

SUBJECT: HIRING OF CONSULTANCY SERVICES FOR THE BIG DATA APPLICATION DEVELOPMENT

Punjab Safe Cities Authority (PSCA), established under Punjab Safe Cities Act 2016, ensures establishment, development and maintenance of an Integrated Command, Control, and Communication system for Police in major cities of the province for public safety. The Safe City is a concept for returning security and quality of life to today's complex cities through the use of technology, infrastructure, personnel and processes.

2. PSCA intends to hire the services of Consultancy Firm for Big Data Application development. Consultancy firm will integrate system with other utilities/application in order to develop and implement Application Design and Database Design management in PSCA. Consultancy firm will ensure integration, deployment, updating and maintenance of databases and applications. The Consultancy firm shall be hired on the basis of qualification and experience in accordance with Rule 46-A (Selection process of firm of consultants) of the Punjab Procurement Rules, 2014.

3. Interested Consultancy Firms should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The detailed Terms of Reference are attached as **Annex-A**. The shortlisting criteria is attached as **Annexure-BI & BI**. The Financial Bid Performa is attached at **Annex-C**.

4. Technical & Financial Quotations along with all the supporting documents in sealed envelope must reach the office of Punjab Safe Cities Authority on or before 08-06-2023 till 1130 hours. Expression of Interests/Sealed Quotations (Technical proposal) will be opened on the same date at 1200 hours in the presence of bidders or their authorized representatives who may choose to attend with original CNIC.

5. Financial Quotations of Technically Qualified firms (only) shall be opened on the Pre-announced date and time afterwards.

6. For obtaining any further information or clarifications, please feel free to contact during office hours 0900 to 1600 (Monday to Friday) at procurement@psca.gov.pk, Tel: (+92) (42) (99051605-7).



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PUNJAB SAFE CITIES AUTHORITY
PSCA Headquarters, Qurban Lines Lahore, Pakistan.

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KASHIF MUSHTAQ WARRAICH,
Chief Law & Procurement Officer,
Punjab Safe Cities Authority,
Lahore.

CC:

1. The Managing Director, PSCA Lahore



HIRING OF CONSULTANCY SERVICES FOR THE BIG DATA APPLICATION DEVELOPMENT

TERMS OF REFERENCE (TORs)

1. BACKGROUND

The Punjab Safe Cities Authority (PSCA), established under Punjab Safe Cities Act 2016, ensures establishment, development and maintenance of an integrated Command, Control, and Communication system (PPIC3) for Police in major cities of the province for public safety. The Safe City is a concept for returning security and quality of life to today's complex cities through the use of technology, infrastructure, personnel and processes. In order to realize the vision of developing safe cities in the province, PPIC3 Centre has been developed for Punjab Police in the city of Lahore and other centers are being established in other larger cities of the province.

2. OBJECTIVE/PURPOSE OF THE ASSIGNMENT

PSCA intends to hire services of consultancy firm for Application and Database administration and development. Consultancy firm will integrate system with other utilities/application in order to develop and implement Application Design and Database Design management in PSCA. Consultancy firm will ensure integration, deployment, updating and maintenance of databases and applications.

3. SCOPE OF SERVICE

The Consultant firm shall be required to provide the following consultancy services (the **Assignment**);

3.1 APPLICATION DEVELOPMENT

1. Developing and implementing computer vision algorithms to analyze video footage from surveillance cameras to detect suspicious behavior, identify individuals, and track objects of interest.
2. Designing and deploying video surveillance systems using in-house GPU servers, ensuring that they are optimized for performance and accuracy.
3. Developing and maintaining web APIs that expose the results of computer vision analysis to other departments and stakeholders within the Safe City Authority.



4. Collaborating with cross-functional teams to ensure that video surveillance systems are integrated with other safety and security systems.
5. Designing and conducting experiments to evaluate the accuracy and effectiveness of computer vision algorithms and video surveillance systems.
6. Keeping up-to-date with the latest research in computer vision and machine learning, and identifying new opportunities for improving the performance of video surveillance systems.
7. Adhering to ethical principles and data privacy regulations, ensuring that video surveillance systems are used in a responsible and transparent manner.
8. Estimate, prioritize, plan, and coordinate testing activities.
9. Communicate test results, issues, and risks to team members, project managers.
10. Continually update technical knowledge and skills by attending in-house and external courses, reading manuals and accessing new applications.
11. Manage and Direct Use of Technology Development Methods and Tools.
12. Leading the development team in the design, development, coding, testing and debugging of applications.
13. Manage both new development and enhancement projects from initial scope through requirements, coding, QA testing, and implementation.
14. Keep up to date with the latest development software.
15. Making plans to design new software and web applications.
16. Ensure that technical solutions are in line with established standards in respect to architecture, security, corporate governance, coding standards, monitoring, logging, testing and service enablement.
17. Collaborating with front end users on software functionality.
18. Provide guidance to the team and ensure they adhere to development standards.
19. Manage and execute against project plans and deliver commitments within a professional, high paced engineering environment.
20. Resolving software deployment and integration errors, and documenting processes.
21. Performing routine maintenance and monitoring performance metrics.
22. Any other task assigned by the supervisor/management.



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4. TIME PERIOD

The duration of the engagement of the Consultant for the Assignment shall be for a period of three months from the effective date of Contract. If the Company chooses to cancel the contract during the course of the assignment, a notice period of 15 days shall apply.

5. REPORTING ARRANGEMENT

The consulting firm shall report to the MD/Chief Operating Officer, PSCA. The focal person for this assignment will be Chief Technology Officer, PSCA.

6. GENERAL CONDITION

- The assignment activities of the consulting firm will be supervised by the Chief Technology Officer, PSCA
- All documentation, reports shall be submitted in the English Language.
- All the data, documents and reports produced by the consulting firm for the said services shall be the property of PSCA. The consulting firm shall not share and use these data, document and reports for any other purpose / job without the explicit written approval of MD/Chief Operating Officer, PSCA.
- In case the consulting firm fails to fulfill the contractual obligations and violate the contract agreement, the contract agreement shall be terminated and consulting firm shall not be entitled to make any pending claims.

EVALUATION CRITERIA

Following Quality & Cost based criteria shall be followed to evaluate the most suitable firm for the assignment:

For Bid Evaluation, the total score is calculated by weighting the technical and financial scores and adding them as per the formula given below. The Consultant Firm that achieves the highest combined technical and financial scores, may be invited for negotiations in accordance with PPRA rules.

The weights given to the Technical (T) and Financial (F) Proposals are:

T = 80% and

F = 20%

Proposals shall be ranked according to their combined technical and financial scores using the weights given to the Technical Proposal and Financial Proposal as above according to following;

$$\mathbf{CS = Ts \times T\% + Fs \times F\%}$$

Ts = Technical Score Fs = Financial Score T = Technical %age F = Financial %age

CS = Combined Technical Score

T + F = 1

ANNEXURE-B-I

Sr. No	ELIGIBILITY CRITERIA (Mandatory Requirements)
1.	Existence as a Legal Entity (Registration under companies Law or Registrar of Firms)- Supporting Evidence
2.	An Operational History of at least 03 Years - Supporting Evidence
3.	Undertaking for Non-involvement in any litigation or black listed by any public/Pvt./national or international agency
4.	Registration with Tax Authorities <ul style="list-style-type: none"> ▪ NTN ▪ STRN/PST/GST

ANNEXURE-B-II

EVALUATION CRITERIA (Merit Point System)				
Sr. No	Criteria	Max. Marks	Min. Passing Marks	Description
1.	Experience of related Assignments/ Engagements with Federal / Provincial Government / Semi Government / Autonomous Bodies or Section 42 Companies <i>(Proof of Experience (Assignments/ Engagements) must be attached)</i>	20	10	05 Marks will be awarded for each Complied Experience on pro-rata Basis. The maximum marks shall not exceed 20 Marks for this criteria.
2.	Experience of related assignments for Private Sector Clients <i>(Proof of Experience (Assignments/ Engagements) must be attached)</i>	10	3.334	3.334 Marks will be awarded for each Complied Experience on pro-rata Basis. The maximum marks shall not exceed 10 Marks for this criteria.
3.	Personnel's Profile Big Data Application & Management Expert (01 No.)	20	20	<ul style="list-style-type: none"> ▪ Minimum Four (04) Years BS degree in Computer Sciences / Software Engineering / Information Technology, MCS, MSc IT or sixteen-years of IT education in the relevant field from HEC recognized university. ▪ Minimum 06-08 years of relevant experience in Big Data Application Development and Database Management with a special focus on Law Enforcement Agencies. ▪ Experience of Machine



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				Learning/Deep Learning including developing custom and light weight CNNs for image and video processing, and deployment of developed models on in-house server
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	Total Score	50	33.334
Minimum Passing Score required in order to Technically Qualify for the Assignment			

Financial Proposals of only Technically Qualified Firm will be evaluated.

ANNEXURE-C

FINANCIAL BID PERFORMANCE

Sr. No.	Description of Services	Amount in PKR <i>Inclusive of all Taxes</i>
1.	Consultancy Services	

Financial Evaluation

For Financial Evaluation,

The lowest evaluated Financial Proposal (LFP) is given the maximum financial score (Fs) of 100.

The formula for determining the financial scores (Fs) of all other Proposals is calculated as following:

$$\mathbf{Fs = 100 \times LFP/PUC}$$

LFP = Lowest Financial Proposal Fs = Financial Score

PUC = Proposal Under Consideration