

## **TERMS OF REFERENCE**

### **DEVELOPMENT, INSTALLATION, TESTING AND DEPLOYMENT OF THE UNIFIED OFFICE OF THE CITY ASSESSOR (OCAs) REAL PROPERTY APPRAISAL AND ASSESSMENT MANAGEMENT SYSTEM**

#### **I. RATIONALE AND BRIEF BACKGROUND**

The Quezon City Office of the City Assessor (OCAs) is responsible for storing, updating and maintaining the Real Property Assessment Information stored in the QCRPATS database housed in the QCITDD for real property assessment, taxation and other purposes. As part of its day-to-day transaction, OCAs is using an in housed developed application and related modules for capturing, retrieving and cancelling real property related information, that includes the following:

- Quezon City Real Property Assessment and Taxation System (QCRPATS)
- FAAS-TD Transaction Processing System
- Field Appraisal and Assessment Solution (FAAS)
- Assessment Real Property Query Module
- PIN Verification Module
- Notice of Cancellation Module
- Export Condo Module
- Idle Land Append/Remove Application Module
- Payment Query Module
- Daily Transaction Tracking Module

With all the in-housed developed applications, there is a need and requirement for an innovative unified software application capable of performing all required tasks within a single platform, including all the necessary procedural and reportorial requirements. This software must meet all specifications outlined by the OCAs in the Business Requirement Document or BRD.

#### **II. PROJECT DESCRIPTION**

##### **Project Goals**

As one of the component programs of the Real Property Information System (RPIS) Project under the Local Development Investment Plan (LDIP) proposed by OCAs, this project aims to upgrade and enhance the existing QCRPATS system by developing an innovative web-based unified software application that will support a comprehensive real property assessment and taxation operations through advanced technology integration, efficient transaction processing, and improved infrastructure, thereby optimizing revenue generation, improving data accuracy, and enhancing user experience for both taxpayers and city personnel.

## **Project Objectives**

With all the application module in place, OCA's users are having difficulty in accessing multiple applications/service programs that affects the accuracy and work productivity. On the other hand, there also appears hindrances and issues in terms of maintenance and enhancement, on the part of developers, considering the application programming languages used in the development of such applications and service programs/modules, vis-à-vis, the requirements for revision/upgrading and enhancement, to conform with OCAs requirements. Thus, the primary objective of streamlining access to multiple applications and service programs for OCAs users, to enhance user experience and improve work accuracy and efficiency. This will be achieved by developing a unified web-based platform that would integrate all necessary functionalities specified by OCAs.

Key components of the project include:

- 1) Development of a secure Web-based Unified FAAS-TD transaction processing for all land, building/other improvement and machinery, including multiple FAAS data capture and TD/NOA generation;
- 2) Development of a normalized database structure to streamline the management of real property related data while ensuring compatibility with other existing applications QCRPATS, Real Property Tax Billing and Collection, and the ETAXMAPS-related applications, considering that the same also gets its related data from the QCRPATS.
- 3) Consolidation of high priority OCAs application modules and enhance the QCRPATS history management capabilities by modernizing it according to OCAs specifications as stated in the BRD to effectively track both real property assessment information and payment history details, for the preparation of certifications and other TD related transaction requests;
- 4) Enabling the proposed system with the capability to generate sixteen (16) reports required by OCAs, including those for regulatory compliance, featuring automatic report generation based on predefined schedules or triggers, that can be extracted by period, specific Barangay, Assessment District, and Congressional District, such as:
  - a) Periodic Report on Real Property Assessments as required by DOF/BLGF aligned with the ESRE/LIFT Reporting System;
  - b) Report on No. of RPUs per property type (land, building/improvements, machineries), by classification and actual use, taxable and exempt;
  - c) Reports on New Discoveries, Reassessments and Reclassifications, accounting for Real Property Tax Computations and Estimated Tax Dues, delineating current and subject to back taxes;
  - d) Report on Assessment and Collection accounting for New Discoveries, Reassessment and Reclassification including back taxes;
  - e) Reports on daily transactions involving Transfer, Consolidation, Segregation, Amendments, Updating of Entries, Inclusion of Awardees, Annotations, Cancellations, and others;

- f) Report on the number of RPU's that were reclassified (from commercial to residential, residential to commercial/industrial) including equivalent value changes;
  - g) Real Property Appraisal and Assessment Accomplishment by period, by specific Barangay, Assessment District, and Congressional District, as required by CPDD and other agencies;
  - h) Report on Sales Values for Land and Condominium Units;
  - i) Electronic Assessment Roll;
  - j) Electronic Tax Map Control Roll (eTMCR);
  - k) Real Property Assessment Listing, extracting selected fields from FAAS, QCRPATS, and Payment Database, as may be required;
  - l) Real Property Assessment Listing of Delinquent Properties, Idle Land, and with restrictions as to:
    - Overlapping properties
    - With Adverse Claim
    - With court cases, LBAA Case, etc
    - With Tax Lien, Warrant of Levy
  - m) Report on Assessment, Classification and Type of Buildings & Machinery;
  - n) Report on Inventory of PINs and TD Nos. issued;
  - o) Report on Property Location and Valuation details by Sub-Classification (Land and Condominium Building/Units); and
  - p) Assessment Reports on Quezon City Government Properties
5. Developing a dashboard based on OCAs needs and requirements in the BRD where users can select report types, set parameters, and view/report results, likewise based on predefined schedule or triggers;
6. Enabling the proposed system with the capability to generate reports based on OCAs specifications in the BRD as required for tax impact study and analysis, for general revision purposes, including related service programs for the automatic generation of Notices of Assessments and Tax Declarations, such as the following:
- a) Report on Sales Values for Land and Condominium Units;
  - b) Report on Property Location and Valuation details by Sub-Classification (Land and Condominium Building/Units)
7. Implementing a real-time data replication feature within the proposed system ensuring the seamless transfer of data from the cloud server to the OCAs server housed at the QC-Information and Technology Development Department.
8. Deployment of a secured system for OCAs in compliance with the Data Privacy Act of 2012 and successfully conducted ITDD and DICT VAPT scan and findings completely addressed.
9. Building the capabilities of OCAs and ITDD personnel to use and manage the system through training and knowledge transfer activities upon system turnover;
10. Initially testing of all functionalities required using one (1) pilot barangay, as proof of viability, before full implementation.

### **III. PROJECT SCOPE OF WORK**

To fulfill the project's objectives, the following list outlines the scope of the project that will involve the development, installation, testing and deployment of a Web-based Unified Real Property Appraisal and Assessment Management System, inclusive of all the application requirements mentioned above.

#### **1) Databases –**

- Design a database schema that includes tables, relationships, and data types tailored to handle property appraisal, assessment, and taxation data;
- Implement access control mechanisms to regulate data access based on user roles and permissions. The database should enforce restrictions on who can access specific data and define the actions they can perform, in accordance with the roles and permissions in the BRD.
- Establish regular backup procedures and schedules to safeguard data against loss or corruption. Ensure backups are stored securely and are easily retrievable;
- Develop a disaster recovery plan and test it regularly to ensure data can be restored quickly in case of a failure;
- Provide comprehensive documentation for the database schema, design, and features or functions listed in this documents upon systems turnover;
- Provide an avenue via API to ensure that the database supports integration with other systems, for seamless data sharing and synchronization later;
- Ensure the database adheres to relevant regulations and standards for data management and protection, such as:
  - a) Applicable Data Protection Regulation
  - b) Conducted ITDD and DICT VAPT scan
- Provide training for database administrators and users on how to interact with and manage the database effectively, upon systems turnover.
- All data collected and processed by the system is the property of QC LGU even after the turnover of the system.

#### **2) System – ensure that the Web-based Unified Real Property Appraisal and Assessment Management System is robust, secure and capable of meeting the needs of all stakeholders as specified by OCAS, in the BRD, and:**

- Ensure the system provides a secure web-based interface for user access, with guaranteed compatibility with Google Chrome and Apple Safari browser;
- Provide APIs for potential integration with external systems such as the ETAXMAPS, UGIS and others to ensure the system can exchange data seamlessly with other systems and services as needed;
- Provide Users Manual and Technical Manual for the web-application, its system architecture, configuration, and operational procedures, and design training materials and programs for users and administrators to ensure effective system use and management, upon system turnover;

- Ensure the systems security adheres to the Data Privacy Act of 2012, and a DICT and ITDD VAPT scan has been conducted and findings successfully addressed.
- Recommend hardware, software, and network requirements for system implementation, which shall be purchased or made available by QCG to the Project;
- Implement data validation rules to the web application based on OCAs specifications in the BRD and using existing legacy modules as primary basis in order to maintain data accuracy and consistency to handle and avoid data entry errors or inconsistencies. This includes constraints, triggers, and checks to enforce data integrity such as validation for TDN format, PIN, Mobile Numbers, Address, ARPN format, and other key data fields.
- The system will be hosted on the cloud utilizing a service from an established provider. The supplier will provide this hosting service for a period of one (1) year beginning from the deployment and launch of the system.

### 3) Reports

- Collaborate with OCAs to determine, report specifications and outline them in the BRD including frequency, format, and content, enabling the proposed system with the capability to generate the following reports that can be extracted by period, specific Barangay, Assessment District, and Congressional District, such as:
  - a) Periodic Report on Real Property Assessments as required by DOF/BLGF aligned with the ESRE/LIFT Reporting System;
  - b) Report on No. of RPUs per property type (land, building/improvements, machineries), by classification and actual use, taxable and exempt;
  - c) Reports on New Discoveries, Reassessments and Reclassifications, accounting for Real Property Tax Computations and Estimated Tax Dues, delineating current and subject to back taxes;
  - d) Report on Assessment and Collection accounting for New Discoveries, Reassessment and Reclassification Including back taxes;
  - e) Reports on daily transactions involving Transfer, Consolidation, Segregation, Amendments, Updating of Entries, Inclusion of Awardees, Annotations, Cancellations, and others;
  - f) Report on the number of RPUs that were reclassified (from commercial to residential, residential to commercial/industrial) including equivalent value changes;
  - g) Real Property Appraisal and Assessment Accomplishment by period, by specific Barangay, Assessment District, and Congressional District, as required by CPDD and other agencies;
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- l) Real Property Assessment Listing of Delinquent Properties, Idle Land, and with restrictions as to:
    - Overlapping properties
    - With Adverse Claim
    - With court cases, LBAA Case, etc
    - With Tax Lien, Warrant of Levy
  - m) Report on Assessment, Classification and Type of Buildings & Machinery;
  - n) Report on Inventory of PINs and TD Nos. issued;
  - o) Report on Property Location and Valuation details by Sub-Classification (Land and Condominium Building/Units); and
  - p) Assessment Reports on Quezon City Government Properties
- Collaborate with OCAs in designing a dashboard to be outlined in the BRD where users can select report types, set parameters and view/report results, likewise based on predefined schedules or triggers;

#### 4) Training and Technology Transfer

- Train QC users assigned to essential functions on the use of the web application system and related modules;
- Train designated administrators, both OCAs and QCITDD on the applications design and queries from the databases, upon systems turn over.
- Train Technical Support for system administration, re-installing, configuring the platform for the applications, and providing first level support to users, upon systems turnover.
- The source code of the system belongs to QC LGU and will be turned over by the supplier upon request of the City or upon expiration of maintenance agreements or warranties.

#### 5) Project Management – Apply best practice project management to ensure that:

- The Project has an approved Project Implementation Plan;
- User requirements are documented properly and considered in the design of the system and in its implementation in the form of a Business Requirement Document (BRD);
- Project objectives are met;
- All stakeholders understand the project and proper communication is done on a need basis;
- Development tasks meet project objectives and timeframe through proper coordination;

#### **IV. DELIVERABLES**

Below is the list of the deliverables for this project:

- 1) Deployed Web-based Unified Real Property Appraisal and Assessment Management System**
  - A secure web-based application software that integrates all the necessary processes for the FAAS-TD Transaction processing as specified by OCAs in the BRD for all land, building and other structures, and machinery, including multiple FAAS data capture, from receiving of transactions in the iDeclare Easy Web Application, to property identification and automated PIN assignment, real property appraisal, assessment, and, must be compatible with the tax billing and collection functions, including functionalities for recording, declaration, digital signing, posting, up until cancellation and issuance of Notice of Cancellations, that has the following features:
    - a) Automated Processing with audit logging - Improved automated transaction processing capabilities, as outlined in the BRD including linking workstations, tracking and integration of the existing QC-ETMCR via iFrame;
    - b) A User Role Management Form within the QCeServices portal - A single user management module for iDeclare Easy and OCAs eServices users, with the capability of adding and updating users including their e-signatures;
    - c) Consolidated and enhanced OCAs application based on specifications provided in the BRD with QCRPATS history management capabilities to effectively track both real property assessment information and payment history details, for the preparation of certifications and other TD related transaction requests, that includes:
      - Assessment Real Property Query Module
      - PIN Verification Module
      - Notice of Cancellation Module
      - Export Condo Module
      - Idle Land Append/Remove Application Module
      - Blocking and unblocking of properties with restriction
      - Payment Query Module
      - Tracking Module
- 2) Fully developed additional application or service programs as required by this project, and stated in the BRD, such as follows:**
  - a) Transfer Tax Query Module
  - b) Delinquency Module
  - c) Assessment Roll Module
  - d) Other reporting modules mentioned in the reports requirement above
- 3) Statistical Reports Application –** Collaborate with OCAs to determine the exact types of reports they need, including frequency, format, and content, enabling the proposed system with the capability to generate all necessary reports, including those for regulatory compliance, featuring automatic report generation based on predefined schedules or triggers, such as those mentioned in item 3 of the Project Scope of Work;
- 4) Dashboards -** Collaborate with OCAs in designing a dashboard to be outlined in the BRD where users can select report types, set parameters and view/report results, likewise based on predefined schedules or triggers;

- 5) **Documentation and User/Technical Manuals** – Formulate and submit upon system turnover a documentation of policies, procedures, technical/user manuals and other documents necessary for the software application, its system architecture, configuration, and operational procedures, documentation on availing of warranty and technical support services.
- 6) **Standards and Policies** - With the assistance and in coordination with OCAs, development and documentation of standards and policies related to systems daily transactions. Standards and policies to be finalized and submitted to OCAs upon turnover of the system.
- 7) **User Training** – End-user training for 20 users for two (2) sessions, with Fully Supported Functional Software (FSFS).
- 8) **Project Management** – In applying best practice, the following has to be submitted:
  - a) **Project Implementation Plan** – three sets hard copy – due within two weeks from Notice to Proceed
  - b) **Quality Assurance Plan and Implementation Report**, one hard copy and three sets backup digital file
  - c) **Project Completion Report** including recommendations for next activities –three sets hard copy

#### **V. AREA OF COVERAGE**

The web application will be deployed online through the QC-eServices portal and will be available for use by the Office of the City Assessor, its authorized/designated internal users and such other authorized QC-LGU offices.

#### **VI. PROJECT STANDARDS AND REQUIREMENTS**

The following are the minimum qualifications and requirements for the Contractor or Bidder:

- i. **Track Record**
  - a. The service provider must be in the same industry as per their SEC/DTI filing for at least five (5) years
  - b. The service provider should have been in operation for at least five (5) years
  - c. The service provider must have implemented a similar registration and web application project within the last three (3) years.
  - d. The service provider should have implemented a public or private project with a single completed contract amounting to at least fifty percent (50%) of the ABC.
- ii. **Organization**
  - a. Service providers must have Platinum status in PHILGEPS.
  - b. The service provider must be a duly registered corporation with SEC/DTI filing.
  - c. The service provider must be filed with SEC/DTI as an IT company with the purpose of software development and the supply of IT-related goods and services
  - d. The service provider must be duly registered under the National Privacy Commission.
  - e. The service provider shall guarantee that the system shall abide with the DATA PRIVACY ACT OF 2012 to ensure that the personal information is protected.
- iii. **Manpower**
  - a. The service provider must have their own headcount of software developers.



- b. The service provider must have their own support staff to conduct support tasks for the project such as system administrators and quality assurance testers.
- c. Staff complement (refer to the attached qualification requirements):
  - i. One (1) Overall Program Manager– college graduate (preferably IT-related courses) and with at least five (5) years experience on this field
  - ii. One (1) Senior Web Development Project Manager– college graduate (preferably IT-related courses) and with at least two (2) years experience on this field
  - iii. One (1) Google Cloud Platform Server Administrator– college graduate (preferably IT-related courses) and with at least one (1) year experience on this field
  - iv. One (1) Web Security Engineer– college graduate (preferably IT-related courses) and with at least one (1) year experience on this field
  - v. One (1) Quality Assurance and Testing Staff– college graduate (preferably IT-related courses) and with at least one (1) year experience on this field.

**VII. TRAINING AND TECHNOLOGY TRANSFER**

As packaged, the service provider will provide the equivalent training requirements necessary for the proper usage of the software system specifically:

<u>Training</u>	<u>No. of Sessions</u>	<u>No. of Participants</u>
End-user training	2	20

Both Systems Administration and Executive Briefings will be conducted upon turnover.

**VIII. AFTER SALES SUPPORT**

- a. One (1) year warranty for software bugs and fixes from date of acceptance/completion.
- b. Technical support:
  - i. Workdays from 8AM to 5PM, expect a response within the day or by next day
  - ii. Weekends and holidays, expect a response by next workday
  - iii. Expected turnaround times:
    - 1. For line down situations, response and/or resolution within two (2) hours of confirmed and acknowledged reporting
    - 2. For individual support queries, response and/or resolution within twenty-four (24) hours of confirmed and acknowledged reporting

**IX. PROJECT COST**

The Approved Budget for this Contract (ABC) amounts to THIRTY MILLION PESOS (Php 30,000,000.00) VAT inclusive, and shall be paid according to the schedule prescribed below:

MILESTONES	Percentage of Total Project Cost	Amount
1. Upon submission of corresponding Project Implementation Plan, and approval of the database and systems design.	15%	4,500,000.00

2. Upon submission of the system for internal testing and approval of the same, tested in one (1) pilot barangay.	15%	4,500,000.00
3. Upon user acceptance testing and deployment of the system online, inclusive of all required features and applications/service programs, completion of documentation and users training.	69%	20,700,000.00
4. Upon completion of one year warranty and technical support.	1%	300,000.00
<b>TOTAL</b>	<b>100%</b>	<b>30,000,000.00</b>

**Cost Derivation:**

Description	Amount
<b>Software Development Cost</b> Quezon City Real Property Assessment and Taxation System (QCRPATS) FAAS-TD Transaction Processing System Field Appraisal and Assessment Solution (FAAS) Assessment Real Property Query Module PIN Verification Module Notice of Cancellation Module Export Condo Module Idle Land Append/Remove Application Module Payment Query Module Daily Transaction Tracking Module Transfer Tax Query Module Delinquency Module Assessment Roll Module Other reporting modules mentioned in the reports requirement	21,000,000.00
Initial Year Cloud Hosting	800,000.00
Technical QA and Customer Service Support	4,500,000.00
On-Demand Report Generator	3,300,000.00
Documentation and Training	600,000.00
<b>TOTAL</b>	<b>30,000,000.00</b>

**X. TIMEFRAME/DELIVERY SCHEDULE**

The time frame to complete the software application shall be a maximum of one hundred ten (110) calendar days upon the issuance of the Notice to Proceed (NTP).

Milestones	Schedule of Deliverables
Technical specifications and Project Implementation Plan sign-off	Day 0-10
Presentation of Minimum Viable Product & Pilot Testing	Day 40-50
UAT of Application modules and submission of required documentation	Day 70-80
End-user training of entire system	Day 100-110

**XI. PENALTIES FOR BREACH OF CONTRACT**

Failure to deliver the services according to the standards and requirements set by the City shall constitute an offence and shall subject the Contractor to penalties and/or liquidated damages pursuant to RA 9184 and its revised Implementing Rules and Regulations.

**XII. CANCELLATION OR TERMINATION OF CONTRACT**

The guidelines contained in RA 9184 and its revised IRR shall be followed in the termination of any service contract. In the event the City terminated the Contract due to default insolvency, or for cause, it may enter negotiated procurement pursuant to RA 9184 and its IRR.

Reviewed and endorsed by:



**ATTY. SHERRY R. GONZALVO**  
City Assessor



**MARY ANN G. CRUZ**  
Officer-in-Charge  
Information Technology and Development Department

Noted:



**MICHAEL VICTOR N. ALIMURUNG**  
City Administrator