

## **TERMS OF REFERENCE**

### **ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY SUBSCRIPTION FOR DATA ANALYSIS**

#### **I. PROJECT BACKGROUND**

The Quezon City Government Business Permits and Licensing Department (BPLD) is responsible for the issuance and renewal of business permits. It regulates the nature and/or operations of various business activities within Quezon City. As a key economic agency, its ability to nimbly measure and interpret licensing and business trends has the potential to provide invaluable input into economic policy-making and regulation.

In today's data-driven environment, the ability to analyze and derive insights from large datasets is crucial for informed decision-making. The Business Permits and Licensing Department recognizes the need for a sophisticated Artificial Intelligence (AI) system that can enhance our data analysis capabilities, enabling the Department to process and interpret vast amounts of data efficiently and accurately.

Following BPLD's various digital innovations over the past few years, the volume of data generated by its operations has increased significantly. Traditional methods of data analysis have become insufficient to manage this growing complexity and scale. This challenge has in most cases impeded its ability to extract actionable insights in a timely manner, which is critical in crafting new policies that will further promote Quezon City as the location of choice for investors.

The proposed AI subscription is intended to address these challenges by automating data analysis processes, improving accuracy, and providing deeper insights. The AI subscription is expected to integrate with BPLD's existing data infrastructure, support various data formats, and offer advanced analytical capabilities such as predictive modeling, trend analysis, anomaly detection, visualization, among others.

This project aims to select and implement a subscription to AI that aligns with BPLD's goals and support its vision for data-driven decision-making. The selected subscription should not only enhance our current analytical capabilities but also be scalable and adaptable to future data needs.

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

The proposed AI system is intended to address BPLD's challenges by automating data analysis processes, improving accuracy, and providing deeper insights. The system will be expected to integrate with BPLD's existing data infrastructure, support various data formats, and offer advanced analytical capabilities such as predictive modeling, among others.

Submissions will be assessed based on the strengths and overall cost-effectiveness of their solutions in:

- Integration across different database formats
- Speed of deployment and simplicity of use, including subsequent availability and responsiveness of support from vendor for BPLD users
- Efficiency and speed in refreshing dashboards
- Flexibility for prospective adaptation, such as the incorporation of new sources and formats of data, subsequent to conclusion of the project
- Stability of system and robustness of data security

### III. PROJECT SCOPE OF WORK

1. Project Preparation and Mobilization, including 2 months subscription to the Administrative portal/ Client portal interface
2. Requirements gathering, scoping and project management
3. Initial database review
4. Data extraction and integration
5. User guidance and training
6. Final handover
7. Technical and Project Support
8. Data analysis and visualization (Up to 30 data visualizations).

#### A. EXTERNAL OR PUBLICLY AVAILABLE USER INTERFACE (UI) DERIVED FROM INFORMATION BASED ON THE PERMITS ISSUED BY THE BPLD. The data visualizations must include the following:

01. Number of all issued business permits based on search parameters, (i.e., period covered, citywide, district, barangays, streets, zones, line of business, sub-business activity, business organization)
02. Number of new business permits based on search parameters (i.e., number of amended new business permits, period covered, citywide, district, barangays, streets, zones, line of business, sub-business activity, business organization)
03. Number of renewed business permits based on search parameters (i.e., number of amended and renewed business permits, period covered, citywide, district, barangays, streets, zones, line of business, sub-business activity, business organization)
04. Revenues of the city from businesses based on search parameters (period covered, new business, renewal, amendment, special permit, occupational permit, other miscellaneous fees, citywide, district, barangays, streets, zones, line of business, sub-business activity, business organization)
05. Statistical data on average turn-around time of permit processing and approval
06. Risk classifications of business activities (line of business and sub-activity) derived from existing businesses in Quezon City and predict potential risks based on historical data, such as areas more prone to regulatory violations, health hazards, or environmental risks
07. Statistical data on business activities operating per zoning classification (citywide, per district, per barangay, per street)
08. Business Type/Size and Revenue Breakdown: Show the distribution of business types or sizes (e.g., Nano, Micro, Small, Medium, Large Enterprises) and revenue with issued permits (new, renewal, amendment) citywide, district, barangay, street, zone
09. Industry and sectoral distribution (line of business and sub-activity) such as top industries, emerging industries and industries on the decline
10. Public map showing the geographical distribution of businesses across different barangays and districts in Quezon City based on issued business permits
11. Two (2) Visualizations assigned to Local Economic Investment Promotions Office
12. Three (3) Visualizations assigned to City Planning and Development Department

**B. INTERNAL USER INTERFACE (UI) DERIVED FROM INFORMATION ON THE PERMITS ISSUED BY THE BPLD (ACCESS FOR BPLD AND OTHER QCGOV DEPARTMENTS TO BE DETERMINED THROUGH QC E-SERVICES ACCOUNT MANAGEMENT). The data visualizations must include the following:**

1. Personnel productivity, average length of time to process an application of each evaluator account as well as timestamp of each application processed by an evaluator
2. Summary and list of establishments with violations upon inspection which thereafter secured permits within a time period
3. Business tax paid vis-a-vis permit renewal data. AI tool must be able to generate MP numbers who paid business taxes but no permit renewal on record year-on-year
4. New and renewal business permit applications permissibility tagging by Zoning Administration Unit (permitted, for compliance, not permitted) per line of business activity
5. Mayor's Permit tagged under the negative list, (i.e., period covered, citywide, district, barangays, streets, zones, line of business, sub-business activity, per department)
6. Identification and assessment of Business Tax and Regulatory Fees paid by a unique MP based on search parameters with % figure (increase/decrease) year-on-year
7. Identification and number of businesses paying taxes on an annual or quarterly basis
8. Turnaround time of each unique Mayor's Permit number application highlighting areas for improvement in terms of processing times, error rates, or bottlenecks in the workflow
9. Assessment of compliance to other regulatory requirements such as but not limited to liquor permit, sanitary permit, environmental clearance, fire safety inspection certificate, tourism accreditation certificate
10. Number and demographics of workers who secured occupational permits and cross-matching of occupational permits and health certificates.
11. Forecast future business trends (line of business and sub-activity) in particular areas (streets, zones, barangays, districts) based on historical geotagged data
12. Identification of business locations/addresses with or without real property tax assessments for the determination of its correct assessment based on use (residential or commercial)
13. Number and demographics of workers who secured occupational permits based on line of business and sub-activity
14. Number of declared employees of all businesses (i.e., period covered, citywide, district, barangays, streets, line of business, sub-business activity, business types or sizes (e.g., Nano, Micro, Small, Medium, Large Enterprises))
15. Distribution of businesses (e.g., Nano, Micro, Small, Medium, Large Enterprises) based on the number of employees

As a minimum, the proposal must deliver an AI system for data analysis which shall include the following features and deliverables:

**A. Administrative Portal Interface**

- Web application accessible from Google Chrome, Microsoft Edge, and Safari web browsers (PC and mobile phone compatible)
- Database integration management

- Integrating new databases from various offices such as but not limited to the Business Permits and Licensing Department, City Administrator's Office, Local Economic Investment Promotions Office, City Planning and Development Department, Small Business and Cooperative Development Office, Quezon City Tourism Department, etc.
  - Creation and editing of charts, including the following chart types:
    - Bar, Line, Area (including Stacked variations)
    - Sunburst
    - Heatmaps
  - Creation and editing of dashboards
  - Interactive filtering of charts and dashboards by text (search), category (dropdown), and date range
  - Management of user roles and access controls
    - Column-level permissions
    - Row-level permissions
  - Backup and recovery functions (cloud-based and on-premise)
- B. Client Interface
- Shareable and embeddable charts and dashboards usable on Quezon City Government's public website
  - Automatic refreshing of chart data at regular intervals
  - Scale and performance to handle public requests during peak periods
  - Secure operation and access controls
- C. Connectivity
- Support for on-premise databases and on-premise operation
  - Support for Microsoft SQL Server and Google Sheets
  - Real-time data access
  - Combine data from multiple databases within a single chart

The proposal must also include professional services to integrate and visualize BPLD's data, and to train BPLD users in subsequent usage and adaptation of the solution.

#### **IV. PROJECT STANDARDS AND REQUIREMENTS**

The soliciting party is the BUSINESS PERMITS AND LICENSING DEPARTMENT (BPLD), acting on behalf of the Quezon City Government.

The parties invited to make and submit their proposals are qualified public/private sector entities, whether stock or non-stock and non-profit corporations. For prequalification purposes, interested and fully qualified parties shall submit the following document together with the submission of their bid:

- A. Company Profile, stating the owners, brief history and business of the company and such other information deemed necessary or desirable to include to enable proper evaluation of its capabilities;
- B. Audited Financial Statement for the last (3) three years, which shall include at least the following: income statement, balance sheet and cash flow statement as submitted to the relevant government regulatory authorities (SEC and BIR);
- C. List of clients and description of relevant projects, including duration of engagement (on-going and completed) for the past three (3) years;
- D. Board Resolution appointing a representative and authorizing your Company to submit a bid and enter into a contract with the Government of Quezon City based on this TOR.

**V. SOFTWARE PROVIDER PROFILE AND QUALIFICATIONS**

Listed below are the minimum qualifications required from the Supplier:

- A. The Supplier must be a reputable Information Technology Firm with at least three (3) years business operation in the design, development, implementation and maintenance of Business Management Systems.
- B. Demonstrated experience by the Lead Supplier Team in application development and deployment and in data analytics with the use of advanced algorithm to generate reports evidenced by use cases.
- C. The Lead Supplier Team should have local and international professional applied experience and skills and qualifications as follows:
  - i. Degree in a relevant field (Computer Science, Data/Information Management, Advanced Statistical Analysis, Information Technology, and Software Engineering) with Professional Regulatory Commission License.
  - ii. Minimum 10-year experience related to data management/database development and archiving, including use of web-enabled platforms and common reporting analysis tools.
  - iii. Proven professional experience in database technologies end to end, including web client development and deployment, database management and development of web-based information systems
  - iv. Competent and dedicated staff that can be reached for feedback having at least 5 years of related work experience
  - v. Excellent communication and writing skills.

**VI. PROJECT DURATION**

This project shall be implemented with the following target days per milestone. The periods indicated below provide target dates only and may run concurrently. They do not illustrate the actual time frame from the beginning to the end of the project.

MILESTONES	CALENDAR DAYS
Project Preparation and Mobilization	14 calendar days upon receipt of Notice to Proceed
Requirements gathering, scoping and project management	14 calendar days upon receipt of Notice to Proceed
Initial database review	28 calendar days upon receipt of Notice to Proceed
Data extraction and integration	35 calendar days upon receipt of Notice to Proceed
Data analysis and visualization Up to 30 visualizations	49 calendar days upon receipt of Notice to Proceed
User guidance and training	56 calendar days upon receipt of Notice to Proceed, for 28 calendar days
Final handover	84 calendar days upon receipt of Notice to Proceed
Technical and Project Support	60 calendar days after final handover

## VII. APPROVED BUDGET FOR THE CONTRACT

1. The approved budget for the project is **SIX MILLION ONE HUNDRED FIFTY TWO THOUSAND FIVE HUNDRED PESOS ONLY (PHP 6,152,500.00)**.
2. **NO PRICE ADJUSTMENT** - The project cost shall be fixed and there shall be no price adjustments applicable for the duration of the contract except when the operations costs are increased by more than 10% as a result of any extraordinary circumstance as IDENTIFIED by the National Economic Development Authority (NEDA). Pursuant to the provisions of RA 9184 and its IRR on contract price escalations, all contract price escalation shall be approved by the Government Procurement Policy Board (GPPB).

## VIII. PROPOSED SCHEDULE

MILESTONES	ACCEPTANCE CRITERIA	PERCENTAGE BILLING
Project Preparation and Mobilization	Completion of project mobilization	15%
Requirements gathering, scoping and project management	Finalization of project scope, chosen metrics and chosen analytics	15%
Initial database review	Submission of database diagnostics and recommendation	20%
Data extraction and integration	Successful integration of four data sources	10%
Data analysis and visualization Up to 30 visualizations	Finalization of 30 visualizations, with up to 5 revisions	10%
User guidance and training	Successful user walk-through on data integration and visualization	10%
Final handover	Identification of in-house staff for data analysis, and up to 1 month of training	10%
Technical and Project Support	Technical and project support during working hours, for 60 days	10%
TOTAL		100%

## IX. TEST PARAMETERS

The delivered software of the AI Technology for Data Analysis shall be tested and evaluated using accepted guidelines.

## X. WARRANTY AND GUARANTEE REQUIREMENTS

Full functionality support program guarantee for the period of one (1) year.

## XI. PENALTIES FOR BREACH OF CONTRACT

Failure to deliver the services according to the standards and requirements set by the City shall constitute an offense and shall subject the Supplier 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 into negotiated procurement pursuant to section 53 (d) of RA 9184 and its IRR.

### **Prepared and Submitted By:**



**MA MARGARITA MEJIA, DPA**  
City Government Department Head III  
BPLD

### **Reviewed by:**



**PAUL RENE S. PADILLA**  
City Government Department Head III  
ITDD

### **Approved by:**



**MICHAEL VICTOR N. ALIMURUNG**  
City Administrator