

## TERMS OF REFERENCE

### Loan Management System Enhancement with Integration Layer Optimization

**Reference No: NG-DBN-222595-CS-CDS**

*Hiring of a consulting firm to develop additional functions on the DBN Loan Management System that will help automate credit risk management, customer service, loan monitoring and other processes involved the due diligence, customer engagement and loan management processes of the Development Bank of Nigeria. The consulting firm will also implement an API Management solution for robust integration of systems and data sources.*

#### I. Background

The Development Bank of Nigeria (DBN) Plc. in line with the strategic objectives to promote sustainability and innovation has identified different processes that need to be digitalised. These initiatives are codified in the Bank's Digital Strategy and the implementation of the initiatives will ensure that interactions with the Participating Financial Institutions (PFIs), the Nigerian Micro, Small and Medium Scale Enterprises (MSMEs) and other stakeholders can be done digitally, and that information sharing is safe and secure while being used to meet business objectives.

The DBN Loan Management System (LMS) is a bespoke software application built to support the lending business of the Bank. The LMS is currently in use for the following processes:

- a. PFI Onboarding: This includes the online completion of the Eligibility Criteria Questionnaire (ECQ), the statutory documents and the automation of the internal approval processes.
- b. Loan Application and Disbursement
- c. Interface with the Core Banking Application (Eazybank AX) to create customers (PFIs), book loans and submit end borrowers' list for Monitoring and Evaluation purposes.

The consulting firm is now required to enhance the system by automating the credit risk management processes including due diligence and risk assessment of PFIs, collateral management, monitoring of end borrowers' list deferrals for M&E activities, customer relationship management, introduction of electronic letters and signature as well as PFI Performance Reviews. The consultant is also expected to implement an API Management platform that will allow for central management of all system and data integrations.

#### 2. Objective of Assignment & Scope of Work

The main objectives of this assignment are

- I. To enhance the Loan Management System (LMS) platform for end-to-end automation of all loan management, customer management and monitoring processes as well as accommodate other ecosystem partners which may be onboarded. The enhancement is

focused on making LMS the go to platform for all Loan Management processes, with a high adoption rate, by addressing all the identified gaps and reasons for low usage by businesses.

2. Implement an API Management solution and integrate disparate systems in a consistent manner so that the Bank's integration layer is optimised.

The broad scope of work will include the following:

## **Milestone I: Credit Risk Management and Compliance Automations**

### **a. Due Diligence & Risk Assessment**

- Design a module within the LMS platform to automate Know Your Customer (KYC), and due diligence processes for PFIs.
- The platform should support the tracking of submitted and outstanding documents, including status reports, visible to all relevant stakeholders (DBN & PFIs).
- Design a uniform template for capturing due diligence data within the module to ensure data consistency.
- Design a template for the due diligence report, to achieve consistency.
- The module should enable electronic submission of Environmental & Social Risk Management reports for ease of document review by the team.
- Integrate with relevant credit bureau to automate credit search on PFIs using Registration Certificate (RC) numbers, and on their directors using Bank Verification Numbers (BVN).
- Develop a mobile application for the field staff (or external consultants) where physical visits shall be compliant to the following requirements:
  - Include a template for conducting assessments and reporting.
  - Possess the capability to capture images where images are necessary.
  - Possess offline capability where full functionality is available to users offline.
  - Ability to integrate the mobile app with LMS to persist of information captured on the field to LMS Database.
- Automate credit risk assessment checklist.
- Automate the checklist used for compliance risk assessment conducted on the directors of PFIs.

- The module should include a calendar for the scheduled days of the anniversary due diligence which will be stated within anniversary due diligence module. The calendar days should be visible to both DBN and the PFIs.
- Include a checkpoint for collaterals to be confirmed by the risk management team before approvals of loan applications.
- The conditions stated on the offer letter should flow into the disbursement process to aid proper reviews.
- Allow processing of loans with multiple end borrower as individual loans while providing identification of a loan tranche.

#### **b. Collateral Management**

- Complete the development of the application logic that computes collateral values considering their peculiarities as defined below and arrive at a cumulative collateral value per PFI, for example:
  - Funds domiciled with CBN at 100%
  - Treasury Bills at 100%
  - Movable assets at valued amounts
- The logic should be able to prorate total collateral value of PFIs on the different loans booked with DBN and provide support for the update of collateral value.
- Support analytics and reporting of collateral value per PFI and the prorated value on loans booked.
- The collateral module should allow PFIs apply for loans without validating collateral requirements, however a collateral validation checkpoint should be implemented at the point of submission of the loan request from credit operations.

#### **c. PFI Onboarding**

- Complete the inclusion of onboarding information requirements to accommodate other ecosystem partners.
- The conditions stated on the offer letter should flow into the disbursement process to aid proper reviews.
- Automated validation of PFIs Directors' details and end-borrowers information at loan application and on-boarding phase (validate BVN details against end borrowers' name, sex and phone number).

#### **d. Loan Repayment Collections**

- Complete the automation of reconciliation of PFI collections within the LMS.
- The system should have the capability of sending automatic messages notifying PFIs on upcoming repayment obligations.
- Establish integration with PFIs to enable real time transaction viewing for collections.
- On receipt and confirmation of collections, an automated notification should be sent to PFIs.

#### **e. Automation of Master Lending Agreement (MLA) Execution**

- Enable DBN Operations to make input and adjust the MLA (RC. Number, name of institution, Date etc.) for requests with approved ECQs.
- Enable DBN Operations the option to include a Memorandum of Understanding (MoU) and a due diligence checklist, alongside the MLA, to be executed by the Financial Institution (FI).
- Increase the file attachment size and have the application prompt the Financial Institution on the best formats for upload and resizing to guide their submission.

#### **f. Automation of Supplementary Lending Agreement (SLA) and Deferral MOU**

- Two major agreements- the SLA and a deferral MoU should be automated and reflected within the LMS. This should be in line with the product type selected (the SLA for the LTF product is different from the regular Term Loan SLA). This will also include the loan amount, interest rate, moratorium period etc.
- The deferral MoU will also require the deferral period to be specified within the MoU as it shall vary from a minimum of 30days to a maximum of 180days. Attached is an SLA and MoU template for review and adoption.

### **Milestone II: Monitoring and Evaluation (Data Enhancement Automation)**

#### **a. Automation of the End-borrowers Deferral Monitoring:**

- To complete the automation of end borrower details validation (validate BVN details against end borrowers' name, sex, and phone number).
- Enhance LMS to calculate the number of days specified on the system from the effective date of the loan as specified by Treasury upon disbursement.

- Daily reminders should be sent out to PFIs, DBN's Business Development and Relationship Managers (BDRM) and Credit Operations, two weeks from the expiry date of the deferral period (for short period deferrals) until the utilization list is uploaded on the system. Reminders should be sent to PFIs, BDRMs and Credit Operations monthly, for disbursement under the Long-Term Funding (LTF) product until the full utilization is completed.
- Options to upload end borrowers' list on the system for all loans with deferrals should be available on LMS. When the end borrowers' list is uploaded, it should impact on count and other developmental indices being tracked.
- Generate report on all pending end-borrowers lists and, on all end-borrowers list uploaded from the deferral option.
- Create option to always submit additional lists of end-borrowers on loans (wholesale loans only not back-to-back) because of periodic submission of end-borrowers due for utilization on the long-term product and re-utilization where applicable. This is irrespective of the fact that a list of end-borrowers was submitted at the time of loan request.

#### **b. Continuous Improvement**

Implement feedback collection capabilities within the LMS to drive continuous improvement of the platform.

### **Milestone III: Customer Experience and Relationship Management Automation**

#### **a. PFI Performance Review**

- Automate submission of Management Accounts of PFIs through system integration.
- PFIs should be able to validate or update their details (e.g., Director's information) at due intervals or as they change.
- Support the analysis and comparison of current performance ratios against ratios at the onboarding stage.

#### **b. Eligibility Criteria Questionnaire (ECQ) Lead Generation**

- Creating compulsory fields for names of the institutions' representatives, phone number and email address, to be collected before the ECQ number is generated for the prospect. This is useful in sending reminders for the completion of the ECQ.
- The data collected should be viewed by the operations team under 'PFI Onboarding in Progress' as leads for prompt follow up.
- The portal should automatically send weekly emails on applications in process, to encourage progress and completion of the ECQ.

### **c. Relationship Management**

- Implement a customer relationship management module to meet the following requirements:
  - Collate records of calls placed to MSMEs / partners for record purposes.
  - Provide a template for documentation of call memos.
  - Manage and track customer inquiries and complaints to fulfilment.
  - Provide a function with the ability to create an engagement schedule and automatically sends out calendar invite to stakeholders.
- Render the relationship management functionality in a mobile app.

### **d. Automating the Issuance of Offer Letters**

- Support a set of standard conditions and flexibility to allow the inclusion of other conditions which addresses the peculiarity of the PFI.
- Support appending electronic signatures on the offer letters.
- Automatic email notification to PFIs following issuance.

### **e. Interest Drawback (IDB) Operational Flow & Loan Booking.**

- Automate operational flow from end to end till point of booking and creation of provision GL by Finance for the IDB product.
- Include DBN's Office of the Chief Economist as line approver in the operational flow prior to booking.
- Create separate product line for IDB to allow for reporting under specific line, track performance and provide for proper accounting.

### **f. Additional Document submission**

- Non mandatory fields should be created to enable FIs submit their most recent management account and most recent regulatory report.
- The review by DBN Operations should permit the attachment of documents on the FI's behalf.

## **Milestone IV: Integration Layer Optimization**

- Deploy a robust cloud-based Application Programming Interface (API) management platform to connect DBN's internal systems together depending on the right interface and data exchange protocol types (REST, SOAP, etc.). Internal Systems include:
  - Eazybank AX
  - Loan Management System
  - Laserfiche (Business Process Management application)
  - DBN BizAid
  - Payroll
- Deploy a robust cloud-based Application Programming Interface (API) management to connect to external applications and collect data for transaction processing, storage, and analysis. The external systems are:
  - NIBSS for BVN and Account Number validations
  - CBN and Credit Bureau records validation
  - Remita for payments
- Deploy a robust cloud-based Application Programming Interface (API) management that will be connected to by external stakeholders to access approved and transformed MSME data. The API portal will be used to display the data that DBN will like to share and how the service can be consumed.
- Provide insight into all connections, status and data exchanged between system.
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- To create and maintain the right access control and security controls to configurations, data, and audit logs.

## **3. Deliverables and Reporting**

As part of the Firm's response to the Request for Proposals, a draft workplan shall be submitted, proving details of job specific milestones in response to the scope of work presented above.

The consultant shall work with the IT department of DBN, and in addition to job specific milestones to be agreed upon, the consultant shall provide the following:

- Inception report
- Weekly progress reports.
- Project completion report.

The following tasks are expected to be carried in completing the different phases which will also serve as milestones in the reporting and payments.

**Milestone 1** - Requirements Analysis, Design, Build, Test, Train and Deploy the Credit Risk Management and Compliance functionalities described in scope.

**Milestone 2** - Requirements Analysis, Design, Build, Test, Train and Deploy the data quality enhancements identified to improve monitoring and evaluation activities described in the scope.

**Milestone 3** - Requirements Analysis, Design, Build, Test, Train and Deploy the automation of customer experience and relationship management described in the scope.

**Milestone 4** - Requirements Analysis, Design, Build, Test, Train and Deploy the integration layer described in the scope.

Typical tasks and procedure for executing these milestones shall largely involve the following:

- Determination and design of solution architectures
- Design of conceptual and logical data models
- Implementation of the physical databases containing tables, views, procedures, functions, and constraints.
- Implementation of appropriate database security models
- Coding of MVC data models, view models and controllers
- Coding of the data access classes and methods.
- Internal testing of the web service operations
- Deployment of the Web API in test environment for consumption and integration with the external data sources
- Design and organization of the UI structure
- Design of the user interfaces for each use case
- Determination and design of appropriate UI authentication and authorization solution
- Development of the UI services
- Development of the UI modules and components

#### **4. Payment Schedule:**

The firm will be paid upon timely submission of agreed deliverables as stated below. The firm shall submit undisputed monthly progress reports and other deliverables, that will be reviewed by the Head, IT.

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#### **Milestone 1: Completion of Credit Risk Management and Compliance Automations**

**Timeline: 20 Weeks after contract**

1. Submission Detailed Requirement Gathering -10% of contract sum.
2. User Acceptance Test and Go Live - 15% of contract sum.

#### **Milestone 2: Completion of Monitoring and Evaluation Data Enhancement**

**Timeline: 40 Weeks after contract**

3. Submission Detailed Requirement Gathering -10% of contract sum.
4. User Acceptance Test and Go Live - 15% of contract sum.

### **Milestone 3: Completion of Customer Experience / Relationship Management Automation**

**Timeline: 60 Weeks after contract**

5. Submission Detailed Requirement Gathering -10% of contract sum.
6. User Acceptance Test and Go Live - 15% of contract sum.

### **Milestone 4: Integration Layer Optimisation**

**Timeline: 60 Weeks after contract**

7. Submission Detailed Requirement Gathering -10% of contract sum.
8. User Acceptance Test and Go Live - 15% of contract sum.

## **5. Timeframe**

The assignment will be over a period of **fifteen (15) months** from the agreed commencement date.

## **6. Qualification and Experience:**

The Firm must be qualified to and have experience and proven track record of providing the proposed services. The Firm must moreover have the necessary team of experts and subject specialists required to deliver the services outlined in the Scope of Work and should show evidence of the following:

1. Minimum of 5-year software development experience
2. 5 years system integration experience within the Financial Industry.
3. 5 years data engineering and analytics experience within the Financial Industry.
4. 3 References from relevant customer with nationwide presence
5. Has an acknowledged partnership with a cloud service provider preferable AWS or Microsoft Azure
6. Has experience in developing API portals, data integration with references from companies operating in the Finance Industry.
7. Expertise with best practices regarding:
  - user experience and usability testing
  - information architecture
  - Extend reach on multiple platforms.
  - Data integration with current apps and platforms.

The consulting firm should have:

1. 1 Solution Architect with 10 years' experience
2. 1 Data Architect with 10 years' experience
3. 3 Software developers with minimum of 3 years' experience
4. 2 Data Engineers with minimum of 3 years' experience
5. 1 Data Analyst with 3 years' experience storytelling experience
6. 1 Project Manager and Scrum Master with 5 years' experience