank does not make any statements or comments or representations about the claim without the prior written consent of the SI, except where the Bank is required by any authority/ regulator/court to make a comment/statement/representation. Further, Indemnity would cover damages, loss or liabilities suffered by the Bank arising out of claims made by its customers and/or regulatory authorities and/or any other person due to the failure of the SI.
Manufacturer’s Authorization Form (MAF) – The Bidder should furnish a letter from original equipment manufacturer authorizing the Vendor to quote for OEM’s product in response to the RFQ from the Bank as per Annexure 11 – Letter from Consortium members. The said letter should also offer to extend the required warranty from the OEM in respect of the items stipulated in the RFQ.

Note: The MAF must be strictly in the format of Annexure 11 – Letter from Consortium members. In case of any deviation for the prescribed format, the MAFs would be liable for rejection and the Bank would decide accordingly.

Technical Inspection and Performance Evaluation - The Bank may choose to carry out a technical inspection/audit and performance evaluation of products offered by the SI. The SI would permit the Bank or any person / persons appointed by the Bank to observe the technical and performance evaluation / benchmarks carried out by the SI. Any expenses (performing the benchmark, travel, stay, etc.) incurred for the same would be borne by the SI and under no circumstances the same would be reimbursed to the SI by the Bank.

Additional Information:

SI’s and/or its authorized service providers should have their own employees for execution of projects. However, SI will be fully responsible for the service for the service providers. The Bank will not make any reference to them. In case of any deficiency in service, penalties will be to SI’s account.

Neither this tender nor the SI’s performance of obligations under this tender shall create an association, partnership, joint venture, or relationship of principal and agent, master and servant, or employer and employee, between the Bank and the SI or its employees, partners; and neither Party shall have the right, power or authority (whether expressed or implied) to enter into or assume any duty or obligation on behalf of the other Party.

The SI shall solely be responsible for all payments (including any statutory payments) to its employees and / or sub contractors and shall ensure that at no time shall its employees, personnel or agents hold themselves out as employees or agents of the Bank, nor seek to be treated as employees of the Bank for any purpose, including claims of entitlement to fringe benefits provided by the Bank, or for any kind of income or benefits. The SI alone shall file all applicable tax returns for all of its personnel assigned hereunder in a manner consistent with its status as an independent contractor of services; and the SI will make all required payments and deposits of taxes in a timely manner.

Consortium

In the case of a Consortium, the following rules will be applicable:

The SI is required to provide proof that the SI is authorized to bid with the products that it does not own. This may be in the form of a (notarized copy of) letter authorizing the Bidder as per Annexure 11 -Letter from Consortium members from a duly constituted attorney and / or a (notarized copy of) back-to-back agreement between the concerned parties. The SI agrees to produce such letter/ agreement in original as and when required by the Bank.

The SI should be an authorized partner to the OEM, whose solution is proposed and copy of the relevant credential letters & supporting documents to be provided. SI should get the implementation of the solution done by the respective OEM and a letter/credential in this regard should be submitted. The OEMs letter should clearly communicate how the proposed system will address the required planning, design and implementation,
as well as the support services. The OEM’s response must also address the operational requirements for the maintenance, repair and enhancement of the systems & infrastructure maintained.

The responsibility for the details presented in the responses will be with the SI, which will form part of the final legal contract. The SI will be totally responsible for delivering contractual services end to end and will be a single point of contact; and

The consortium partners led by the SI cannot change their offer once the Technical and bid has been submitted in response to the RFQ by the SI.

It is expressly clarified that even in the case of a consortium; the SI shall have the single-point responsibility/liability to ensure the fulfillment of all obligations of the partners and themselves under the contract.

Confidentiality

The SI acknowledges that in the course of performing the obligations under this RFQ and subsequent Agreement, each party shall be exposed to or acquire information of the other party, which such party shall treat as confidential. Neither party shall disclose the Confidential Information to an external member without the written consent of each other.

The SI, at all times, will maintain confidentiality regarding the contents of this RFQ and subsequent Agreement and proprietary information including any business, technical or financial information that is, at the time of disclosure, designated in writing as confidential, or would be understood by the Parties, exercising reasonable business judgment, to be confidential.

The SI agrees to keep in confidence and not disclose to any third party any and all Confidential Information available to the SI, whether such information is given in writing or, is oral or visual, and whether such writing is marked to indicate the claims of ownership and/or secrecy or otherwise. Except as otherwise provided in this tender, the SI agrees that it shall not use, nor reproduce for use in any way, any Confidential Information. The SI agrees to protect the Confidential Information of the other with at least the same standard of care and procedures used by to protect its own Confidential Information of similar importance but at all times using at least a reasonable degree of care.

If the SI hires another person to assist it in the performance of its obligations under this RFQ, or assigns any portion of its rights or delegates any portion of its responsibilities or obligations under this tender and subsequent Agreement to another person, it shall cause its assignee or delegate to be bound to retain the confidentiality of the Confidential Information in the same manner as the SI is bound to maintain the confidentiality.

This shall not be applicable and shall impose no obligation on the receiving party with respect to any portion of Confidential Information which:

► was at the time received or which thereafter becomes, through no act or failure on the part of the receiving party, generally known or available to the public;
► is known to the receiving party at the time of receiving such information as evidenced by documentation then rightfully in the possession of the receiving party;
► is furnished by others to the receiving party without restriction of disclosure;
is thereafter rightfully furnished to the receiving party by a third party without restriction by that third party on disclosure;

► has been disclosed pursuant to the requirements of law or court order without restrictions or other protection against public disclosure; or

► Independently developed by the receiving party without the help of the Confidential Information.

On termination of the RFQ and subsequent Agreement, the SI shall immediately return to the other party or delete or destroy all Confidential Information of the other party and all notes and memoranda (including copies of them) containing Confidential Information of the other party in its possession or control save for that training materials and Documentation that has been provided to the Bank which is contemplated for continued realization of the benefit of the Services. Notwithstanding the foregoing, SI may retain a copy of such information (but which shall not include customer data and Confidential Information) as may be necessary for archival purpose.

The SI recognizes and agrees that breach of the confidentiality Article by the Bank shall not be construed as material breach for the purposes of this tender.

**Terms of Reference for the Contract**

**Contract Commitment**

The Bank intends that the contract, which is contemplated herein with the SI shall be for a period of five years starting from the effective date of the Contract between the Bank and the Selected Bidder.

**Ownership, Grant and delivery**

The SI shall procure and provide a non-exclusive, non-transferable, perpetual license to the Bank for all the software to be provided as a part of this project. The Bank can use the software at any of their branches and locations without restriction and use of software by service providers on behalf of the Bank would be considered as use thereof by the Bank and the software should be assignable / transferable to any successor entity or affiliate of the Bank.

The license shall specifically include right

A. To Use. (i) to use the executable code version of the Software and all Enhancements, Updates and New Versions made available from time to time solely for business operations of the Bank; (ii) to use the Program Documentation for purposes of installing or operating the Programs and supporting the use of the Software by the Bank; (iii) to use the technical Training Materials for purposes of supporting Users.

B. To Copy. (i) to copy the Software that operates on server systems to support the users of the Bank; (ii) to make additional copies of the Program Material for archival, emergency back-up, testing, or disaster recovery purposes; and (iii) to copy the Program Documentation to support its Users.

C. To work as interface: (i) to work with other Application Software packages at the Bank as interface; (ii) to allow other application software packages at the Bank to work as interfaces to the Software. If such interfacing requires any modification or change to the Software, such modification or change has to be carried out by the SI free of any additional License charge or fees or expenses.
LICENSE AND INTELLECTUAL PROPERTY OWNERSHIP

The Parties hereby acknowledge and agree that

(i) SI hereby grants the Bank an irrevocable, nonexclusive, India wide, fully paid-up license to use and execute all Software that constitutes part of the Deliverables under this Agreement.

(ii) Subject to Sub-Clause (i) above, SI or Sub Contractors will own respective right, title and interest in Intellectual Property in relation to the Deliverables and the Services created for the purposes of the Project (collectively hereinafter referred to as the “Materials”), subject to the other provisions of this Agreement. The Bank or its Affiliates will have a perpetual, non-exclusive, irrevocable, royalty free, non-transferable license to use the Materials in their ordinary course of business or in furtherance of the same.

(iii) For the avoidance of doubt, it is hereby clarified that each party hereby grants to the other only the licenses and rights specifically set out in this Agreement and that no other licenses or rights are granted under the terms hereof.

Delivery

The SI, at the time of installation shall deliver to the Bank required copies of the object code version of the Software and the associated Program Documentation including operation manual and training material. The SI, after customization shall deliver to the Bank required copies of the object code version of the customized Software and the associated Program Documentation including operation manual and training material. The SI, after modifications, updates or new versions shall deliver to the Bank required copies of the revised object code version of the latest Software and the revised associated Program Documentation including operation manual and training material. The Program Documentation shall consist of required number of User Manuals per branch/service Center/ office/ extension counter, Data Center and Disaster Recovery Center. The program documentation shall be supplied by the SI to the Bank both in hard copy form except where hard copies are not available and soft copy form (MS word format and HTML Browser format). The operational manual shall be provided by the SI under help menu in the software as dynamic online documentation / help files, wherever applicable. The object code version of the Software, executables and required run-time files shall be on Compact Disc or on any such media as desired by the Bank as may be applicable.

The grant of license by the SI herein shall be for processing the internal business of the Bank or its affiliates and does not, without limitation, include the rights to reverse engineer, reverse compile or otherwise arrive at the source code of the Software nor does it include the rights to sell, lease, license, sublicense or otherwise transfer, convey or alienate the software for commercial consideration to any person.

Except as specifically agreed by and between SI and Bank, the ownership of all rights, title and interest, including without limitation, all patents, copy right, trade secrets and any other form of intellectual property rights in and to software, any derivative works thereof and enhancements thereto, hardware and documentation are and shall at all times remain with the SI or its Licensors and be the sole and exclusive property of the SI or its Licensors. The Bank acknowledges and agrees that nothing contained in this RFQ and subsequent Agreement shall be construed as conveying by the SI or its licensor’s title or ownership interest in any licensed software or any derivative works thereof and enhancements thereto. Nothing contained herein shall be construed to preclude the SI from owing, using, improving, marketing, including without limitation, licensing to other persons any and all licensed software.
Rights: The SI shall ensure that the equipment (including hardware and software) does not infringe third party intellectual property rights. If a third party's claim endangers or disrupts the Bank’s use of the software, the SI shall be required to, at no further expense, charge, fees or costs to the Bank, (i) obtain a license so that the Bank may continue use of the equipment in accordance with the terms of this RFQ and subsequent Agreement and the license agreement; or (ii) modify the equipment without affecting the functionality in any manner so as to avoid the infringement; or (iii) replace the equipment with a compatible, functionally equivalent and non-infringing product; or (iv) refund to the Bank the amount paid for the infringing software and bear the incremental costs of procuring a functionally equivalent equipment from a third party, provided the option under the sub clause (iv) shall be exercised by the Bank in the event of the failure of the SI to provide effective remedy under options (i) to (iii) within a reasonable period which would not affect the normal functioning of the Bank. The SI shall have no liability for any claim of infringement based on (i) a claim which continues because of Bank’s failure to use a modified or replaced software that is at least functionally equivalent to the software, or (ii) the Bank’s failure to use corrections, fixes, or enhancements made available and implemented by the SI, despite notice of such failure by the SI in writing, (ii) any change, not made by or on behalf of the SI, to some or all of the software/deliverables supplied by the SI or modification thereof; or (iii) the Bank’s continued misuse of some or all of the software/deliverables or any modification thereof despite notice from the SI of such misuse in writing.

SI is the Prime Vendor for purposes of all deliverables and services, with the single-point responsibility for the same. Should the software provided by the SI be infringing, it would have a serious business impact on the business of the Bank. Therefore, the SI should take responsibility of its actions. Even if Bank would have used the deliverables before the infringement was noticed, legally each such use constituted infringement and therefore the SI is in breach of the SI’s warranty and obligation.

GLOSSARY OF TERMS

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Abbreviation/Acronym</th>
<th>Expansion</th>
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<tbody>
<tr>
<td>1</td>
<td>ACRM</td>
<td>Analytical Customer Relationship Management</td>
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<tr>
<td></td>
<td>ADF</td>
<td>ALM</td>
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<tr>
<td>53</td>
<td>IT</td>
<td>Information Technology</td>
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<td>54</td>
<td>ITIL</td>
<td>Information Technology Infrastructure Library</td>
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<tr>
<td>55</td>
<td>IVRS</td>
<td>Interactive Voice Response System</td>
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<tr>
<td>56</td>
<td>LAN</td>
<td>Local Area Network</td>
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<tr>
<td>57</td>
<td>LD</td>
<td>Liquidated Damages</td>
</tr>
<tr>
<td>58</td>
<td>LTO</td>
<td>Linear Tape-Open</td>
</tr>
<tr>
<td>59</td>
<td>MAC</td>
<td>Move, Add and Change</td>
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<tr>
<td>60</td>
<td>MDM</td>
<td>Master Data Management</td>
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<tr>
<td>61</td>
<td>MIS</td>
<td>Management Information System</td>
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<tr>
<td>62</td>
<td>MS</td>
<td>Microsoft</td>
</tr>
<tr>
<td>63</td>
<td>MTBF</td>
<td>Mean Time Between Failures</td>
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<tr>
<td>64</td>
<td>NEFT</td>
<td>National Electronic Fund Transfer</td>
</tr>
<tr>
<td>65</td>
<td>NIC</td>
<td>Network Interface Card</td>
</tr>
<tr>
<td>66</td>
<td>NPA</td>
<td>Non-Performing Asset</td>
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<tr>
<td>67</td>
<td>NRI</td>
<td>Non-Resident Indian</td>
</tr>
<tr>
<td>68</td>
<td>OCRM</td>
<td>Operational Customer Relationship Management</td>
</tr>
<tr>
<td>69</td>
<td>ODS</td>
<td>Operational Data Store</td>
</tr>
<tr>
<td>70</td>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
</tr>
<tr>
<td>71</td>
<td>OLAP</td>
<td>Online Analytical Processing</td>
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<tr>
<td>72</td>
<td>OLTP</td>
<td>Online Transaction Processing</td>
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<tr>
<td>73</td>
<td>OS</td>
<td>Operating System</td>
</tr>
<tr>
<td>74</td>
<td>PAN</td>
<td>Permanent Account Number</td>
</tr>
<tr>
<td>75</td>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>76</td>
<td>PDF</td>
<td>Portable Document Format</td>
</tr>
<tr>
<td>77</td>
<td>PDM</td>
<td>Physical Data Model</td>
</tr>
<tr>
<td>78</td>
<td>PM</td>
<td>Preventive Maintenance</td>
</tr>
<tr>
<td>79</td>
<td>PO</td>
<td>Purchase Order</td>
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<tr>
<td>80</td>
<td>POD</td>
<td>Proof of Delivery</td>
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<tr>
<td>81</td>
<td>RACI</td>
<td>Responsibility Assignment Matrix - Responsible, Accountable, Consulted, Informed</td>
</tr>
<tr>
<td>82</td>
<td>RAS</td>
<td>Reliability, Availability, and Serviceability</td>
</tr>
<tr>
<td>83</td>
<td>RBI</td>
<td>Reserve Bank of India</td>
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<tr>
<td>84</td>
<td>RDBMS</td>
<td>Relational Database Management System</td>
</tr>
<tr>
<td>85</td>
<td>RFP</td>
<td>Request for Proposal</td>
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<tr>
<td>86</td>
<td>RFQ</td>
<td>Request for Qualification</td>
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<tr>
<td>87</td>
<td>ROI</td>
<td>Return on Investment</td>
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<tr>
<td>88</td>
<td>RTGS</td>
<td>Real Time Gross Settlement</td>
</tr>
<tr>
<td>89</td>
<td>RTO</td>
<td>Recovery Time Objective</td>
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<tr>
<td>90</td>
<td>SAN</td>
<td>Storage Area Network</td>
</tr>
<tr>
<td>91</td>
<td>SDLC</td>
<td>Software Development Life Cycle</td>
</tr>
<tr>
<td>92</td>
<td>SFMS</td>
<td>Structured Financial Messaging System</td>
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<tr>
<td>93</td>
<td>SI</td>
<td>System Integrator</td>
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<tr>
<td>94</td>
<td>SIT</td>
<td>System Integration Testing</td>
</tr>
<tr>
<td>95</td>
<td>SLA</td>
<td>Service Level Agreement</td>
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<tr>
<td>96</td>
<td>SME</td>
<td>Small and Medium Enterprise/ Subject Matter Expert as relevant to the context.</td>
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<tr>
<td>97</td>
<td>SQL</td>
<td>Structured Query Language</td>
</tr>
<tr>
<td>98</td>
<td>SW</td>
<td>Software</td>
</tr>
<tr>
<td>99</td>
<td>TCO</td>
<td>Total Cost of Ownership</td>
</tr>
<tr>
<td>100</td>
<td>TDS</td>
<td>Tax Deductible at Source</td>
</tr>
<tr>
<td>101</td>
<td>UAT</td>
<td>User Acceptance Testing</td>
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<tr>
<td></td>
<td>UPS</td>
<td>Uninterrupted Power Supply</td>
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</tr>
<tr>
<td>103</td>
<td>WAN</td>
<td>Wide Area Network</td>
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