



REPUBLIC OF THE PHILIPPINES  
**DEPARTMENT OF BUDGET AND MANAGEMENT**  
 GENERAL SOLANO STREET, SAN MIGUEL, MANILA

**SUPPLEMENTAL/BID BULLETIN (SBB) NO. 1**

This SBB No. 1 dated September 5, 2023 for **Project ID No. DBM-2023-38, “Subscription to Low-Code Frontend Development Platform (LCFEDP) for the Department of Budget and Management,”** is issued pursuant to Section 22.5 of the 2016 Revised Implementing Rules and Regulations of Republic Act No. 9184, to clarify, modify or amend items in the Bidding Documents. Accordingly, this shall form an integral part of the Bidding Documents.

PARTICULARS	AMENDMENTS
<p><b>Section VII. Technical Specifications</b></p> <p style="text-align: center;"><b>Annex “A” (Detailed Technical Specifications)</b></p> <p style="text-align: center;">xxx</p> <p>4.1.1. The local contractor of the proposed LCFEDP must be in the business for at least twenty (20) years.</p> <p><i>Note: The Bureau Internal Revenue (BIR) Certificate of Registration (COR) BIR Form 2303) will be submitted during post-qualification.</i></p> <p style="text-align: center;">xxx</p> <p>4.2.15 Must provide Secure Socket Layer (SSL) certificates for the development, test and production environment of Application Servers.</p>	<p><b>Section VII. Technical Specifications</b></p> <p style="text-align: center;"><b>Annex “A” (Detailed Technical Specifications) (REVISED)</b></p> <p style="text-align: center;">xxx</p> <p>4.1.1. The local contractor of the proposed LCFEDP must be in the business for at least <del>twenty (20)</del> <b>TEN (10)</b> years.</p> <p><i>Note: The Bureau <b>OF</b> Internal Revenue (BIR) Certificate of Registration (COR) BIR Form 2303) will be submitted during post-qualification.</i></p> <p style="text-align: center;">xxx</p> <p>4.2.15 <del>Must</del> <b>THE DBM WILL</b> provide Secure Socket Layer (SSL) certificates for the development, test and production environment of Application Servers.</p>
	<p><b>Note:</b></p> <p><b><u>Attached is the Annex “A” Detailed Technical Specifications (Revised) which should be used as part of the Bidding Documents to be submitted by the bidders.</u></b></p>

**Other matters:**

- The “No Contact Rule” shall be strictly observed. Bidders are not allowed to communicate with any member of the Bids and Awards Committee, Technical Working Group or Secretariat effective September 12, 2023 right after the opening of bids.
  
- For guidance and information of all concerned.

**RAMON VICENTE B. ASUNCION**

*Director IV*

*Vice Chairperson, DBM-BAC*

**DETAILED TECHNICAL SPECIFICATIONS  
(Revised)**

**1.0 PROJECT TITLE**

Subscription to Low-Code Frontend Development Platform (LCFEDP) for the Department of Budget and Management (DBM).

**2.0 OVERVIEW**

The LCFEDP is a new tool for application development that the information technology (IT) industry has adopted. Rather than using conventional procedural computer programming, it enables the construction of application software through graphical user interfaces and setup.

The LCFEDP shall be used in the development of applications. This platform bundles together a set of tools that will enable DBM to build web and native mobile based applications and operationally manage them throughout its lifecycle. It shall reduce the amount of traditional hand coding, enabling accelerated delivery of business applications. The platform will shorten the development time; provide the ability to automatically deploy applications between environments (i.e. development, test, and production); promote collaboration between developers; and provide seamless version controls.

**3.0 OBJECTIVES**

The project shall utilize a LCFEDP that will provide DBM with a facility to be used in the development of its applications. This will enable DBM to build web and mobile based applications and operationally manage them throughout its lifecycle.

The DBM would need a Process Automation technology stack that will involve LCFEDP and provide process automation solutions to streamline processes or systems on the frontend or from the user-interface (UI) level. Said technological capabilities will include the following activities:

- 3.1 Streamlining of tasks focused on interactivity and attended processes;
- 3.2 Creation of workflow applications to improve business productivity; and
- 3.3 Quick task building with no heavy technical programming and disruptive changes to existing programs or applications.

## 4.0 LOW-CODE FRONTEND DEVELOPMENT PLATFORM

### 4.1 Qualifications of Local Contractor

- 4.1.1 The local contractor of the proposed LCFEDP must be in the business for at least ten (10) years.

*Note: The Bureau of Internal Revenue (BIR) Certificate of Registration (COR) BIR Form 2303) will be submitted during post-qualification.*

- 4.1.2 The local contractor must have a partnership with the Principal/Technology provider for at least five (5) years. The local contractor must submit Manufacturer's Authorization from the Principal/Technology provider to do business in the Philippines and specifically with the DBM. Said local contractor/company is likewise an Authorized Sales and Delivery Partner of the Principal/Technology provider.

*Note: Manufacturer's Authorization from the Principal/Technology will be submitted during post-qualification.*

- 4.1.3 The local contractor must have a pool of professionals with the following certifications:
- a) Certification as Reactive Web Developer; or
  - b) Certification as Mobile Developer.

*Note: The Certifications will be submitted during post-qualification.*

- 4.1.4 The local contractor must provide a Platform as a Service (PAAS) hosted in cloud infrastructure for the LCFEDP based on attestation issued by the local contractor for the purpose.

- 4.1.5 The LCFEDP must be in the leaders' quadrant of the 2022 Gartner's Magic Quadrant Report for Enterprise Low-Code Application Platforms.

*Note: The 2022 Gartner's Report indicating that the LCFEDP technology is in the leaders' quadrant will be submitted during post-qualification.*

- 4.1.6 The local contractor must provide cloud infrastructure and user licenses with the following specifications:
  - 4.1.6.1 Two (2) Non-Production Environments (Development and Test)
  - 4.1.6.2 One (1) Production Environment
  - 4.1.6.3 With Service Level Agreement (SLA) uptime and reliability: 99.95%
  - 4.1.6.4 With Built-in Support for Android and iOS
  - 4.1.6.5 With High Availability Feature
  - 4.1.6.6 Annual Subscription on Licenses
  - 4.1.6.7 Seven Hundred (700) Internal Users
  - 4.1.6.8 Ten Thousand (10,000) External Users
  - 4.1.6.9 User License Subscription is on a named-user basis
  - 4.1.6.10 Four Hundred Fifty (450) Application Components

*Note: Application Components are elements in the application that include:*

- a. Pages- the screens designed or installed in the environment for end users. e.g., web, email, mobile SMS, and pop-up screens;
- b. Tables - entities that are designed within the LCFEDP or imported for integration from external databases or both;
- c. Application Programming Interface (API)/Service Operations-Methods from web services, Representational State Transfer (REST) APIs or integration connectors that are consumed or exposed.

- 4.1.7 The local contractor must provide compute and storage resources for Application Servers at the minimum, for a period of one (1) year for the development, test, and production environments with two (2) vCPUs, 4GB Memory, and Disk space necessary to run the platform.
- 4.1.8 The local contractor must provide the platform compute and storage resources for Database Servers at the minimum, for a period of one (1) year for production, development and test environments. The local contractor should also provide vCPU, 8GB Memory and Disk space necessary to run the platform.
- 4.1.9 The local contractor must provide Virtual Private Network (VPN) software to secure communication between the PAAS cloud and the DBM internal network, when necessary. The VPN software must have at least one (1) of the following encryption technologies:

- a. Advanced Encryption Standard (AES) (128 bits and higher);
- b. Triple Data Encryption Standards (TDES) (minimum double-length keys);
- c. Rivest-Shamir-Adleman (RSA) (1024 bits or higher);
- d. ECC (160 bits or higher); **or**
- e. ElGamal (1024 bits or higher).

4.1.10 The Cloud Service Provider (CSP) of the proposed PAAS Cloud must have at least one (1) of following accreditation and certifications:

- a. ISO 27001 - Information Security Management;
- b. Payment Card Industry (PCI) Data Security Standard (DSS);
- c. Service Organization Control (SOC) 1 and 2; **or**
- d. ISO 27018 - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors.

## 4.2 Solutions Components

- 4.2.1 The platform should provide tools for the LCFEDP approach in the development and deployment of software applications.
- 4.2.2 The platform should be able to generate APIs to be utilized in a microservice architecture.
- 4.2.3 The platform must provide a clear exit strategy that will allow DBM to continue the use of the applications developed in the LCFEDP using traditional tools and technology and independent from any of the platform components without recoding to avoid vendor lock-in. This is necessary in the event DBM decides to stop using the platform for whatever reason.
- 4.2.4 The platform must have the capability to use the same source code in addressing common backend functionalities (i.e., business rules, back-end integrations, and back-end data) in both web and native mobile interfaces.
- 4.2.5 The platform must be able to create multi-channel user experience, including Web Applications, Hybrid Applications and Mobile Native Apps, for iOS and Android.
- 4.2.6 The platform must work on a fully standard web stack, running standard web applications on standard web servers and databases. It must not depend on any runtime interpreters. The database must be open and easily readable.
- 4.2.7 The platform must have an SLA that guarantees at least 99.95% availability of all services for PAAS subscription.
- 4.2.8 The platform should provide a development environment where the design of software application is done using its available tools and graphical interface.

- 4.2.9 The platform must include the maintenance, troubleshooting and delivery of the day-to-day technical support operations.
- 4.2.10 The platform must provide horizontal and vertical scalability that allows the scaling of computing and storage resources (e.g. CPU, Memory) of a Virtual Machine (VM), when needed.
- 4.2.11 The platform must maintain regular backups of at least fifteen (15) days and ensure that these backups could be restored immediately when necessary.
- 4.2.12 The platform must provide direct access to the database provided in PAAS platform, when needed, using enterprise database tools to perform operations such as, but not limited to:
  - 4.2.12.1 Read and write data in bulk to database tables (e.g. deleting data in a test table).
  - 4.2.12.2 Create and run database specific Extract, Transform and Load (ETL) processes to extract and load data from external data sources (e.g. extraction production data and load to the test environment).
- 4.2.13 The platform must have a dedicated set of Virtual Machines (VMs) and database instances that are completely isolated from other VMs and database instances of other tenants/customers of the Cloud Service Provider.
- 4.2.14 The compute and storage resources for LCFEDP may be upgraded depending on the requirements with no additional cost to the DBM.
- 4.2.15 The DBM will provide Secure Socket Layer (SSL) certificates for the development, test, and production environment of Application Servers.

### 4.3 Integration Requirements

- 4.3.1 The platform must allow automatic integration with external database engines such as, but not limited to, Oracle SQL, MySQL, MS SQL, among others.
- 4.3.2 The platform must allow automatic integration with Simple Object Access Protocol (SOAP) services using Web Service Definition Language (WSDL) definitions.
- 4.3.3 The platform must provide the necessary integration to the DBM on-premise Active Directory and Azure Active Directory.

#### 4.4 Deployment Requirements

- 4.4.1 The platform must provide the ability to automatically deploy applications and all its dependencies between environments (i.e., development, test, and production).
- 4.4.2 The platform must allow automatic integration with SOAP services using WSDL definitions.
- 4.4.3 The platform must allow the configuration of a deployment package using a dependency analysis and impact analysis that allows the validation of whether any existing applications will be negatively affected by the deployment.

#### 4.5 Management, Monitoring, and Operations Requirements

- 4.5.1 The platform must provide a central security configuration console that allows fine-grained control over what each user can do in the environment.
- 4.5.2 The platform must provide a central security configuration console that allows specifying which components can be reused or changed by specific developers.
- 4.5.3 The platform must provide auditing trails/logs of all IT operations performed in the environment.
- 4.5.4 The platform must provide a centralized console for application configuration such as user requests, batch processes, web services and global variables.
- 4.5.5 The platform must provide a centralized dashboard that allows a visual analysis of the performance levels of the overall web responsive applications portfolio over time.
- 4.5.6 The platform must log performance issues whenever slow database queries or slow integrations are executed for ease of troubleshooting.

#### 4.6 Other Requirements

- 4.6.1 The platform must have proper security mechanisms to allow access only to authorized users.
- 4.6.2 The platform must have a role-based access scheme where authorized and designated users must be defined and classified in accordance with their access privileges. This means that levels of access to certain data or information depend on their roles.



## 4.7 Scope of Work, Enablement and Support

- 4.7.1 Must complete the setup, installation, and configuration for all environments within thirty (30) calendar days from the receipt of the Notice to Proceed (NTP).
- 4.7.2 The subscription period will be for twelve (12) months from the date of completion of setup, installation, and configuration for all environments.
- 4.7.3 Access to online training and technical materials
  - 4.7.3.1 Provide unlimited access to online training materials;
  - 4.7.3.2 Provide online training references and Hands-on exercise materials;
  - 4.7.3.3 Provide online technical manuals; and
  - 4.7.3.4 Provide installation, configuration and deployment procedures online references.
- 4.7.4 Enablement support for up to sixteen (16) DBM personnel (e.g., software developers).
  - 4.7.4.1 Must provide at least one (1) introductory session to jumpstart the enablement and usage of the LCFEDP with the following components:
    - a. Platform Overview
    - b. Platform Walkthrough
    - c. Application Development Demo
  - 4.7.4.2 Must provide enablement for the following:
    - a. Basic Frontend Development (Web and Mobile)
    - b. Managing Data
    - c. Integrations
    - d. Platform Best Practices
  - 4.7.4.3 Must provide guidance and mentoring sessions for the DBM personnel to complete a final project as part of the enablement completion.
- 4.7.5 24x7 Platform Technical and Operational Support
  - 4.7.5.1 Provide unlimited 24x7 helpdesk web and telephone technical support for platform incidents
  - 4.7.5.2 Provide 24x7 remote support (even during holidays) with two (2) business hours response time for all urgent problems reported and related to the proposed LCFEDP. Urgent problems are defined as complete loss of service or a significant feature that is completely unavailable and no workaround exists.

- 4.7.5.3 Provide access to a web-based portal for all product support and service requests.
- 4.7.5.4 Provide unlimited web support for how-to develop, performance, coding issues, and other concerns related to the use of the LCFEDP.
- 4.7.5.5 Provide access to the LCFEDP patches, bug fixes, security fixes and software updates.
- 4.7.5.6 The Principal/Technology Provider of LCFEDP shall warrant that the platform provided is free from any hidden defect. If there is any hidden defect, said principal must be capable of fixing said defect.

4.7.6 The local contractor is obligated to provide the following:

- 4.7.6.1 One (1) year subscription for the LCFEDP;
- 4.7.6.2 Named-user licenses;
- 4.7.6.3 Allow at least sixteen (16) developers to collaborate;
- 4.7.6.4 Export the applications developed using the said platform to traditional lines of programming code;
- 4.7.6.5 Installation and configuration of development, test, and production environments;
- 4.7.6.6 One (1) year 24x7 technical and operations support on the platform;
- 4.7.6.7 Platform Enablement Support for developers; and
- 4.7.6.8 Online learning materials and references.

## **5.0 CONFIDENTIALITY OF DATA**

- 5.1 The service provider shall be required to sign a Non-Disclosure Agreement (NDA).
- 5.2 The DBM Enterprise Network System, its components, parts and all products, products samples and specifications, data, ideas, technology, and technical/nontechnical materials, all or any which may be derived from any of the foregoing are strictly confidential.
- 5.3 The contractor agrees to hold all the foregoing information in strict confidence. The contractor further agrees not to reproduce or disclose any confidential information to third parties without the prior written approval of the DBM.

## **6.0 TERMS OF PAYMENT**

One-time payment shall be made, subject to the submission of the following documentary requirements, and in accordance with budgeting, accounting, and auditing laws, rules, and regulations:

- 6.1 Proof of LCFEDP Subscription; and
- 6.2 Sales Invoice / Billing Statement;
- 6.3 Certificate of Acceptance issued by the Undersecretary for Information and Communications Technology (ICT) Group; and
- 6.4 NDA.