PROJECT IMPLEMENTATION UNIT (PIU)
PUNJAB URBAN LAND SYSTEM
ENHANCEMENT (PULSE)
Punjab Land Records Authority (PLRA)
Government of the Punjab
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<u>TERMS OF REFERENCE</u>

PUNJAB URBAN LAND SYSTEM ENHANCEMENT (PULSE)

ISLAMIC REPUBLIC OF PAKISTAN
PUNJAB PROVINCE

HIRING OF AN INDIVIDUAL CONSULTANT AS SOFTWARE DEVELOPMENT EXECUTIVE

JUNE 2023

Terms for Reference for Software Development Executive

1. BACKGROUD INFORMATION

Board of Revenue, Punjab with the technical & financial support of World Bank is preparing Punjab Urban Land System Enhancement (PULSE) project for the establishment of a unified central database of all types of urban properties (societies / authorities / development agencies), rights and charges. The proposed system will not merely a GIS & Parcel based one but has all possible functionalities to serve as a robust platform for creation of 'Spatial Data Infrastructure' (SDI), an inevitable need of the future. The project will provide a complete and transparent record of title in land and immovable property. Digitization of remaining parts of rural land, digitization of katchi abadi record, automation of sub-registrar record rooms is also part of the project.

1.1. Beneficiary Country and Province:
Islamic Republic of Pakistan and Punjab Province.

1.2. Contracting Authority:
Under the Punjab Urban Land System Enhancement (PULSE) Project and in agreement with the World Bank, the Project Implementation Unit (PIU), Punjab Land Records Authority (PLRA), Government of Punjab is the contracting authority.

2. OBEJECTIVE

One of the core objectives of the PIU is to provide the analytical services and value-added information and solutions to Punjab Land Records Authority (PLRA) in Punjab and other users such as World Bank, donor organizations etc. in a manner that broadens and strengthens the digitization of land record on PLRA and maximizes the effectiveness of the Punjab Urban Land System Enhancement (PULSE).

The Software Development Executive will provide support to the wider PIU team in the development of Software that is part of the vision of Punjab Land Records Authority (PLRA).

3. SCOPE OF WORK

i. The Consultant will analyze and understand business requirements and translate them into technical solutions.
ii. The Consultant will design, develop, and maintain high-quality software solutions.
iii. The Consultant will participate in the full software development life cycle, from requirements gathering to deployment.
iv. Collaborate with cross-functional teams, including product management, design, and testing, to deliver high-quality software.
v. Stay current with the latest technologies and industry trends, and recommend solutions to improve the software development process.
vi. The Consultant will be responsible to perform any other tasks assigned and entrusted by the PC-PIU.

4. DELIVERABLES

The consultant is expected to deliver the following:
i. High-quality, well-documented, and maintainable code.
ii. Detailed documentation of software design, architecture, and implementation.
iii. Regular progress updates and status reports.

5. QUALIFICATION AND EXPERIENCE

We are seeking enthusiastic and motivated individuals, to work with us on this dynamic and engaging project, who fulfill the following criteria:

i. Minimum 16 years of education in GIS / Computer Science / IT or equivalent education from HEC recognized University / Institute.
ii. At least three (3) years of post-qualification experience, design and management spatial database, management systems and spatial feature representatives.
iii. Proficiency in one or more modern programming languages, such as .Net Core, MVC, React/Angular, Node, C#, MS SQL Server, jQuery, etc.
iv. Experience with GIS based applications.
v. Knowledge of cloud-based technology and services, such as AWS, GCP, or Azure.
vi. Knowledge of microservices architecture and containerization technologies, such as Docker.
vii. Knowledge of tools such as Jira / Trello / ClickUp etc.
viii. Familiarity with Agile software development methodologies and DevOps practices.
ix. Experience with version control tools such as GitHub / GitLab / Bitbucket
x. Strong understanding of software development best practices, such as unit testing, code review, and continuous integration/continuous delivery.

6. TYPE OF CONTRACT

Time-Based Contract.

7. ESTIMATED DURATION OF CONTRACT

The duration of the contract is for a period of two (02) years.

8. SELECTION METHOD

The selection will be made in accordance with the Open Competitive Selection of Individual Consultants of World Bank Procurement Regulations for IPF Borrowers", dated November 2020. The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers" dated July 2016 revised November 2017 and August 2018 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

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