



# Expression of Interest (EOI) Leading to Pre-Qualification



## Provision of Technology Solution for the Punjab Police Integrated Command, Control and Communication Centre (PP-IC3), Lahore, Pakistan

Punjab Police in collaboration with Punjab Information Technology Board (PITB), Government of the Punjab, Pakistan, invites Expression of Interest leading to pre-qualification from registered, reputable, well-experienced and financially sound firms/companies.

- The objective of this advertisement is to seek Expression of Interest leading to pre-qualification of firms/companies for "Provision of Technology Solution for the Punjab Police Integrated Command, Control and Communication Centre, Lahore, Pakistan". Complete scope of services and requirements is given in the EOI Document available at [www.punjabpolice.gov.pk](http://www.punjabpolice.gov.pk), [www.pitb.gov.pk](http://www.pitb.gov.pk) and [www.ppra.punjab.gov.pk](http://www.ppra.punjab.gov.pk).
- Interested firms/companies are required to submit a single package containing EOI proposal and pre-qualification documents, signed, stamped, sealed and in complete conformity with the requirements as per EOI Document. The proposal should be dropped in the Tender Box placed at the Reception of the PITB office, 11th Floor, Arfa Software Technology Park, 346-B, Ferozpur Road Lahore, not later than 1500 Hours, **05.05.2014**.
- All prospective firms/companies are required to submit an amount of Rs. 5,000/- in PITB's account as mentioned in the EOI Document.
- Income/Sales tax registration certificate and other documents as mentioned in EOI Document must accompany the proposal.

The current proceedings shall be governed by provisions of the Punjab Procurement Rules, 2014 for national competitive process. The Competent Authority may reject all proposals at any time prior to the acceptance of a proposal, as provided under Rule-35 of the Punjab Procurement Rules, 2014.

**DIG (Telecommunication) / Project Director PP-IC3, Punjab Police, Lahore,  
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**EXPRESSION OF INTEREST (EOI)  
&  
PRE-QUALIFICATION DOCUMENT**

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**Provision of Technology Solution for Punjab Police  
Integrated Command, Control and Communication  
(IC3)**

**Centre – Lahore**

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**Punjab Information Technology Board (PITB)**

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**Important Note:**

Interested Parties/Contractors must ensure that they submit all the required documents indicated in this EOI & Pre-Qualification Document without fail. Proposals received without, valid documentary evidence, supporting documents and the manner for the various requirements mentioned in this document or test certificates are liable to be rejected at the initial stage itself. The data sheets, valid documentary evidences for the critical components as detailed hereinafter should be submitted by the Interested Parties/Contractors for scrutiny. It is intimated that no objection shall be entertained regarding the terms and conditions of this EOI & Pre-Qualification Document at the later stages during Pre-Qualification process.

**Applicability of Punjab Procurement Rules, 2014**

This Pre-Qualification Process will be governed under Punjab Procurement Rules, 2014, as amended from time to time and instructions of the Government of the Punjab received during the completion of the process. These may be obtained from PPRA's website:

[http://ppra.punjab.gov.pk/sites/ppra.pitb.gov.pk/files/Final%20Notified%20PPR-2014%2013.01.2014 .pdf](http://ppra.punjab.gov.pk/sites/ppra.pitb.gov.pk/files/Final%20Notified%20PPR-2014%2013.01.2014.pdf)

## 1. INTRODUCTION

Punjab Information Technology Board (PITB) intends to invite Expression of Interest & Pre-Qualification proposals from Interested Parties / Contractors in order to further streamline the Procurement procedures.

All reputable, registered and established Companies/Firms/Contractors are invited to apply for the participation in EOI & Pre-qualification Process and submit proposals for EOI & Pre-Qualification.

A transparent evaluation method given in this document shall be adopted for the purpose of Pre-Qualification of the applicant's capabilities in respect of vital elements of applicant's organization and capacity to perform so that eligible Interested Parties/Contractors may be invited to get involved in further Procurement Procedures. Each Interested Parties/Contractors performance in terms of quality, delivery, after sales service, credit terms and other contractual obligations will be closely monitored and periodically reviewed during all future procurements they are involved in.

The EOI & Pre-Qualification document carrying all details can be downloaded from PITB's website <http://www.pitb.gov.pk>, [www.ppra.punjab.gov.pk](http://www.ppra.punjab.gov.pk) and [www.punjabpolice.gov.pk](http://www.punjabpolice.gov.pk), for information only. All prospective Interested Parties/Contractors are required to submit an amount of Rs. 5,000/-. This amount shall be deposited in PITB's A/C No.CPA:260-1, Branch code 0320, ASTP Lahore, the deposit slip must accompany respective proposal.

The proposals along with supporting documents etc., must be delivered into the Tender Box, placed at reception of Punjab Information Technology Board, Lahore on or before **1500 hours on 5<sup>th</sup> May, 2014**. The proposals shall be publicly opened in the Committee Room of Punjab Information Technology Board, 11<sup>th</sup> Floor, Arfa Software Technology Park, 346-B, Ferozepur Road, Lahore, at **1600 hours on 5<sup>th</sup> May, 2014**.

A meeting of answer & question session will be held on 1400 hours dated 21<sup>st</sup> April 2014 at PITB office, ASTP. Queries of the Interested Parties/Contractors (if any) for seeking clarifications regarding EOI & Pre-Qualification Document must be received in writing to the Purchaser till 22<sup>nd</sup> April, **2014**. Any query received after said date may not be entertained. All queries shall be responded to within due time.

The Primary Contact & Secondary Contact for all correspondence in relation to this Pre-Qualification is as follows:

**Primary Contact**

**Faisal Yousaf**

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Interested Parties/Contractors should note that during the period from the receipt of the proposal and till further notice from the Primary Contact, all queries should be communicated via the Primary Contact and in writing or e-mail only. In the case of an urgent situation where the Primary Contact cannot be contacted, the Interested Parties/Contractors may alternatively direct their enquiries through the Secondary Contact.

Interested Parties/Contractors are also required to state, in their proposals, the name, title, fax number and e-mail address of the their authorized representative through whom all communications shall be directed until the process has been completed or terminated.

The Purchaser will not be responsible for any costs or expenses incurred by Interested Parties/Contractors in connection with the preparation or delivery of proposals.

As authority competent to accept the proposal, the Purchaser reserves the exclusive right to cancel the pre-Qualification process, accept or reject all proposals without assigning any grounds of reason thereof.

# TERMS AND CONDITIONS OF THE PRE-QUALIFICATION

## Definitions

- I. In this document, unless there is anything repugnant in the subject or context:
- II. "Authorized Representative" means any representative appointed, from time to time, by the Purchaser or the Supplier.
- III. "Purchaser" means the Punjab Information Technology Board (PITB), or any other person for the time being or from time to time duly appointed in writing by the Purchaser to act as Purchaser for the purposes of the Contract.
- IV. "Client" means the Project lead of technical wing of the Purchaser for whose' particular project the Goods / Services have been procured or any other person, duly appointed in writing, by the Client, for the time being or from time to time, to act as Client for the purposes of the Contract.
- V. "The Contractor" means the Interested Parties/Contractors who's Proposals have been accepted.
- VI. "Day" means calendar day.
- VII. "Person" includes individual, association of persons, firm, company, corporation, institution and organization, etc., having legal capacity.
- VIII. "Prescribed" means prescribed in the Pre-Qualification Document.
- IX. "Origin" shall be considered to be the place where the Goods are produced or from where the Services are provided. Goods are produced when, through manufacturing, processing or assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components. The origin of Goods and Services is distinct from the nationality of the Supplier.
- X. "Services" means work to be done by the supplier or other such obligations which the Supplier is required to provide to the Purchaser under the Purchase Order/Contract.

## Abbreviations

Term	Definition
AAA	Authentication Authorization and Accounting
AKS	Authentication Key Server
ANPR	Automatic Number Plate Recognition
ATC	Adaptive Traffic Control
AVLS	Automatic Vehicle Localization System
BMAN	Broadband Metropolitan Area Network
CAD	Computer Aided Dispatch

<b>CAS</b>	Content Addressed Storage
<b>CCTV</b>	Closed Circuit Television
<b>CSS</b>	Clock Synchronization System
<b>DCMS</b>	Data Center Management System
<b>DIA</b>	Direct Internet Access
<b>DIMS</b>	Data Infrastructure Management System
<b>EDC</b>	Effective Date of Contract
<b>EWS</b>	Early Warning System
<b>FMS</b>	Fault Management System
<b>GIS</b>	Geographical Information System
<b>GPRS</b>	General Packet Radio Service
<b>ICCS</b>	Integrated Communication and Control System
<b>IPAS</b>	Intersection Public Address System
<b>IPMI</b>	Intelligent Platform Management Interface
<b>ITMS</b>	Intelligent Traffic Management System
<b>MTSS</b>	Multi Threat Security System
<b>NAS</b>	Network Attached Storage
<b>NMS</b>	Network Management System
<b>NTP</b>	Network Time Protocol
<b>PIP</b>	Project Implementation Plan
<b>PoE</b>	Power over Ethernet
<b>PRM</b>	Project Review Meeting
<b>QAP</b>	Quality Assurance Plan
<b>RSMS</b>	Remote Server Management System
<b>SAN</b>	Storage Area Network
<b>SI</b>	System Integrator
<b>SLA</b>	Service Level Agreement
<b>Term</b>	<b>Definition</b>
<b>TES</b>	Traffic Enforcement System
<b>TLC</b>	Traffic Light Controllers
<b>TLVS</b>	Traffic Light and Speed Violation System
<b>TMS</b>	Telecom Management System
<b>UTMS</b>	Unified Threat Management System



<b>VCA</b>	Video Content Analysis
<b>VID</b>	Vehicle Incident Detection
<b>ViMS</b>	Video Management System
<b>VMD</b>	Video Motion Detection
<b>VSS</b>	Video Surveillance System

## Disclaimer

This Expression of Interest (EOI Document) for “Provision of Technology Solution for Integrated Command, Control and Communication (IC3) Centre – Lahore” (‘the Project’) contains brief information about the Project and qualification process for short listing and pre-qualification of Applicants for RFP stage. The purpose of the Document is to provide the Applicants with information to assist the formulation of their EOI application or response to EOI Document (“the Application”) and to pre-qualify Interested Parties/Contractors for RFP Stage.

While all efforts have been made to ensure the accuracy of information contained in this EOI Document, this document does not purport to contain all the information required by the Applicants. The Applicants should conduct their own independent assessment, investigations and analysis and should check the reliability, accuracy and completeness of the information at their end and may advise as per their relevant experience and international best practices as required before submission of their EOI application. Punjab Information Technology Board (PITB), Punjab Police and Government of the Punjab or any of its employees or advisors / consultants shall incur no liability under any law, statute, rules or regulations as to the accuracy or completeness of the EOI Document.

PITB reserves the right to change any or all conditions/ information set in this EOI Document by way of revision, deletion, updation or annulment through issuance of appropriate addendum as the Authorities may deem fit following through the rules and regulations issued vide PPRA 2014. Participation in the EOI process does not qualify any applicant for the next stage of the procurement process.

PITB, Punjab Police and any other Government Department will not entertain or be liable for any claim for costs and expenses in relation to the preparation of the EOI applications to be submitted in terms of this Document.

## 2. EXPRESSION OF INTEREST (EOI)

Punjab Police Department with the technical assistance of Punjab Information Technology Board intends to establish an Integrated Command, Control and Communication Centre (IC3) for Lahore City. A dedicated building for the same is under construction at Qurban Lines, Lahore. The details of the project back ground and other relevant information is presented in the subsequent paragraphs. The purpose of the initiative is to provide security through Surveillance System and integrated command & control, dispatching of the resources to rescue and secure the citizen.

This EOI is being issued for provision of technology solution for Integrated Command, Control and Communication (IC3) Centre (“the Project”) in the city of Lahore/identified area. Through EOI,

Government invites Applicants to submit their Expression of Interest (EOI) to set-up and provide the complete solution on turnkey basis.

The shortlisted applicants will assist in setting up an integrated security surveillance system in the area which would involve the design, supply, installation, testing, commissioning, 24/7 operations for 5-years of an effective and state-of-art IP-based integrated security and surveillance operation centre. A purpose-built building is under construction in Qurban Lines Lahore. Applicant shall propose an integrated solution with systems like CAD, Incident Management, Geographic Information System and other relevant system/applications for ensuring rapid response and optimum resource mobilization.

The key objectives of the Project would be:

- To make Lahore a safe and secure city via effective policing .
- Assessment of the need of surveillance cameras (fixed, PTZs), ANPRs, Speed Detection Cameras based on the perceived threat and traffic congestions on various spots in identified area.
- Securing infrastructure, places etc. by collecting and analysing (in real time and in passive mode) the information received from cameras deployed at various locations in Lahore (a list of **1800 (Sites Detail and KML file can be downloaded from Annex-F)** pre identified sites along with the KML file will be made available to the interested parties on request).
- Achieving smooth flow of traffic at all junctions in the city
- Centralizing all emergency/ distressed calls for public through centralized call centre and single point of contact
- Monitoring city streets, roads, crossings, important buildings and entry / exist points of Lahore

## 2.1 Project Background

The increasing complexity of social and economic life is driven by rapid developments in technology, communication, and transportation. New inventions, new technologies, changing preferences and external shocks are constantly altering and modifying the most fundamental structure within the environment. Increasingly, organisations operate in turbulent environments with unexpected changes, uncertainty, and lack of control, complex decisions, group inter-dependencies, high performance demand and unclear and fuzzy boundaries.

Today's complex policing environment requires enhanced strategic police capabilities in protective security (including tightened ports, airports and border security) and combating terrorism. In fact there is a critical need for a holistic approach to policing that covers:

- Serious and organised crimes
- Counter-terrorism and extremism
- Impacts of global instability and conflicts
- Business Continuity and emergency response management
- Public order events
- Critical National Infrastructure policing

Operating within a complex and dynamic security environment requires a high level strategic approach that incorporates an overarching security strategy, comprehensive risk management, fully joined-up governance and effective programme support. The strategy needs to be fully integrated into the national security strategy and achieve high levels of international confidence in the security arrangements.

There needs to be a programme of modernizing the police systems to deliver better and more flexible resources to meet the requirements of a dynamic and complex environment policing environment. Operational business processes, facilities and ICT infrastructure need to be aligned to ensure that they support this evolving capacity, capability, efficiency and effectiveness approach. In short, there is a need to:

- Better manage the demand for a police response
- Develop a community services ethos within the police force
- Engender a more professional approach within the police force that is better able to address the security situation and meet the need of the citizens
- Provide information and intelligence to ensure that informed decisions are made with regard to priority and allocation of the most appropriate resources in response to calls for assistance.
- Ensure that the police are efficient and effective.

The overall objective of the Integrated Command, Control and Communication (IC3) Centre programme to modernize the infrastructure, systems and capabilities for the police to proactively manage the security situation and to professionalize the police response to incidents by moving towards directed and mission-focused deployment of resources. IC3 will bring together the innovative Concept of Operations (ConOps), quality focused business processes with an integrated technical solution to provide an operational solution that delivers:

1. New technology and process infrastructure to provide real-time information and intelligence to facilitate field commanders making evidence based decisions in operationally critical situations
2. Ability to have access to and share information within the Punjab Police departments as well as external agencies to ensure seamless service delivery to the public and a more timely and effective response
3. Provision of information and intelligence to ensure that informed decisions are made with regard to priority and allocation of the most appropriate resources in response to calls for assistance
4. Provision of high quality emergency response systems to the residents and visitors to Punjab and specifically Lahore
5. Delivery of flexible operational systems that can evolve and expand with the evolving needs of the country
6. Increased capacity that acknowledges foreseeable growth profiles in the future.

7. The design and implementation of a consolidated IC<sup>3</sup> organisational operating model to optimize cross agency coordination, communication, and effectiveness of public safety and emergency services delivery.

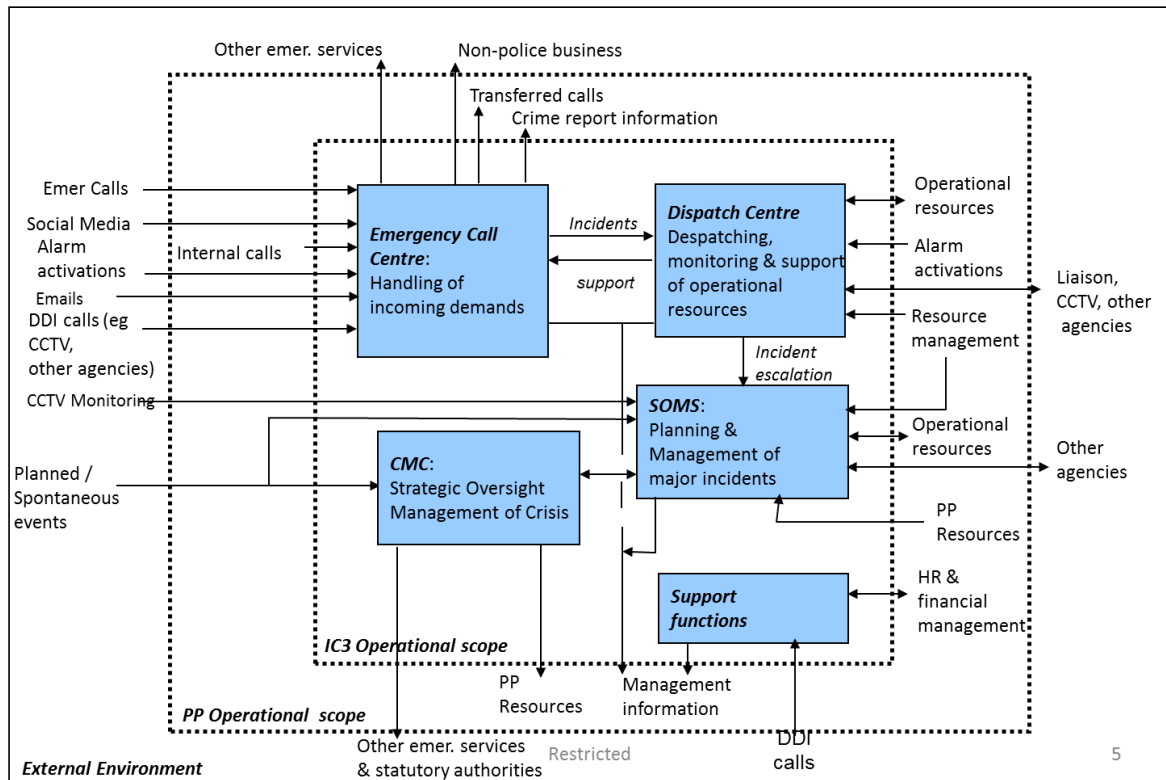
The overall aim of the IC<sup>3</sup> programme is to improve Punjab Police's operational efficiency by deploying new hardware using up-to-date technology that will enable the Police to adopt more efficient working practices and new operating concepts. The role of the Police will not fundamentally change by the introduction of the IC<sup>3</sup>; the efficiencies relate to how that role is carried out from both process and performance perspectives. In progressing towards greater efficiencies, one of the IC<sup>3</sup> aims is to bring together various elements of Punjab Police operation to work as a more unified team. The IC<sup>3</sup> operations will integrate the Command, Control, and Communication functions through 5 Services areas:

- Emergency Call Centre (ECC) – ECC will be handling all incoming and outgoing public demands
- Dispatching Centre (DC) – DC will dispatch, monitor and support of operational resources
- Strategic Operations & Monitoring Suite (SOMS) – SOMS will proactively and intelligently monitor the public spaces and will include:
  - Video Management System is responsible for displaying video streams Video-Based Incident Detection system based on intelligent analysis of the video streams of the CCTV Cameras.
  - Video Wall Management System (and video wall) to display video streams on the video wall
  - Automatic Number Plate Recognition (ANPR) Control System to control all ANPR equipment and archiving/retrieving recognized license plates
- CCTV Control – CCTV Control will operate as a receiving and recording point for CCTV images that are available to the CCTV matrix for IC<sup>3</sup> Centre. Images can be displayed and, where appropriate, passed into the SOMS and CMC at that centre for viewing at work-stations and/or for display on the video-wall. CCTV Control will also monitor all police facilities including police premises.
- Crisis Management Centre (CMC) – CMC will plan and manage all the pre-planned and spontaneous major events through a defined escalation process to contain and manage a situation or an event through a clearly defined command structure. It will contain integrated tools that merge information in an environment that provides leadership quick and accurate data to evaluate situations.

These Services will generate a level of required support that in some cases will be new work but in others will call upon existing support organizations and processes. In particular these existing organizations will include database management, human resources, finance and facilities management. When completed, the new build IC<sup>3</sup> Centre will become integral parts of the technology infrastructure, allowing seamless access between the IC<sup>3</sup> Centre and the wider Punjab Police (PP) and other agencies.

The diagram below outlines the operational scope for the IC<sup>3</sup> Programme

## High-Level Operational Scope



The IC<sup>3</sup> technology solution incorporates the following major components:

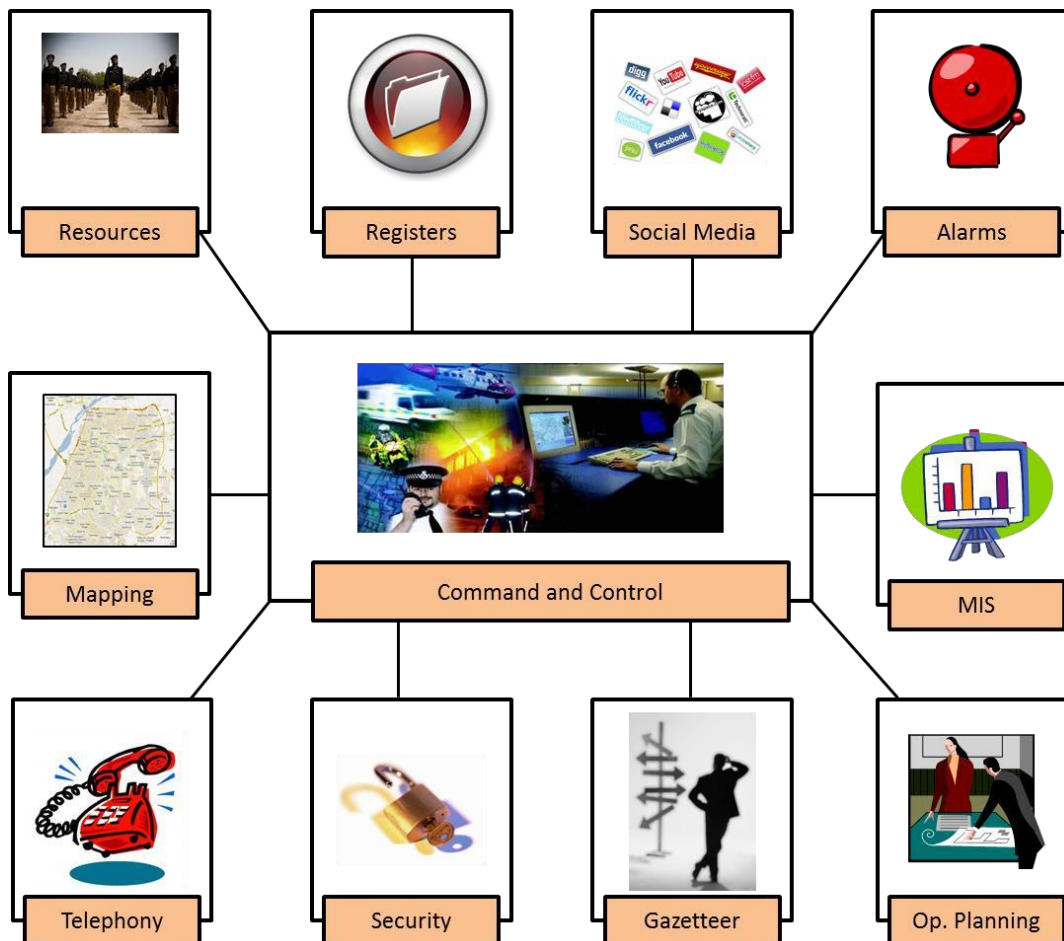
- **Command and Control System** - including Command and Control Incident Management, Geographic Information System (GIS), Resource Management System, Integrated Automatic Resource Location System (ARLS), and Mobile Data Terminals
- **Integrated Video Management System (IVMS)** – including System Control and Management, Digital Recording and Archiving, Specific Analysis Tools, Video Walls and Control Systems, and In-Vehicle Video Systems
- **Field Equipment** – including Strategic Surveillance Locations, Surveillance of Public Places, Surveillance of Intersections, Surveillance of roads, Surveillance of Iconic Buildings / Locations, Camera installation and Security and power and connectivity.
- **Implementation and Fit-out** – including Data Centre fit-out, structured cabling, furniture and desktop as well as system integration and testing.

## Command and Control System

The Command and Control system should include a suite of components as illustrated in figure below. It should provide the main functionality for the real-time management of incidents, resources and major events. The supporting applications provide facilities for maintaining the data required for Command and Control to operate with clearly defined and documented interfaces such that these components

can be replaced by equivalent components where these exist already or will become available in the future.

The Command and Control system should be able to be accessed via either a full application client or a browser client through Internet Explorer. The full application client will be deployed in the IC3 centre environment where performance and the ability for screens to update dynamically in real time are critical. For elsewhere, the browser should provide a subset of core functionality including the ability to display incident and resource details.



With the growing population in Lahore, the concern for law & order and governance in the cities has also increased. There is a steep increase in theft, burglary, auto theft, murder and other crimes over the past few years in the city. Further, the recent security situation in the country has made it highly susceptible to the terrorist attacks.

It is observed that by merely setting up police stations, security check booths at market places or ad hoc surveillance systems through CCTVs, control rooms etc. are not providing adequate solutions. These inadequacies may have an impact on the economic growth of the region, where corporate and companies are looking at cities with better and safe quality of life for their employees. Lahore being a largest city of the province of Punjab needs the state of the art electronic security system which is also capable of providing feeling of wellness to its large residential and commercial complexes.

For a composite development of the city, there is an urgent need to upgrade its resources to deal with the highly skilled and specialized crimes being committed in the region. It is essential to promote the district and its regions as “Secure Region” by undertaking an integrated set of initiatives with the help of PITB, Police and traffic police Department and provincial level intelligence agencies.

## 2.2 Project Scope

The scope of work is limited to area under the jurisdiction of Lahore City. The key components of the scope for the System Integrator (SI) are provided below. The components may be added or deleted based on the design proposed by various bidders.

1. Video surveillance
  - a. Video analytics
  - b. Installation of cameras
  - c. Set up of Command and Control Centre and live feed of cameras
2. Integrated Communication Platform to Voice Communication System to provide User Interface for telephone and radio communications
3. Traffic management
  - a. ANPR
  - b. ITMS
  - c. E-Challan
  - d. VMS
  - e. Handheld devices
4. Demand Management
  - a. Telephony demand via the ECC
  - b. Social Media
  - c. CCTV surveillance
  - d. Alarms
  - e. Intelligence
5. Response management
  - a. GPS enabled vehicles/ Automatic Vehicle Location System

- b. Computer aided dispatch
  - c. Resource Management
  - d. Operational planning for pre-planned and spontaneous events
  - e. Dispatching mechanism to relevant agencies
6. Data centre and disaster recovery centre
- a. Design and setup of primary Data Centre and requisite hardware (computing) for Disaster Recovery Centre.
  - b. Deployment and Installation of hardware including servers, storage, racks etc.
  - c. Detailed solution architecture
  - d. Bidders are required to propose the determine the computing required as per proposed solution
7. Network
- a. Providing redundant connectivity through reliable media from cameras to Command and Control centre; Command and Control centre to DC; DC to DR; from handheld devices/ mobile vehicles to Command and control centre.
  - b. Detail network diagram with network architecture
  - c. Provide all network components includes all active and passive equipment.
8. Command & Control Centre hardware
- a. Video Wall with allied accessories, Data center, LAN, PC, printers, scanners, switch/router, building security equipment etc.
9. Integration
- a. Provisioning and Integration of the Security and Surveillance system with existing databases as per industry standards.
  - b. Command and Control, GIS, Resource Management System, Computer Telephony Integration Applications, Integrated desktop, crime and intelligence Systems
  - c. GIS and location services
10. Training
- a. key element and is critical to the success of the IC<sup>3</sup> Centre programme
  - b. Comprehensive training program for management, operational, maintenance, and support personnel



The scope of work has been divided in three phases. All the phases would include the components as mentioned above.

1. Phase 1: Planning
2. Phase 2: Execution
3. Phase 3: Maintenance

The bidders are required to submit a comprehensive detailed system and network architectures of proposed solution as well as the detailed specifications of proposed hardware components.

## 2.3 Geographical Scope

The area identified for the project is approximately covering entire Lahore up till the entry / exit points of Lahore. The coverage is further curtailed in three tier's covering the following:

- First Tier: All the entry and exit points of Lahore to be covered with ANPR system – List Attached
- Second Tier: All the intersections of the earmarked area of all six division of police within Lahore (approximately 1800 sites with tentatively 7000 cameras including Fixed, PTZ and ANPR) to be covered.
- Third Tier: All critical infrastructures within the earmarked area, important Govt. Buildings, hospitals, market places, malls and all traffic junctions.
- Integration mechanism of already installed cameras in these locations

Indicative area to be covered by surveillance system has also been provided in a KML file that will be shared to all interested bidders.

## 2.4 Detailed scope of work

### PHASE 1: PLANNING

**Bidder is expected to conduct survey of the geographic area as site locations given at EOI stage.** Bidder is required to conduct survey of the earmarked area and entry / exit points define the target areas and/ or gaps for surveillance and intelligence system, infrastructure, and management. It is expected that the bidder submits their response based on thorough study of the locations. Following is an indicative list of items which should be surveyed by the bidder and appropriate response shall be given.

- Surveillance cameras: Specify type, number and location of cameras to be deployed in the city. It can include fixed, PTZ, ANPR etc. cameras.
- Variable Message Signboard: Location and size of VMS boards
- Network: List of locations along with the required network type at each location. It should include both fixed/ wired / fiber and mobile communication points.

- Integration: Bidder needs to study the important infrastructure points from where integration would be done. These may include malls, metro stations, government buildings etc. where cameras are already installed and a feed needs to be integrated with new system.
- Develop the surveillance layout for the identified area; recommend the risk mitigation strategy and a structured plan (year-on-year, milestone-by-milestone)
- Provide a detailed proposed system and network architecture for an integrated solution involving command and control elements, Data Centre & Disaster recovery equipment, communication, procedures and personnel.
- Design of the integrated solution Command and Control Incident Management, Geographic Information System (GIS), Resource Management System, Integrated Automatic Resource Location System (ARLS), and Mobile Data Terminals
- Design for the Integrated Communications Platform

## **PHASE 2: EXECUTION**

Bidder is expected to provide end to end services of design, procure, installation and commissioning of the security and surveillance system.

### **1. Video surveillance**

#### **a. Installation of cameras**

- Cameras need to be deployed to monitor the roads, junctions and sensitive locations of the city like governmental buildings, hospitals etc. It shall support video analytics security application for the city, perimeter protection, intrusion, illegal construction and encroachment detection for key places. A list of all tentative parameters for video analytics is at Annex-D
- Cameras need to be provided at the identified locations
- Bidder needs to identify the type and number of the camera i.e. PTZ, fixed etc. based on the location.
- Any civil work related to installation of camera like fixing a pole, customization of vehicle, cabling etc. would be part of bidder's scope of work.
- Ariel Surveillance – Quad Copters (05)
- Specialized Vehicles (10) equipped with wireless video feed mechanism to IC3.

#### **b. Set up of Command and Control Centre**

- Central command and network operation centre to be set up at the location to be specified after Project award
- Furnish 24/7 Communication and Information System (CIS) and Security services at the command centre
- Mobile surveillance vehicle with Command & Control Unit (MCCU) with surveillance system to assist the system during unpredicted or exceptional events (social, sports, political, law and order etc.) and provide good surveillance capabilities from ground aerial and otherwise.
- Any civil work related to installation of screens, making of video wall, cabling, civil work, customization of vehicle etc. would be part of bidder's scope of work.

## 2. Voice Communication System (VCS)

- A new solution incorporates an Integrated Communications Control System which will allow operators to manage all their voice communications and video surveillance activities at their own integrated console. The VCS shall provide an integrated User Interface for telephone and radio communications as a minimum
- Automatic Call Distribution (ACD) and Computer Telephony Integration (CTI) systems, such that queues are balanced and minimized and that the operators who has been waiting longest is allocated the next call.

## 3. Traffic management

### a. ANPR

- Bidder shall provide ANPR at all the identified location.
- ANPR should be able to read the number plates clearly and provide accurate output and integrate it with MTMIS systems
- It should be able to read number plates of all sorts
- ANPR would be required to be integrated with the registration details of the vehicle

### b. ITMS

- ITMS should include Speed and Traffic Light violation linked with an Automatic Number Plate Recognition system (ANPR) to identify vehicles and generate Challans
- Traffic volume analysis should also be available in ITMS which can help regulate traffic through central command and control centre
- Traffic light control system would also be required to synchronize lights in case of heavy traffic flow.

### c. VMS

- Variable Message Signboards (VMS) and Public Announcement (PA) systems should be installed at strategic locations in the city.
- VMS and PA system would provide driver information and guidance based on the input from command and control centre
- VMS would also show emergency / disaster messages if required

## 4. Demand Management

- a. System to 'blend' demand from telephony, CCTV surveillance, Alarms, Intelligence and knowledge products and social media
- b. Incident Management system should provide the functionality to create, update and close incidents including validating the location, adding log entries, performing searches and retrievals, creating and managing tasks, scheduling incidents restricting access and tagging for the attention of other users.
- c. The demand will be distributed and balanced across the EC centre resource pool such that operators with the shortest queue, or who have been in standby longest, are allocated the latest call.

- d. All voice calls from the public will be answered and assessed by an operator before being routed to a suitable destination.
  - e. Queues may be segregated and may be dynamically re-configurable by operator skills and specialization or by source and caller identification.
5. Response management
- a. GPS enabled vehicles/ Automatic Vehicle Location System
    - Each police/ patrolling vehicle should be fixed with GPS system so that they can be tracked from command and control centre
    - Command and control centre should be able to monitor all vehicles and should be able to connect with any vehicle as per the requirement.
  - b. Computer aided dispatch
    - Based on the location of the call, dispatching mechanism should initiate the message to the nearest located vehicle for quick action and rapid response.
    - Computer aided dispatch including Command and Control Incident Management, Geographic Information System (GIS), Resource Management System, Integrated Automatic Resource Location System (ARLS), and Mobile Data Terminals
    - Management of pre-planned and spontaneous events - system shall allow an event plan is created, ideally using a map-oriented facility, which can be used to overlay event-specific locations such as road closures, rendezvous points, evacuation points, vulnerable premises, CCTV cameras, etc.
6. Data centre and disaster recovery centre
- a. Design and set up of DC and DRC according to best practices (Data center standards TIA).
    - Bidder is required to design DC and DR at the location provided by the Authority
    - It is envisaged that the DC would be built at Command & Control Center, Qurban Lines Lahore (Floor Plan is attached for the ease of the bidder) and DRC would be set up in Arfa Software Technology Park, Lahore
  - b. Minor Civil work including.
    - Dynamic and efficient precision cooling system should be designed for DC
    - Precision Cooling System for DC should be designed with no single point of failure, best of breed products, maximum flexibility, scalability and accessibility for maintenance.
    - Electrical and Mechanical actual load consumption shall be considered for design of power system
    - Floor plan and flooring would also be part of bidder's scope of work.
  - c. Provisioning and installation of hardware including servers, storage, racks etc.
    - Bidder is expected to supply all the hardware required for the data centre and DRC including servers, monitors, storage, racks etc. The proposed hardware must be scalable.

- Applications required for commissioning of the hardware shall also be provided by the bidder
- Bidder shall also set up monitoring room for the DC and DRC with the required hardware.
- Bidder shall also provide Anti-Virus, EMS, DMS, VPN etc. for the smooth functioning of the DC/ DRC

## 7. Network

- Providing redundant connectivity through reliable media from cameras to Command and Control centre; Command and Control centre to DC; DC to DR and from handheld devices/ mobile vehicles to Command and control centre.
  - The project includes provision of optic fiber network for last mile connectivity, as well as preparation of the final system design (FSD), documenting all system components, preparation of input like messages, dynamic sign contents, response/ action plans, etc. according to the Client's requirements, coordination with the PITB on training and maintenance by providing technical support.
  - Bidder may suggest other connectivity options such as wireless, LTE, Wireless Mesh Network etc. as per the requirement of the project.
  - Bidder will provide primary and secondary connectivity between the locations. It is expected that there would be minimum connectivity failure at any point of time.
- Provide all network components including active and passive components
  - In addition to the connectivity, bidder shall provide all network components such as routers, switches, cable at all the required locations.

## 8. Office hardware

- Supply and install PC, laptops, printers, scanners, office LAN, office switch/ router etc.
  - For the proper functioning of the surveillance system, bidder may need to proper certain office hardware. Bidder should study the current availability of office hardware and new hardware shall be procured based on the gaps.
  - Hardware shall be commissioned by the bidder and also maintained by the bidder during the maintenance period.

## 9. Integration

- Integration services to include
  - Command and Control, GIS, Resource Management System, CTI Applications, Integrated desktop, crime and intelligence Systems etc.
  - Video Surveillance, VMS & Analytics
  - Call Centre / VOIP
  - Location Integration Services - Camera,, Analytics , GIS & C&C system

b. Integration of the Security and Surveillance system with existing ones

- There are certain applications/ systems running or being developed at various departments which need to be integrated with the surveillance application to make an integrated system
- To integrate the video feed from other sources such as malls and private establishments, important buildings, metro stations etc. in the surveillance system. Provision for such integration should also be made by the bidder.

10. Training

a. The scope of the training shall be to train the skills, knowledge, behaviors, technology functionality, processes of the new roles for, but not limited to, the:

- ECC operators and supervisor
- Dispatch operators and supervisors
- SOMS operators and supervisors
- CMC operators and supervisors.
- Punjab Police Command Team
- Center managers
- Technical support
- Administration roles.

### **PHASE 3: MAINTENANCE / POST OPERATIONS**

- All the equipment, software and workmanship that form a part of the service are to be under warranty throughout the term of the service contract from the date of service acceptance and commencement. The warranty shall require the Service Provider to be responsible for all cost of parts, labour, field service, pick-up and delivery related to repairs or corrections during the Project Period.
- Bidder shall ensure all the equipment's installed in the outdoor shall be vandal proof and incase the equipment's get damaged he should replace it in the shortest time.
- The service needs to adhere to defined SLAs and SI is expected to keep spares of implemented products for smooth and uninterrupted functioning of the system.
- Preventive maintenance shall be carried out once in a quarter along with corrective maintenance and also when calls are placed by officer in-charge, respective officers and Police authority.
- Bidder shall provide manpower to give maintenance support for 24/7 at the system and wherever the bidder feels necessary for the period of service contract.
- Bidder shall offer maintenance of the various equipment, components and installations to a high level of operational integrity for a defined period following the issuance of the Taking-Over Certificate.
- In addition to maintenance during the defined period, the SI shall be fully responsible for all maintenance activities for the period between installation of equipment and issuance of the Taking-Over Certificate.

## 2.5 Manpower

- a. Bidder shall provide adequate number of personnel each responsible for a specific role within the system.
- b. Bidder must provide clear definition of the role and responsibility of each individual personnel.
- c. Bidder shall have a defined hierarchy and reporting structure for various teams that shall be part of the project
- d. Bidder shall independently estimate the teams size required to meet the requirements of this project and propose their credential. Bidder shall propose qualified technical personnel with adequate skills levels to manage the infrastructure.
- e. Some of the required personnel would be:
  - ▶ Project Head
  - ▶ Project manager
  - ▶ Surveillance expert
  - ▶ Solution architect (solution, network, hardware)
  - ▶ ITMS expert
  - ▶ Data centre expert
  - ▶ Handholding staff
  - ▶ Trainer
  - ▶ Facilities management engineer

## 2.6 Project Period

The estimated time period for development and Supply, Installation, Testing and commissioning shall be 12 (twelve) months from the date execution of the Contract, while the Operation & Maintenance period shall be 5 (five) years subsequent to the commissioning date.

### **3. SUBMISSION OF PROPOSAL**

- 3.1 The EOI & Pre-Qualification proposal and all documents relating to the EOI & Pre-Qualification proposal, exchanged between the Interested Parties/Contractors and the Purchaser, shall be in English. Any printed literature furnished by the Interested Parties/Contractors in another language shall be accompanied by an English translation which shall govern for purposes of interpretation of the EOI & Pre-Qualification proposal.
- 3.2 The EOI & Pre-Qualification proposal shall be filed in / accompanied by the required Forms, Annexes, Charts, Drawings, Documents, Brochures, Literature, etc. which shall be typed, completely filled in, stamped and signed by the Interested Parties/Contractors or his Authorized Representative. In case of copies, signed and stamped photocopies may be submitted. If volume of the bid contains various set(s) of documents the same must be properly numbered and tagged in binding shape
- 3.3 The proposal shall consist of two parts, one shall be the EOI & the other shall be the Pre-Qualification proposal. Each proposal shall be in two sets i.e. the original and the copy. In the event of any discrepancy between the original and the duplicate, the original shall govern.
- 3.4 The EOI proposal shall comprise of the following:-
  - i. Complete EOI in compliance to scope mentioned vide this document;
  - ii. Original deposit slip of EOI & Pre-Qualification fee, as mentioned in EOI & Pre-Qualification advertisement;
- 3.5 The pre-qualification proposal shall comprise of the following:-
  - i. Certificate of Company/Firm Registration/Incorporation under the laws of Pakistan;
  - ii. Complete Company Profile;
  - iii. Detail of relevant Projects (Successfully completed and ongoing projects);
  - iv. Complete CVs / list of employees, including Top Level management, middle level management and operational teams;
  - v. Submission of undertaking on legal valid and attested stamp paper that the firm is not blacklisted by any of Provincial or Federal Government Department, Agency, Organization or autonomous body or Private Sector Organization anywhere in Pakistan;
  - vi. Audited financial statements for the last three (03) years, supported by audit letters, 2) certified financial statements for the last three (03) years, supported by tax returns duly signed and stamped by authorized representative
  - vii. Integrity Pact duly signed and stamped by authorized representative (Annexure-B);
  - viii. Undertaking (All terms & conditions and qualifications listed anywhere in this document have been satisfactorily vetted) and Affidavit (Integrity Pact)



(Annexure-B & C);

- ix. Covering letter duly signed and stamped by authorized representative. (Annexure-A);
- x. Financial Capacity as per evaluation criteria;
- xi. Valid Registration Certificate for Income Tax & Sales Tax;
- xii. Income Tax & Sales Tax Returns.

Verifiable documentary proof of the mandatory and other requirements mentioned in this document must be submitted along with the below form, noncompliance of which shall lead to disqualification.

- 3.6 The Interested Party/Contract shall seal the Original EOI Proposal in an envelope duly marked as under:

Original EOI for  
EOI & Pre-Qualification Title.

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Interested Party/Contractor]

[Address of the Interested Party/Contractor]

[Phone No. of the Interested Party/Contractor]

- 3.7 The Tenderer shall seal the Duplicate EOI Proposal in an envelope duly marked as under:

Duplicate EOI for  
EOI & Pre-Qualification Title

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Interested Party/Contractor]

[Address of the Interested Party/Contractor]

[Phone No. of the Interested Party/Contractor]

3.8 The Interested Party/Contractor shall follow the same process for the Pre-Qualification proposal.

3.9 The Interested Party/Contractor shall again seal the sealed envelopes of Original EOI Proposal and the Original Pre-Qualification Proposal in an outer envelope, duly marking the envelope as under:

Original EOI & Pre-Qualification Proposal for

EOI & Pre-Qualification Title

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Interested Party/Contractor]

[Address of the Interested Party/Contractor]

[Phone No. of the Interested Party/Contractor]

3.10 The Tenderer shall again seal the sealed envelopes of Duplicate EOI and the Pre-Qualification Proposal in an outer envelope, duly marking the envelope as under:

Duplicate EOI & Pre-Qualification Proposal for

EOI & Pre-Qualification Title

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Interested Party/Contractor]

[Address of the Interested Party/Contractor]

[Phone No. of the Interested Party/Contractor]

- 3.11 The Interested Party/Contractor shall enclose soft copies of the EOI Proposal and the Pre-Qualification Proposals, including all Forms, Annexes, Schedules, Charts, Drawings, Documents, Brochures, Literature, etc., in the form of MS Word Documents, MS Excel Worksheets and Scanned images, with the hard copies.
- 3.12 The Proposals shall be dropped in the prescribed Tender Box placed at the Reception of the Purchaser's office, during office hours, up to due date and time.
- 3.13 This is made obligatory to affix authorized signatures with official seal on all original and duplicate (copies) documents, annexures, copies, certificates, brochures, literature, drawings, letters, forms and all relevant documents as part of the proposal submitted by the Interested Party/Contractor.

#### **4. Other Terms & Conditions**

- 4.1 Interested Parties / Contractors which submitted complete EOI in compliance to scope mentioned vide this document, shall only be considered for Pre-Qualification.
- 4.2 Joint ventures or Consortium are also eligible for this EOI & Pre-Qualification, as long as the joint venture complies with the following conditions:
  - A. The Interested Parties/Contractors may form a joint venture of maximum four Companies/Firms/Partners. An Agreement Deed to that effect, legally executed and signed by all the partners shall be submitted with the bid.
  - B. One partner of formulated joint venture will be designated the lead partner and would be get into legal contract with Purchaser and would be liable to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners. A power of attorney to that effect, legally executed, signed by all the partners shall be submitted with the Tender/bid.
  - C. There must be at least one locally registered company (Partner) of good repute, with relevant experience and proven track record, in the joint venture.
  - D. All the partners shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The Interested Parties/Contractors, and in case of successfully pre-qualifying, the Contract Deed, to that effect, shall be signed by the lead partner.
  - E. Partners other than the lead would also be bound by the terms and conditions of the contract.

## 5. EVALUATION CRITERIA

### IMPORTANT NOTE:-

All the applicants to please note that as per PPRA Rules and Regulations, all the documents/statements submitted by a Interested Parties/Contractors for its pre-qualification are under Oath.

Any document/statement provided if proved false, mis-stated, concocted, or incorrect at any time during or after Pre-qualification will result into permanent dis-qualification and black listing of the firm/Company/Partners with their names displayed on PPRA website.

**PASS MARKS:** Based on conditions listed in this document, Proposal not meeting the 70% pass marks limit will be rejected. All Interested Parties/Contractors scoring greater than or equal to 70% of the marks will be accepted in Pre-Qualification.

**PROVISO:** Provided that if NONE or ONLY ONE (single) Firm/Contractor exceeds the 70% pass mark, then the Purchaser SHALL decrease the Pass Mark limit to 60%. In other words, if TWO or more Firms/Contractors exceed 70%, then the Pass Mark will NOT be decreased to 60%.

If Pass Marks are decreased to 60%, then ALL Firms/Contractors with scores greater than or equal to 60% shall be considered EQUALLY.

The Firms/Contractors who have duly complied with the Qualification and Evaluation Criteria against each item will be eligible for further processing.

The proposals shall be evaluated by the technical evaluation committee in the light of following evaluation criteria:

Category	Description	Requirement/Points
Legal (Mandatory)	Certificate of Company/Firm Registration/Incorporation under the laws of Pakistan	Mandatory
	Valid Income Tax Registration	Mandatory
	Valid General Sales Tax Registration (Status = Active with FBR)	Mandatory
	Submission of undertaking on legal valid and attested stamp paper that the firm is not blacklisted by any of Private or Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan.	Mandatory
	Bidder / partner must have experience of successful delivery of command and control projects in a critical environment. (Successfully	Mandatory

	completed and ongoing projects)		
	City wide command and control systems including surveillance experience of the partner (IC3, video analytics, connectivity, data center and traffic management solutions) (3 Projects) 10 marks for each project (Max point 30)	3 Projects	30 Points
	Surveillance experience of the bidder with minimum 100 cameras along with connectivity and SLA (5 Projects) 2 marks for each project (Max point 10)	5 projects	10 Points
	Comprehensive solution for IC3 including detailed BOQ with end to end solution (Max Point 15)	Solution	15 Points
	Proposed Solution Presentation (Max point 15)	presentation	15 Points
	Bidders projects (worth 100 million) in last three years (Max Points 10) 2 marks for each project	5 projects	10 Points
	Annual Average turnover of last three (3) years (Max Points 10)	1 Billion	05 Points
		2 Billion	10 Points
Human Resource, Professional	Technical team (Max Points 10) <b>HR Performa must be filled attached at (Annex-E)</b>	2 points for every 50 resources	10 Points

Note: Verifiable documentary proof for all above requirements and criteria points are mandatory requirement and marks will be awarded on the basis of these verifiable proof

**Format for Covering Letter**

To  
(Name and address of Purchaser)

**Sub:** \_\_\_\_\_.

Dear Sir,

- a) Having examined the EOI & Pre-Qualification document and Appendixes we, the undersigned, in conformity with the said document, offer to provide the said items on terms of reference to be signed upon the award of Purchase Order/Contract.
- b) We undertake, if our proposal is accepted, to provide the items/services comprise in the contract within time frame specified, starting from the date of receipt of notification of award from the Purchaser.
- c) We agree to abide by this proposal for the period of \_\_\_\_ days (as per requirement of the project) from the date of opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- d) We agree to execute a contract in the form to be communicated by the \_(insert name of the Purchaser)\_, incorporating all agreements with such alterations or additions thereto as may be necessary to adapt such agreement to the circumstances of the standard.
- e) Unless and until a formal agreement is prepared and executed this proposal together with your written acceptance thereof shall constitute a binding contract agreement.
- f) We understand that you are not bound to accept any proposal you may receive, not to give any reason for rejection of any proposal and that you will not defray any expenses incurred by us in Pre-Qualification.

\_\_\_\_\_

Authorized Signatures with Official Seal.

**INTEGRITY PACT**

**(To be submitted on Legal Stamp Paper)**

**AFFIDAVIT**

We \_(Name of the Interested Party/Contractor)\_ being the first duly sworn on oath submit, that Mr. / Ms. \_\_\_\_\_ (if participating through agent / representative) is the agent / representative duly authorized by \_(Name of the Interested Party/Contractor)\_ hereinafter called Contractor to submit the attached proposal to the \_(Name of the Purchaser)\_. Affiant further states that the said M/s (Firm/Company Name) has not paid, given or donate or agreed to pay, given or donate to any line officer or employee of the \_(Name of the Purchaser)\_ any money or thing of value, either directly or indirectly, for special consideration in the letting of the contract, or for giving undue advantage to any of the Firm/Contractor in the Pre-Qualification Process and in the evaluation and selection of the Firm/Contractor for contract or Participating in further Procurement Procedures or for refraining from properly and thoroughly maintaining projects implementations, reporting violation of the contract specification or other forms of non-compliance.

[The Firm/Contractor] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with the Purchaser and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty / support.

[The Firm/Contractor] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty / support. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to the Purchaser under any law, contract or other instrument, be voidable at the option of the Purchaser.

Notwithstanding any rights and remedies exercised by the Purchaser in this regard, [the Firm/Contractor] agrees to indemnify the Purchaser for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to the Purchaser in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [the Firm/Contractor] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from the Purchaser.

\_\_\_\_\_  
Authorized Signature & Stamp

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

\_\_\_\_\_  
Notary Public



**UNDERTAKING**

It is certified that the information furnished here in and as per the document submitted is true and correct and nothing has been concealed or tampered with. We have gone through all the conditions of Pre-Qualification and are liable to any punitive action for furnishing false information / documents.

Dated this \_\_\_\_ day of \_\_\_\_\_ 20\_\_

Signature

(Company Seal)

\_\_\_\_\_

In the capacity of

Duly authorized to sign proposals for and on behalf of:

## PROPOSED VIDEO ANALYTICS FEATURES

Sr.No.	Analytics Features	Description
1	License Plate Recognition (LPR)	Number plate recognition
2	Track Moving Items	Keep track of an object within scene
3	Real Time Automatic Alerts Algorithms	In case of event occurrence an alert will be generated for appropriate action
4	Image Segmentation	Divide digital image into multiple segments to get maximum information
5	IVS Based Face Recognition	Facial recognition to match with stored images to identify person
6	Crowd Surveillance	As name implies
7	Tag And Track	Tag an object then track it on every camera installed within surveillance
8	Automated Analysis Of Video Surveillance Data	Analysis on stored data in wake of certain event
9	Dimension Based Items Classifiers	Classification of objects based on dimension
10	Event Detection Methods	Detecting events based on presets
11	Ability To Count People And Vehicles	Head count of people or vehicles
12	Camera Tamper Detection	As name implies
13	Night Enhanced Snapshots	Image enhancement
14	Image Stabilization	As name implies
15	Loitering Event	Unwanted event identification like a person is staying longer than necessary
16	Dynamic Masking	hide any part of video feed e.g. to protect privacy
17	Counter flow detection	Detecting flow of people in wrong direction



## ANNEXURE-F

List of Sites: [https://www.dropbox.com/s/vwtvu0dpanu2g0x/List\\_of\\_Sites.xlsx](https://www.dropbox.com/s/vwtvu0dpanu2g0x/List_of_Sites.xlsx)

Sites KML: [https://www.dropbox.com/s/yhbfhcmnt91v6nf/Sites\\_Geo\\_Tagging.kml](https://www.dropbox.com/s/yhbfhcmnt91v6nf/Sites_Geo_Tagging.kml)