Request for Proposal for 'Response to Emergency And Disaster incidents (READi)' System– Vol I

A Modern State-of-the-art Disaster Response & Communication System with integrated Dial 100 System extending to Rural Population

March 2014

STRUCTURE OF THE RFP

This RFP is meant to invite proposals from interested Bidders capable of delivering the services described in this document. The complete RFP is contained in two volumes as explained below:

Volume I: Project Specifications
Volume I of RFP intends to bring out all details with respect to solution and other requirements that the purchaser deems necessary to share with potential Bidders along with the terms and conditions of the bid. The information set out in this volume broadly covers Project overview, Overall Scope of Work, Functional and Technical requirements covering multiple aspects of the requirements, Project Phases & Timelines, Service Level Agreement, Instructions to Bidders, Bidding & Evaluation Process, Payment Terms and Schedule etc.

Volume II: Master Service Agreement
Volume II of RFP is the draft Master Service Agreement essentially devoted to explain contractual terms and conditions.

This document is Volume I of the RFP.

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Abbreviations

Acronym	Full Form
AMC	Annual Maintenance Contract
AVL	Automatic Vehicle Locator
AVLS	Automatic Vehicle Location System
BoM	Bill of Material
CAD	Computer Aided Dispatch
COTS	Commercial Off the Shelf
DERC	District Emergency Response Centre
DMZ	Demilitarized Zone
FRS	Functional Requirement Specifications
FY	Financial Year
GIS	Geographic Information System
GPRS	General Packet Radio Service
GPS	Global Positioning System
GoI	Government of India
GoP	Government of Punjab
GSM	Global System for Mobile
INR	Indian Rupees
IP	Internet Protocol
IPS	Intrusion Prevention System
ISO	International Organization for Standardization
IT	Information Technology
LAN	Local Area Network
MZ	Militarized Zone
OEM	Original Equipment Manufacturer
OS	Operating System
PP	Punjab Police
PPHQ	Punjab Police Head Quarters
READi	Response to Emergency And Disaster incident System
RFP	Request for Proposal
SERC	State Emergency Response Centre
SI	System Integrator
SLA	Service Level Agreement
SOP	Standard Operating Procedure
WAN	Wide Area Network

1. Background

1.1. Introduction

'Department of Revenue, Rehabilitation and Disaster Management, Government of Punjab' in collaboration with Punjab Police (hereafter referred to jointly as "**Departments**") intend to implement a state **'Response Emergency And Disaster incidents' (READi)** system to that would perform the dual function of providing disaster response and communication capabilities as well as acting as an emergency response centre for citizens to call and seek help in case of an emergency situation through Dial 100 system. An integrated system would ensure that the disaster management capabilities, which otherwise remain unutilized for long period of time, are utilized to effectively deal with day to day emergency situations as well. The proposed system has been envisaged to be available at 27 District Emergency Response Centres (**DERCs**) of Punjab spread across 24 districts and 3 Commissionerates with a centralized State Emergency Response Centre (**SERC**).

Through this Request for Proposal (RFP), the Departments of Punjab Government intend to appoint a suitable and experienced **Public Sector Undertakings (PSUs)** as a System Integrator for designing, developing, installing and commissioning the desired solution for READi System, and maintaining it for a period of 5 years.

Please note: This RFP is open for Indian Public Sector Undertakings (PSUs) only.

1.2. Punjab – Overall Structure

Punjab is a state in northwest India, forming part of the larger Punjab region. The state is bordered by the Indian states of Himachal Pradesh to the northeast, Jammu and Kashmir to the north, Haryana to the south and southeast and Rajasthan to the southwest as well as the Pakistani province of Punjab to the. Punjab's capital is Chandigarh.

The total area of the state is 50,362 square kilometers (19,445 square miles). According to the 2011 Indian Census, the population of Indian Punjab is 27,704,236 (males 14,634,819 & females 13,069,417). The literacy rate in Punjab is 75%, male literacy being 80.23% and female literacy 68.36%.

For the purpose of effective policing in the state, the state is divided into four zones, seven Ranges, 24 Police Districts headed by SSPs and 3 Commissionerates headed by CPs. FOUR zones are Border Zone, Patiala zone, Jalandhar zone and Bathinda Zone, which are further divided into SEVEN Ranges viz. Patiala, Bathinda, Ferozepur, Ludhiana, Jalandhar, Border and Rupnagar Range. These zones have a total of 24 Police Districts and 3 Commissionerates.

For the purpose of implementation of state level Integrated Emergency Response System, it has been envisaged that 27 DERCs would be set up in these 24 Police Districts and 3 Commissionerates and a central state level SERC.

Please refer to Annexure 3: District Emergency Response Centres Location List

1.3. Existing Dial 100 and Control Room Set-up in Punjab

Punjab Police has set-up basic CAD based district control rooms at 3 Commissionerates and 3 larger districts since the year 2010. Other districts have non-CAD, basic dial 100 facilities, manned by a few police personnel for receiving and responding to the emergency calls.

Details of the existing set-up at the 3 Commissionerates and 3 larger districts are provided at Annexure 2: Existing infrastructure

2. Project overview

2.1. Objectives

In the modern information society, knowledge is power, and crimes are no more committed only on the streets by weapon-wielding shady characters. As the nature of a society changes, the role and capabilities of its protectors must evolve, so that peace and tranquilly prevails, and development can be ensured. Keeping this in mind, 'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and Punjab Police have embarked upon a comprehensive modernisation plan that will help timely and effective communication in case of disaster and carrying out policing responsibilities to the best satisfaction of citizens in case of disaster or emergency.

Following are the key objectives of the project:

- To acquire ability to respond to wide spread disaster situations by being able to draw a common operational picture of the disaster site and communicate & coordinate relief and rescue operations

- To enable prompt handling of emergency situations through use of latest advancements in Information and Communication Technology

- To improve the communication link between the distress callers and Police

- To provide to citizens an uninterrupted 24X7 access to the Disaster and Emergency Control Room through multi-channel Dial 100 facility

- To minimize the response time of the State to any situation requiring immediate State intervention through quick and efficient transmission of information from the Control Room to disaster relief and PCR vehicles and vice-versa

- To ensure transparency and accountability of the personnel, manning the Modern Control Room as well as disaster relief and PCR vehicles

- To maintain high visibility/presence of State response team to instil confidence among citizens and deter offenders

- To acquire ability to analyze trends and station GPS- fitted vehicles, four and two Wheelers at strategic locations

2.2. READi System Functional Overview

Departments intend to implement READi System, an integrated, modern, state-of-the-art system that would significantly enhance their capabilities to respond to wide spread disaster and day to day emergency situations.

Key modules of READi system include Computer Aided Dispatch integrated with Geographical Information System; Automatic Vehicle Locator, Disaster Management, Control Room Automation; Computer Telephony Interface, SMS Gateway etc. Key differentiator for the READi system would be integration of SDMA, Police, Health, Fire, Electricity, Water, Irrigation, Road, Rail authorities for effective & efficient communication and coordination in case of disaster.

READi system will be required to function primarily under following two conditions -

1. Disaster situations

2. Day to day citizen emergency situations

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

2.2.1. Disaster Situations

Disaster situations that are typically encountered include earth- quake, flood, fire, building collapse etc. In case of such situations SERC, in addition to being an emergency contact centre, would also perform activities pertaining to assistance in disaster response and coordination.

The basic functions of disaster response capability would be to:

- Receive, monitor, and assess disaster information

- Monitor, assess, and track response units and resource requests

- Assistance in management of resource deployment for optimal usage

- Timely communication to all responding units, including law enforcement, fire, medical, logistics etc.

- Augment emergency communication from SERC to any field operation when needed or appropriate

The district level DERCs can be called upon to provide assistance wherever possible. This will include coordinating local dispatch functions and ensuring movement and operation of PCR Vehicles etc.

2.2.2. Day to Day Citizen Emergency Situation

This is the normal state situation where in the citizens call SERC pertaining to their emergency situation and seek assistance. SERC will then forward the incident request to district level DERC for taking appropriate action on the same.

The basic functions of emergency response capability would include:

- Receiving Distress Calls

- Gathering Caller's Details

- Finding the geographical position of caller

- Emergency call Dispatching

- Automatic Police Patrol Vehicle tracking with GPS /GPRS System

- Sending instructions to the vehicle

- Logging voice/data communication

2.3. Disaster/ Emergency Call Flow

This section highlights the functions that will be performed by various entities in order to respond to an incoming emergency call.
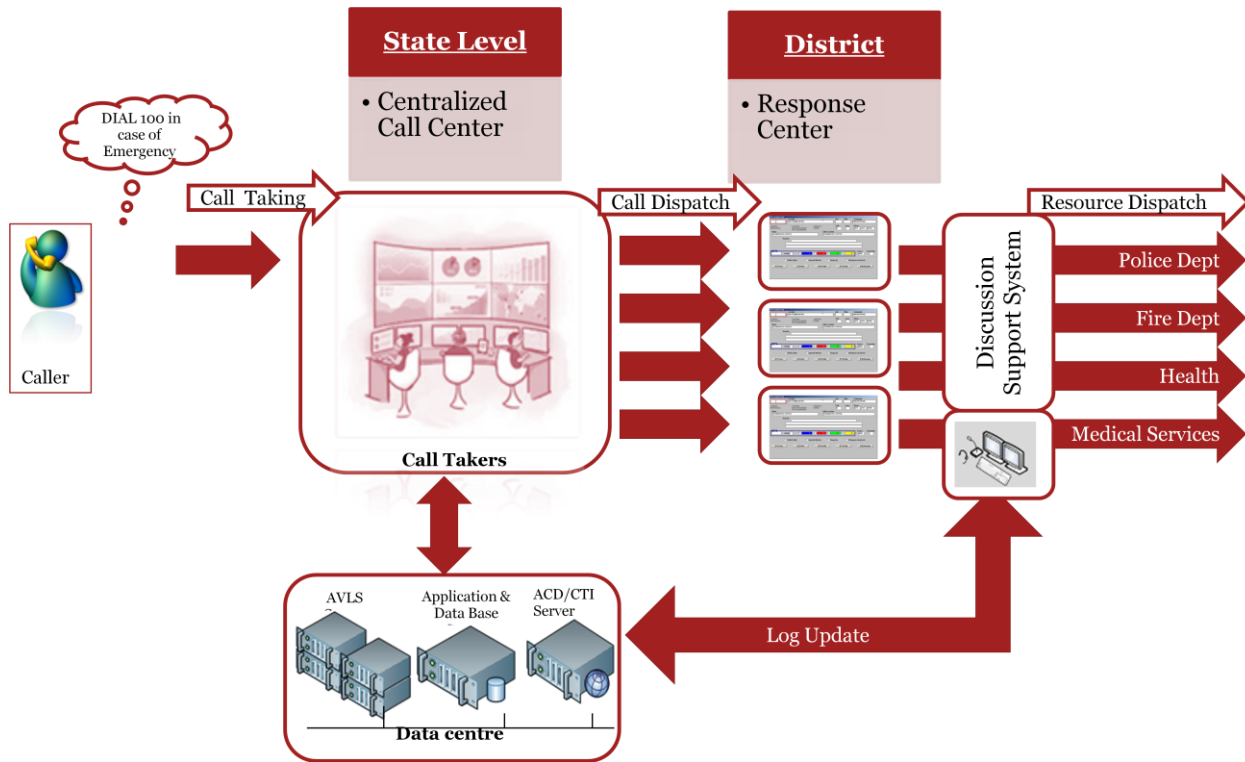
Figure Emergency Call Flow

State Level- SERC operations overview

a) Distress caller will dial the emergency call-in number (Dial No. 100). This call will be answered at the SERC by the call taker. Call taker will be responsible for the screening, acknowledgement and registration of the call. Using the information available from the CAD system call taker shall identify the district from where the call has originated. It shall also be possible to obtain the location of the call within the district using the data available from the Telecom Service Provider. On the call taker screen all the details with respect to the call i.e. event and location information shall be available and the same shall be simultaneously indicated in GIS window of the application. All additional information from the distress caller shall be collected. The voice logger server will record the conversation between the Call Taker and distress caller for further analysis and verification.

b) Based upon the location of the incident the call taker shall transfer the incident to the respective DERC at the District.

District - DERC operations Overview

c) Dispatcher on receiving the incident in the system will acknowledge the receipt and take necessary action. Incident arrival will be indicated by an alarm through the DERC application. Dispatcher will check all the related information of the incident along with call information and telephone number, which can be used to contact the caller in case some additional information of the incident is required.

d) Dispatcher will utilize the information of GIS map, nearest and free Response Unit (RU) location through the READi system application to verify the event location and details/status of the responding units/resources available. It shall be the responsibility of the dispatcher to identify the nearest RU which is free and thus assign the incident to that particular RU through radio communication or GSM/GPRS communication. If required, a voice call can also be set up with the Patrolling vehicle. The RU chosen shall also depend on the actionable requirements of the incident; it is possible that an incident may require emergency services like ambulance,

fire tender, disaster management mobile vans, etc. The Dispatcher shall update the relevant information to that particular incident which shall include personnel assigned to this incident, vehicle number, related RU, etc. along with its timestamp.

e) The responding Units shall be fitted with Mobile Data Terminals and will be GPS enabled for tracking. Dispatcher can watch and guide the Vehicle as it move to the distress spot. In addition a local navigation System in the MDT can help provide Navigation support. It shall be the responsibility of the RU on reaching the incident spot to update the Dispatcher with time of arrival which needs to be updated in the system for quality and efficiency. RU shall also continuously update Response centre with the information and real time feedback of the incidence including the procedures carried at the spot though radio or Voice Enable MDT via GSM/GPRS technology. The information shall in turn, will be displayed at the workstations of the dispatcher with the help of the GIS server.

f) Once Dispatcher gets confirmation from RU about the closure of incidence the same will be verified and be closed in the system under the guidance of supervisor.

g) Supervisor will precisely monitor the standard operating procedures (SOP) which Dispatcher follows towards closure of incident. Operator will receive incident closure request made by Dispatcher and close the same or instructs the Dispatcher to close the incident.

h) Supervisor will be able to generate reports, charts and perform GIS based analysis.

2.4. *Scope Overview*

The Bidder has to ensure the successful installation of the proposed READi system, as explained in detailed scope section and the same shall be its sole responsibility. Any functionality not expressly stated in this bidding document but required to meet the requirement of the organization shall essentially be under the scope of the Vendor and for that no extra charges shall be admissible.

The Bidder's scope of work shall include but should not be limited to the following broad areas. Details of each of these broad areas of activity have also been outlined in subsequent sections of this document:

1. **Business Blueprinting :** The Bidder shall study the existing business processes, MIS reporting requirements, problem areas and expectations of Departments. Output of business blueprinting will be submitted by vendor to Departments in the form of following documents -

    i. Business Processes (AS-IS) – this document should define the processes as they are being handled currently

    ii. Business Processes (TO-BE) – this document should define the business processes as they should be after the implementation of READi system. Bidder will have to ensure that the system being installed complies completely with this document

2. **Computer Aided Dispatch System (CAD**) Installation, Customization, Integration with third party paging and alerting system & Maintenance. This shall consist of **:**

    i. Assessment of existing systems

    ii. Preparation of Solution Architecture and Gap Analysis

    iii. Customization of system as per the specific requirements of Departments

    iv. Procurement and supply of requisite licenses, Installation and implementation (including configuration/ customization and Testing) of proposed CAD system (including AVL and GIS system) along with the required base map and data layers for GIS application

    v.   Interfacing with third party systems such as mobile data terminal devices, automatic vehicle locating system devices, smart phones, caller phones etc.

    vi.   Procurement of SMS gateway services and integration of the same with CAD application for sending SMS to mobile phone callers and police personnel as per requirement

    vii.   Change Management, Training and handholding for the users of the READi system

    viii.   Operations & Maintenance of CAD application.

3. Design, Supply, Installation, Commissioning, Operations & Maintenance of **IT Infrastructure.** This shall consist of :

    i.   Basic Infrastructure

    ii.   Supply, Installation and Commissioning of IT Infrastructure

    iii.   Establishment of WAN connectivity between SERC and DERCs[*1]

    iv.   Establishment of LAN connectivity

    v.   Integration with existing systems

    vi.   Operation & Maintenance for IT Infrastructure (procured as a part of this project).

4. **Setting up Helpdesk Services** and provide support to users at Departments' locations in compliance to the defined SLAs and providing support to all users at specified locations.

5. **Provide Handholding manpower** at DERC on a 24 X 7 basis. Bidder shall provide people with right skill sets to manage the operations of DERC. Handholding manpower should train police personals for day to day operation of call dispatch function.

Note:

*1. WAN Connectivity from SERC (State Level) to DERC (District Level) will be provided by the System Integrator. SWAN may be used as the back-up network. However, Departments may have the discretion to use the SWAN as primary connectivity and discard the SI provided network during the project duration.

2.5. *Detailed Scope*

Milestone	Scope of work for the Bidder
Business Blueprint	• Selected Bidder shall study the existing business process functionalities, MIS reporting requirements, problem areas and expectations of Departments • Selected Bidder should document existing business processes and functionality of current police control room system in "AS-IS" document • Selected Bidder shall organize workshops to reconcile the differences between the existing practices and their benchmarks • Selected Bidder shall prepare a To-Be process document duly highlighting the gaps and the best practices available in the proposed solution to fill the identified gaps
Installation, Configuration & Customization of CAD	• The Scope includes Supply, Installation, Configuration, and Customization (as required) of the proposed READi system solution

Milestone	Scope of work for the Bidder
solution	• Selected bidder must implement the above mentioned system as per the identified needs of Departments • Selected bidder will be responsible for the procurement of any other software required for successfully installation and managing READi system • Selected bidder shall procure the licenses of the system after approval by Departments • Selected bidder will procure/develop base map for GIS application or will procure third party provided GIS maps. • Selected bidder will procure/develop all the required GIS data layers needed by Departments for smooth functioning of READi system. Specific data layers to be procured/developed will be identified during the System Study phase however a tentative list of data layers is provided in Annexure 1 of Volume I of RFP. • **Please note: The Departments may provide satellite images of Punjab State, at later stage. In such case, the vendor would be required create the vector maps and migrate the data layers to such map, without any additional cost to the Departments.** • Based on the approved To-Be Business Processes, the Selected Bidder should undertake the system configuration and installation • The implementation methodology and approach has to be based on the global best practices in order to meet the defined Service Levels during the operation • Selected Bidder has to carry out the integration with other systems / solutions, both existing legacy systems and new plug in modules, third party devices etc to meet the needs of the Departments • Selected Bidder has to design and implement the requisite user authorization as well as other IT security controls, for the entire solution • All reports & MIS, as per Departments' requirements, shall be incorporated in the READi system system • The Selected Bidder shall, if required, commission a temporary development environment inclusive of hardware, network, software and other components of the solution landscape to initiate the development work even before the procurement of actual hardware set up
Supply, Installation and commissioning of IT Infrastructure	• Supply, installation and commissioning of the IT Infrastructure components such as Servers, Databases, Networking & Security components, Storage Solution, Software and other IT components required as a part of this bidding document. • Installation and commissioning of the Networking components • Installation and commissioning of the Security Infrastructure and other associated IT Components • Planning and layout design for the placement of equipment in the Control Room • Help desk and other monitoring and management services

Milestone	Scope of work for the Bidder
Supporting Infrastructure, civil work and passive components	• Selected Bidder should be responsible to provide supporting infrastructure including furniture, Air Conditioner, IT and non-IT components, Screen Display, Diesel Generators, UPS etc. For more details please refer the BoM (Bill of Material) section and Minimum specifications mentioned in this RFP • The Selected Bidder should also be responsible for setting up the passive components such as network cabling etc.
System Testing	• The Selected Bidder shall design the Testing strategy including traceability matrix, Test Cases and conduct testing of various components of READi system installed for Departments. Testing shall at least include Unit Testing, System Integration Testing, Performance Testing, Load Testing, UAT etc. • Selected Bidder shall obtain the approval certificate from Departments on testing approach and plan. Selected Bidder shall perform the testing of the solution based on the approved test plan, document the results and shall fix the bugs found during the testing. Though Departments are required to provide formal approval for the test plan, it is the ultimate responsibility of the Selected Bidder to ensure that the end solution delivered meets all the requirements from READi system as specified in this bidding document • Upon approval by Departments, the Bidder should appoint the Auditor for carrying out an independent audit of the entire READi system. Observations/ recommendations by the third party auditor are to be incorporated by the Bidder before installation
Product Documentation	Selected Bidder should provide detailed final system documentation for reference of Departments. Selected Bidder shall prepare the final user manual incorporating details of all menus and functionality provided by the system. In addition, the Bidder should provide ongoing product information for reference purposes and facilitating self-education for Departments personnel. Key product documents required are:- • Configuration Documentation: consisting of system setting and parameters for each function modules. • User Manual including system instruction and use cases, running of a program to perform specific task in the system with sample reports, details of menus & instructions on how to perform specific tasks in the system using screenshots etc. • Any other documentation required for usage and maintenance of implemented solution at each location like Technical Manual, Installation Guides etc. • System operational procedure manuals. • Selected bidder shall prepare Standard Operating Procedures (SOPs) for all possible scenarios of all types of operations such as call taking, call dispatch, etc. It should also prepare instruction manuals for all the stakeholders of the project. • System documents including the Functional Specifications & Technical Specification • System Administration manual indicating the system settings for each module • Toolkit and Troubleshoot guides for every component of the System as well as IT

Milestone	Scope of work for the Bidder
	infrastructure The Bidder shall provide minimum three hard copies and two soft copies on the above mentioned manuals.
Project Documentation	Project documents include but are not limited to the following: • Project Charter • Detailed Project Plan • Functional Requirement Specifications • System Requirement Specifications • Detailed Design Document • Requirements Traceability Matrix • Test Plan, Test Cases, Detailed Acceptance Test Procedure etc.
Post Implementation Support Services	Post implementation support services should include the following : • SLA and Performance Monitoring • Project Operate and Review • Logging, tracking and resolution of issues. The services shall be rendered onsite from the Departments designated premises. The scope covers the following activities: • Enhancement / modifications with respect to new / enhanced / enriched functionality • Ensure the desired functioning of the Interface / integration • Test scripts preparation and interim system testing • System installation and testing whenever required • Modification / development of reports • Provide technical support on system parameters and requirement of Departments • Present relevant information and training if applicable and necessary regarding the use and functions of new products and services to a defined number of relevant users designated by Departments. • Provide handholding support to end users in carrying out the business process transactions Changes in Business Processes/ Statutory requirements resulting in modification of system and any non-availability of system should not fall under the Service Level measurements. However, Bidder should ensure business continuity and provide the solution in consultation with Departments and Implementation Agencies.

Milestone	Scope of work for the Bidder
Bugs / Fixes Management	Bugs / Fixes Management are an important activity and based on the severity level, it becomes highly critical. As the parties involved are Users / functional team members of Departments, System providers and Bidder, SLAs may not be directly defined. Bidder commits involvement in resolution on 'best of efforts' basis as per requirements. Following are the steps involved: • Problem definition • Context definition (through functional teams as per requirements) • Request Analysis by Bidder • Priority Categorization • Logging with OEM • The Bidder shall identify and resolve system problems like system malfunctions, performance problems, data corruption etc. due to which READi system is not able to give the desired performance • The Bidder shall update all available patch/ updates to the proposed system • Bidder is responsible to provide handholding support to end users Deliverables • Bidder shall work round the clock or as per requirements and ensure proactive and timely support in identification and provision of solutions including OEM Support for resolution. • Timely logging of Bugs/Problems • Daily Status Report
Maintain configuration information & System documentation	The Bidder shall maintain and update documentation of the system to ensure that: • System documentation is updated to reflect on-going maintenance and enhancements including FRS, in accordance with the defined standards • User manuals & training manuals are updated to reflect on-going changes/enhancements • Standard practices are adopted and followed in respect of version control and management of system documentation
Operation & Maintenance of infrastructure	As part of infrastructure operations and maintenance, selected bidder will be required to ensure maintenance and uptime of all supplied infrastructure (as part of READi system commissioning) for smooth functioning of operations. Selected bidder will ensure that the GIS map and associated data is kept updated in the system to reflect true on-ground situation. For this purpose, selected bidder is expected to carry out the update on GIS map and relevant data layers every 3 months or whenever required by the Departments. Selected bidder shall provide comprehensive warranty of all the tendered items supplied for the project. It shall be for 60 months from the date of successful installation of READi system. In case the installation extends beyond schedule, then warranty for all the

Milestone	Scope of work for the Bidder
	tendered items shall also be extended correspondingly by the selected bidder.
	Please refer to Service Level Agreement section for further details on O&M SLAs.
Help Desk	The successful bidder will be required to establish the helpdesk and provide facilities management services to support the officials in performing their day_to_day functions related to this system.
	The successful bidder shall setup a central helpdesk at SERC, which shall be supported by support personnel at SERC level for providing support to DERCs. This helpdesk shall be operational upon commissioning of READi system.
	Please refer to Service Level Agreement section for further details on Help Desk SLAs.
Training	**Develop Overall Training Plan** Selected Bidder shall be responsible for finalizing a detailed Training Plan for the program in consultation with Departments covering the training strategy, environment, training need analysis and role based training curriculum. Bidder shall own the overall Training plan working closely with the Departments Training team. **Training Delivery Approach** Selected bidder shall deliver training at 3 levels: 1. Operational Training 2. Sr. Management Training 3. Administration Training Training scope will include delivery of initial training as part of READi system implementation as well as on-going training as part of regular capacity building. Please refer to Annexure 4: Training Requirement for expected training requirements **Training Effectiveness Evaluation** Bidder shall evaluate the effectiveness of all end users trainings using electronic or manual surveys. Bidder shall be responsible for analyzing the feedback and arrange for conducting refresher training, wherever needed. Departments should periodically monitor the training effectiveness through the performance metrics.
Exit Management	• Selected Bidder will be responsible for formulating a detailed exit management plan to help facilitate Departments in managing READi system upon exit of the Bidder. The plan should clearly outline the risks involved and give a detailed transition schedule. This exit plan should be subject to approval from Departments or any of its designated agencies. The exit plan shall be updated on an annual basis to reflect the current status
Dial 100 facility Communication	• Selected bidder will be required to provide inputs on communication strategy to be used for advertising the availability of Dial 100 facility to citizens • Selected bidder will be required to develop web pages consistent with communication strategy. These web pages would be integrated with Departments' web site

2.6. Indicative Deployment Architecture

This section illustrates indicative deployment architecture for the reference of bidders. However, please note that this is indicative only and bidder are required to design their solution and architect considering their solution and the RFP requirements.

2.6.1. Integrated Deployment Architecture

READi system requires an integrated infrastructure encompassing SERC, DERC, Response units and connectivity between each of these systems. The system shall be built on high availability (HA) mode considering the criticality of the job. Detailed deployment architecture of integrated infrastructure is shown in following figure. Details if each section is described in details below:
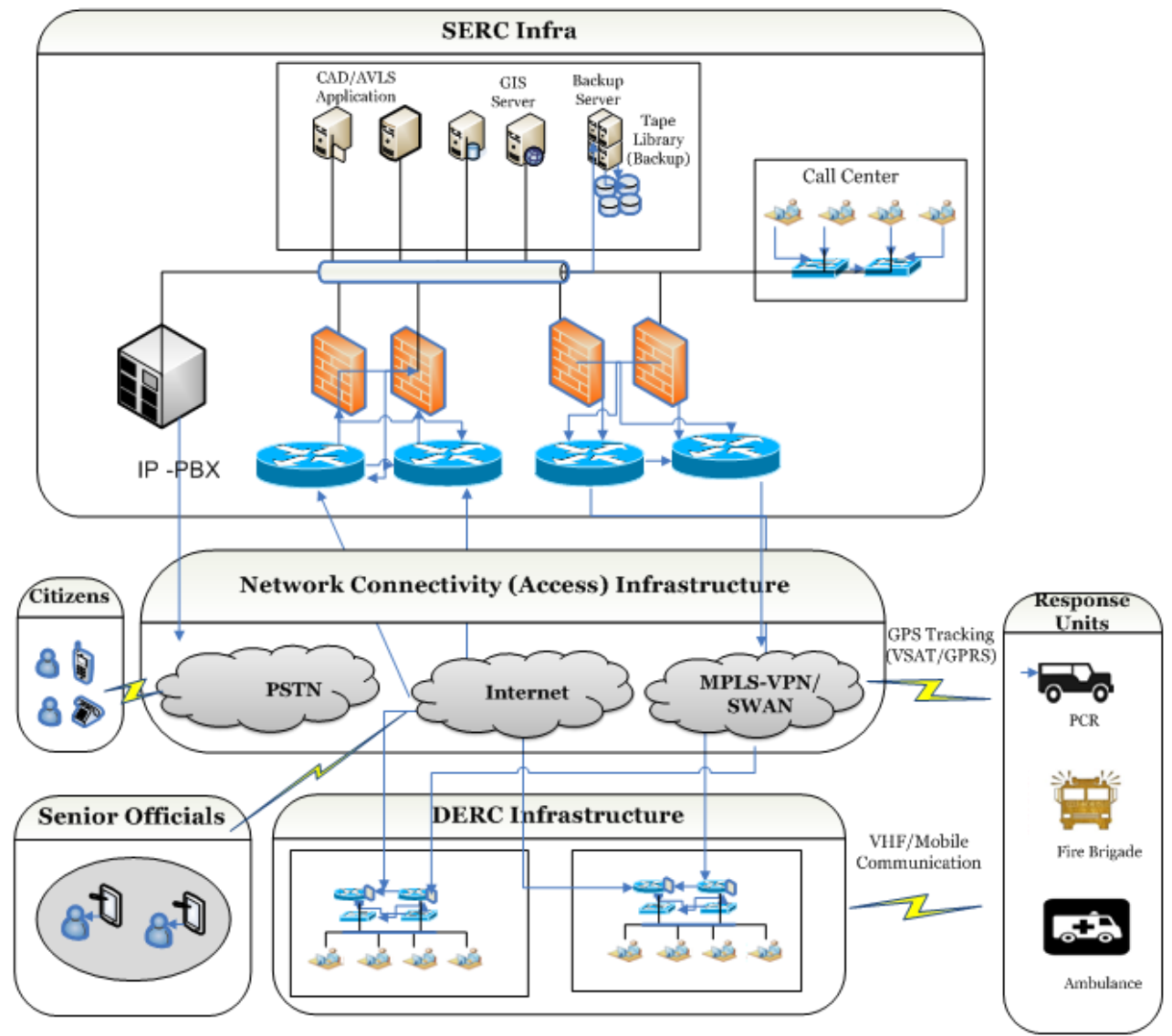
Figure: Integrated deployment Architecture

The integrated deployment architecture primarily includes following systems:

A. SERC

SERC shall be the central data centre hosting the Dial 100 Call centre, servers and systems for dispatching calls to district level and monitoring mechanism to review the calls. The system shall contain routers, firewalls, application and database servers and IP-PBX to register and maintain calls received through dial 100. A detailed deployment diagram for SERC is mentioned in sections below.

B. DERC

DERC Facility shall provide a district level CAD based dispatch facility to emergency response units. All the DERCs shall be connected to SERC in a hub-spoke model serving each districts however controlled by a central location. Key components shall include IP based phones, systems and manpower to dispatch the request to response units. A detailed deployment diagram for SERC is mentioned in sections below.

C. Emergency Response Units

These units shall be actually responsible for attending to the emergency and would be connected to DERC via VHF and other similar mediums.

D. Connectivity between different systems

a) Citizen Diall-100 communication to SERC:

Citizens shall register the emergency call at SERC call centre. SERC will have multiple PRI lines terminating at IP-EPBX at SERC for this purpose. The IP-PBX will further be integrated with CTI/ACD/Voice logger server to provide call centre facility at SERC.

b) SERC-DERC Primary Connectivity:

This connectivity infrastructure will be used DERC to communicate with servers installed in SERC and to get the details of emergency for which response/dispatch to be generated. MPLS VPN connectivity shall be used for this purpose. The proposed MPLS VPN connectivity will connect SERC and all DERC locations.

c) SERC-DERC Backup Connectivity:

The Backup connectivity shall be used when primary MPLS link between SERC and DERC goes down. This shall be an internet broadband connectivity from Internet service provider (ISP). The required configurations need to be done to secure the connection by using IP-SEC tunnel between SERC and DERC.

d) Communication between Response units and AVLS servers at SERC (Vehicle Tracking):

AVLS application will track the location of response units by using the GPRS based signals from response units. SERC will receive these signals using Internet connectivity.

e) Communication between DERC and Response units:

DERC will require contacting response units for dispatch. Existing VHF system and MDT/Mobile/PSTN communication system will be used for this.

f) Communication with senior officials:

Senior officials will be able to monitor the status on web portal using the internet connectivity on the laptop/mobile device.

2.6.2. SERC Deployment Architecture

SERC will host data centre facility for all Application servers and Call Centre facility to receive dial-100 complaints and forward call details to district level centres. A details logical architecture of SERC is given in following figure. Various building blocks of SERC include deployment of MZ and DMZ server infrastructure, Network Infrastructure, Security infra and Call centre facility. All These sections are described below in detail.
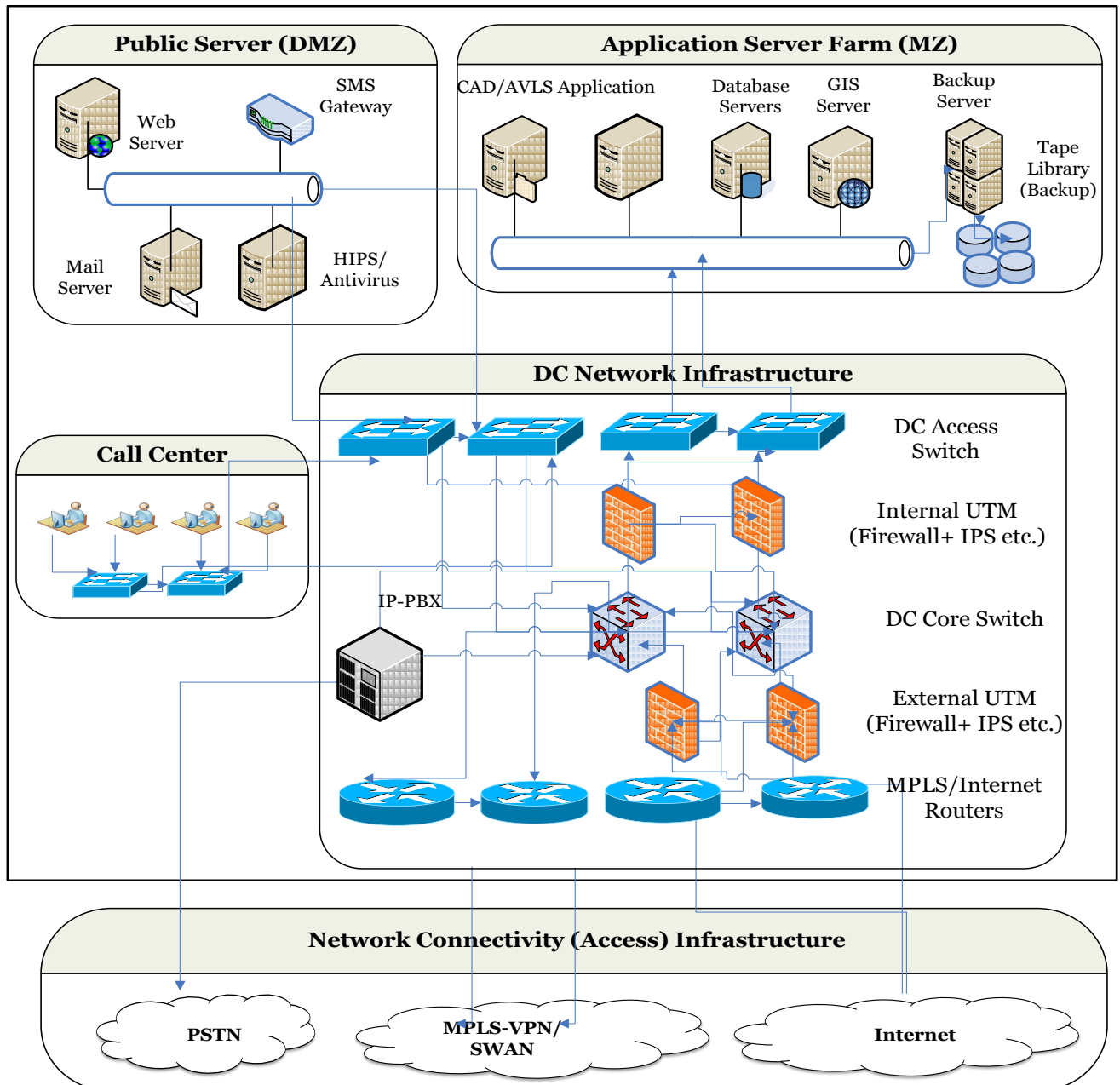
Figure: SERC Infrastructure deployment Architecture

a) Application server Farm (MZ):

This will be a secure Militarize Zone (MZ) to host all critical application including CAD, AVLS, Data Base server, GIS Server etc. To secure all severs hosted in this block a dedicated Internal UTM with functionalities of Firewall and IPS need to be installed in HA.

b) Server Farm (DMZ):

This building block will host all applications and server that need be accessible directly from internet. This include Web server, Antivirus Server, Mail Sever, SMS gateway etc. All servers shown in MZ and DMZ are illustrative only, Bidder need to submit the detail design diagram with their proposed architecture. The servers shall be built on HA architecture.

c) DC Network and Security Infrastructure:

DC Network Infrastructure includes all communication appliances (Router/Switches/IP-EPBX etc.) and Security appliances (External and Internal UMT). Various components of this building block are:

- External UTM in High Availability

- Internal UTM in High Availability

- MPLS Router in Redundancy

- Internet Routers in Redundancy

- Core Switches in Redundancy

- DC-MZ Access switch in redundancy

- DC-DMZ access switch in redundancy

- Call Centre switches (Same switch will be used by IT admin team and other resources to be deployed by bidder under this contract)

- IP-EPBX

Bidder need to provide the detailed proposed architecture in technical bid documents for Network and security Infrastructure.

d) Call Centre Infrastructure:

Call Centre facility will accommodate all call centres agents. All required call centre user infrastructure i.e. Desktop computer, IP phones etc. need to be provided by bidder for this infrastructure component.

2.6.3. DERC Deployment Architecture

DERC Facility will be a district dispatch facility to dispatch the response team as per emergency call logged at SERC. DERC deployment architecture is shown in following figure and various components are described below:
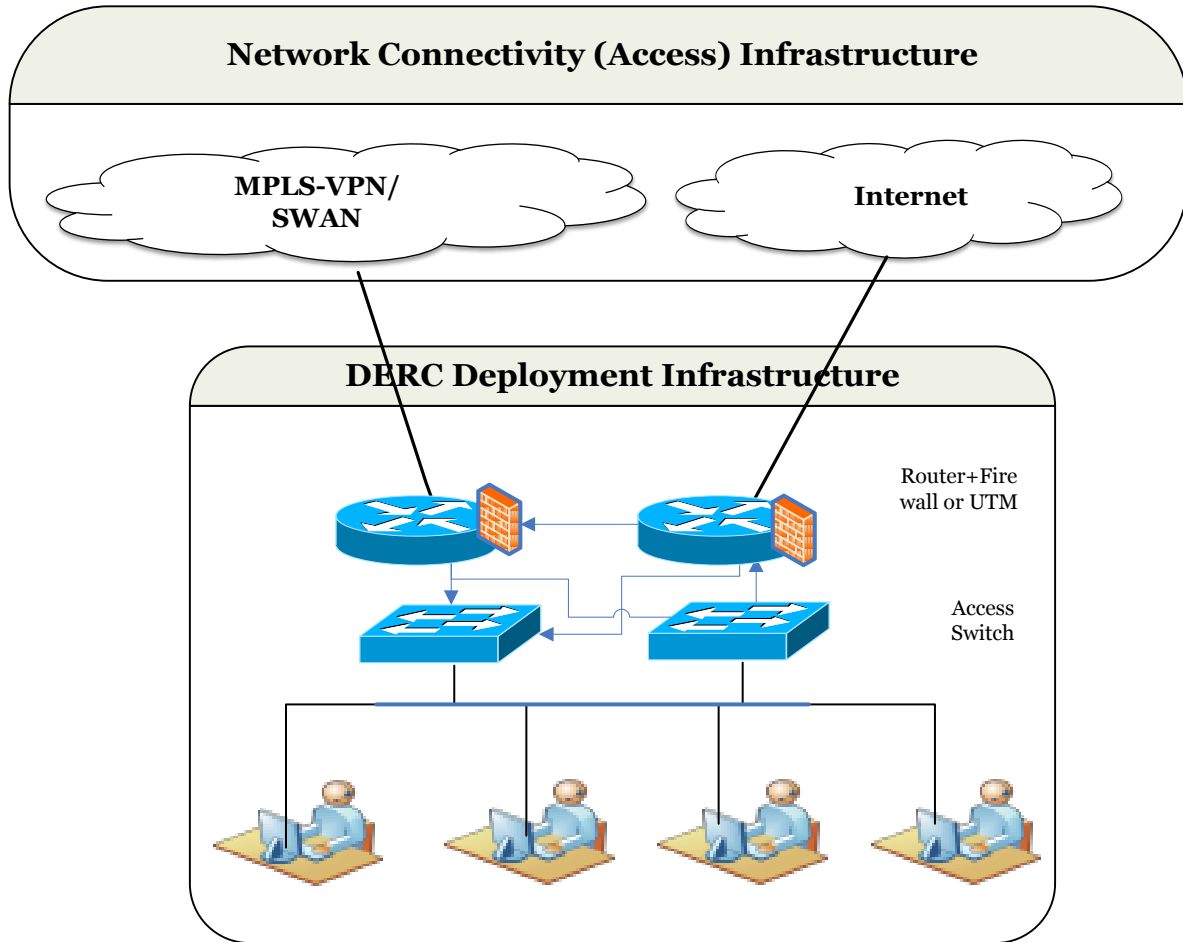
Figure: DERC Infrastructure deployment Architecture

a) **Network Infrastructure:**

DERC will have Router with integrated firewall or UTM box to terminate MPLS and Internet connectivity. The box will function as Security device as well as L3 termination device. Further the L2 access switch will provide the LAN connectivity to DERC users.

b) **DERC user Infrastructure:**

DERC users will have high end dedicated systems to access necessary applications from SERC including CAD, GIS etc. User will also be provided an IP-Phone to communicate with SERC & other senior officer as and when required.

3. Functional requirements of the project

This section presents indicative functional requirement specifications of the READi system. Bidders are required to furnish their compliance against each of the functionality and submit the same as part of the Technical Bid.

With the given background & objectives of the project, a broad outline of functional requirements are listed below.

#	Specification	Description
	3.1. CAD System Specifications	
	3.1.1. General System requirements	
1.	**Design & Architecture**	a. System design should be able to support a fully functional Integrated Emergency Response Centre for emergency response management including call taking & dispatching, communication with other departments etc.
		b. System should be based on open architecture and based on client-server technology. The system should be modular and 3 times scalable for future upgradeability.
2.	**Disaster Recovery centre**	a. System should have provision to setup the Disaster Recovery centre (DRC). However at this stage DRC is not in scope of the selected bidder.
3.	**Customization**	b. System should be customizable to address the stated user needs and future requirements that may arise.
4.	**Security**	a. System should be secure and feature an intelligent Log-in & Log-out facility. The same user should not be able to Log-in simultaneously at different machines.
5.	**Interoperability**	a. System operators should be capable of swapping between call takers, Dispatcher and Supervisor role, based on the user authentication, without the need to have separate licenses in each category.
		b. System should allow a single operator to take the role of call receiver as well as dispatcher simultaneously, if the need arises.
6.	**Provision for CFS (Call for Service) through Multi-media**	a. System should enable citizens to reach the authorities by calls using PSTN, cell phones and VoIP, text messaging, instant messaging, real-time text, pictures and videos.
		b. System should have a provision of receiving the picture images captured by smart phone.
7.	**GIS Map**	a. System should have an integrated GIS map in the software hosted in GIS Server/operator work station to ensure quick pop up of caller/incident/vehicle location. It should have the capability & tools to view attribute details of the specific GIS layers on map click.
		b. Mapping Tools should be provided to be able to group the multiple attribute layers and to control (ON and OFF) the same.
8.	**Automatic Vehicle Location System (AVLS) integration**	a. System should be integrated with the AVLS software to facilitate data communication link with the vehicle mounted location tracking devices (GPS).

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#	Specification	Description
		b. System should have facility to poll a specific GPS receiver of a vehicle to transmit its current positional information.
9.	Message services integration	a. System should have message software that shall provide the ability to send/receive messages in a centralized and distributed mode. The system should also be able to receive query/messages from AVLS/CAD client applications & distribute them to other AVLS client applications based on a user configurable set of rules.
		b. The Message Software should support centralized logging of relevant Command Centre AVLS/CAD related message communications.
10.	Multi-monitor	a. The system should support Multi-monitor displays. There should be two monitors for each operator for viewing Application GUI & GIS map respectively.
11.	Multiple Map Windows	a. The Software should have a provision to open multiple map windows for easy decision-making.
12.	Floating Windows	a. The system software should have floating windows capability i.e. the operator should be able to shift/ position & resize the window form as per his requirement or similar operational functionality
13.		a. System software should be able to send Message between operators using intranet.
14.	Messaging /SMS Interface	b. System software should be capable of, in a pre-defined template, sending SMS to the caller and/or police personnel. SMS can be triggered manually at the discretion of the user or automatically as per a pre-defined procedure configured in the system. SMS may include police station contact number /address details.
15.	User Friendliness	a. The application GUI should be user friendly for ease of operation and keeping in mind the response time to attend to emergency.
		b. System software should have a single comprehensive inbuilt Help file with user friendly search facility and/or tagging.
16.	Call Management for Duplicate Calls	a. System software should alert the call taker, dispatcher and, supervisor about the possibility of a single incident - multiple call situation or a multiple incident - multiple call situation.
17.	Video / CCTV Surveillance Interface	a. System should have provision to integrate with video feeds available from CCTV camera, in future.
		b. System operator should be able to see the video of cameras installed and mapped on to the GIS map.
18.	MDT / Smartphone Interface	a. System should have integration with Mobile Data Terminal /commercially available Smartphone.
19.	Multi-Agency Support	a. System should have capability to support multiple agencies like Police, SDMA, Fire, Health, Electricity, Irrigation, Agriculture, Rail, Highway etc
		b. System should have provision to register the contact number and resource available with of various departments.
20.	Multi –Language	a. System should be able to support multi-language. It should be possible to easily switch between Local Language (Punjabi) and English.
21.	Emergency Number Setup	a. System should have provision to setup Emergency help line number in case of any case emergency.
		b. The system should be able to curve out a small team of call receivers and dispatchers, within the SERC, dedicated for handling calls received on such special emergency numbers.

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#	Specification	Description
		b. In case of emergency, system should have provision to configure some agent in the SERC to handle such situations.
22.	IP-Phone communication	a. System should ability for audio communication between senior officers and SERC/DERC by IP-Phone.
23.	Printing	a. System should have ability to allow users to browse the network for available printers and for remote printers or fax machines.
		b. System should have ability to print user ID, employee ID and employee name when printing cases
		c. System should have ability to have a print button to print from all windows in a legible font size

3.1.2. Call Taking Software Module

#	Specification	Description
24.	Caller Information & Location	a. The software should be able to display via pop-up, on call taker desktop, automatically caller name, number and address.
		b. It should be possible for the call taker to manually pin point or create/search a general location of the caller where no location information is generated by the system.
		c. It should be possible that the caller may not be calling from the point where response is required. The software should support a complete manual address input Call taking capability.
		d. It should be possible that PSTN caller's address information is not the same provided by the telecom service provider. The caller's information, if the call taker chooses, should be updated into the system database.
		e. The software should have a provision to display the real time location of the mobile caller. The accuracy of mobile caller's location should be as per the information provided by telecom service provider.
25.	Call Classification & Priority	a. The call taker should be able to classify the call into distress call, enquiry call, departmental call (administrative), blank call, crank call etc.
		b. The software should also be able to set the priority of the distress call.
26.	Duplicate Calls	a. System should suggest the possibility of a duplicate call based on the caller number , location, time, classification, etc.
		b. It should be possible to merge or split event depending upon the situation. To achieve this, the system should have the capability for cross referencing of event.
27.	Multiple Calls & Incidents	a. System should be able to handle multiple calls and multiple incidents
28.	Call Recordings	a. All calls should be recorded and tagged with the concerned event. The call should be recorded for the desired period.
29.	Caller History	a. System should have option to view caller's history. It should also be possible to create a reject list where crank callers could be added after warning.
30.	Standard Operating Procedures (SOP's)	a. The software should have the capabilities to set the Standard Operating Procedures (SOP) for Call-taker.
31.	'Emergency Call' or 'Hot Calls'	a. The software should have the capabilities to create Emergency Call and Hot Calls. Call-taker should fill information for a hot call. Dispatcher and supervisor should receive the alert/ notification for the same. Dispatcher should be able to initiate action for quick response.

#	Specification	Description
32.	Status Display & Search	a. The Call Taker screen should be provided with event status for displaying the status of all event like 'Pending', 'Open', 'Dispatched', 'Closed' etc.
33.	Location of Interest Search Options	a. The Call-taker and dispatcher shall have the facility to search for various Location of Interest of an event location like nearest Hospital, Blood bank, Fire brigade.
34.	Automatic Display of district police station name	a. The software should have the facility in the system to populate the relevant district police station name, whenever any new event is created.
35.	Update Existing event Information	a. The software should allow the Call-taker/Dispatcher/Supervisor to update/modify existing event details for any Additional/Supplementary information related to the same.
36.	Pre-defined interaction script	a. The option should be available within the software to assist the Call Taker with predefined questions list that can be used to extract information quickly and comprehensively from the caller.
37.	User-defined Alarm	a. The application should be configured with user-defined alarm modules that will be flashed on all the other screens in case of major incident. For Ex: Terrorist attack, Fire
38.	Request to Close event	a. The Call taker Software should be able to send request to close event.

3.1.3. Call Dispatching Software Module

#	Specification	Description
39.	Dispatch Decision	a. The software should suggest available resources for dispatch in the range of jurisdiction.
40.	Caller Location	a. The system should automatically display the caller's location on the GIS map, to the call receiver b. The software should also display the information entered by the call taker for an event. It should also display the location as identified by the call taker or address database but the dispatcher should also have the option of relocating the event.
41.	Caller History	a. The response to an event would be affected by previous experience about the caller, location or, locality. The software should retrieve and display such information.
42.	Action Taken / Feedback	a. The dispatcher should be able to enter the Action Taken / Feedback information as reported by the responding unit.
43.	Vehicles Tracking & status Update	a. The GIS map should display the allocated, un-allocated filed resources using different graphical symbols. b. The software should be capable of displaying the vehicles on the GIS map, with color-coding according to their current status. Vehicle color should change automatically with their change in status, i.e. dispatch, en-route, at scene, available etc. c. The entire movement of a vehicle from being assigned to an event till arrival upon scene should be time stamped and monitored by the dispatcher. d. The software should have the tools to provide the playback of the vehicle history data displayed on the integrated GIS Map.
44.	Alarm for new event	a. The software shall provide an alarm/alert for every event entered in the system.
45.	Event Status	a. There should be facility for event symbolization. To facilitate easy identification of event status (pending, open, closed) it should be

#	Specification	Description
		displayed on map with different colors.
46.	**Geo-fencing**	a. The software should have Geo-fencing capability. Software tools should facilitate in allocating areas for all patrolling units depending on Police needs.
47.	**Shortest Path guide**	a. There should be provision for shortest route to guide Vehicles. Dispatcher can find from the GIS based map the shortest path from the dispatched vehicle to the event location and convey the shortest path direction to the dispatched vehicle.
48.	**Display of Resources & event on Map**	a. There should be provision for display of field resources and event on Map.
49.	**Viewing**	a. The software should facilitate viewing of event and vehicle chronology, status of all vehicles & event on the map.
50.	**Call Recordings**	a. VHF and Caller conversation should be recorded and tagged with the concerned event. The call should be recorded for the desired period.
51.	**Incident Data Quality**	a. Application should provide ability for dispatchers to rank, against each incident, the quality of data entry done by call takers. This data will be used for the purpose of improvement in accuracy of data entry as well as SLA monitoring.
52.	**Call back to distress caller**	a. System should provide a user friendly capability (Call back button on screen) for dispatchers to call back the distress caller as per contact details provided in incident report.

3.1.4. Supervisor Software Module

#	Specification	Description
53.	**Event monitoring**	a. The software should facilitate supervision of SERC and DERC operations. The supervisor should be able to examine each event and ensure appropriate action.
		b. The Supervisor should be able to call up the complainant for feedback and a satisfaction report.
		c. The supervisor workstation should have the provision for the functionalities of both call taker & dispatcher.
54.	**Route creation & assignment of routes**	a. The software should have the provision of tools for creation of digitized patrolling route (daily, weekly etc) and assign one or more police vehicles to these pre-defined routes along with check points.
55.	**Reports**	a. The software should have built-in Reporting module. The reporting module should have an ability to create various reports using various options like date wise, police station, police zone, event type, sub type etc.
56.	**System settings**	a. The Supervisor software should be able to undertake various system settings & configuration such as: i. Allotment of Telephone Extension number ii. Screen Setting (Single, Dual & Triple), iii. Map Path Setting iv. CCTV camera icon display on GIS Map.
57.	**Unlock of event**	a. The Supervisor software should be able to unlock the assigned event in process and reassign to another dispatcher to take further action.
58.	**Response plan**	a. The Supervisor software should be configure/create the response plan based on Incident type like, Accident, Robbery, Terrorist attack etc.

#	Specification	Description
	### 3.1.5. Remote viewer software module	
59.	**General**	a. Remote Viewer will be a web-based software monitoring tool to be used by the senior officers for monitoring of limited CAD functionalities using LAN/WAN (Intranet) or Internet.
60.	**Monitoring**	a. The software should support monitoring of all events, critical functionality related to SERC and DERC, police vehicles fleet monitoring, reports, charts & Analysis etc.
61.	**GIS map**	a. The software should have integrated GIS map with zoom in, zoom out and pan functionalities.
62.	**Event monitoring**	a. The Software should support active event monitoring with detail information and location on the map.
63.	**Live vehicle tracking**	a. The software should support live vehicle tracking of the response units with details.
64.	**Play back history**	a. The software should view vehicle history data of the response units with details.
65.	**Geo-fencing**	a. The proposed software should have Geo-fencing capability. Software should facilitate allocating of areas for patrolling units depending on police needs and also receive the notification when vehicles cross the Geo-fence.
66.	**Reports**	a. The software should have in built web based reporting module. The reporting module should have an ability to create various reports using various options like date wise, police station, police zone, event type, sub type etc.

67.	**Analysis**	a. The reporting module should have an ability to create various GIS analysis reports. It should be possible to select the data on the basis of police zones, police stations, events, event sub-type, priority & date and time and provide information pertaining to (but not limited to)
		  i. Incident Query
		  ii. Incident Count
		  iii. Repeat Incident

68.	**Vehicle dashboard**	a. The reporting module should have inbuilt dashboard to view the performance and health check of GPS devices fitted in the patrol vehicles.
	### 3.1.6. Administrative software module	

69.	**Configuration & creation of CAD database**	a. The application software should have administration module for optimum utilization of resources, master database creation and other analytical purposes. It shall enable the systems administrator to define users & configure their access privileges. The Software should create / configure various master database like:
		  i. Users & roles for operators
		  ii. Dispatch zones/ groups & police stations
		  iii. Vehicles
		  iv. Events & events Sub-type
		  v. Shift Master

#	Specification	Description
		vi. Skill Master
		vii. LOI Creation
		viii. Agencies
		ix. Schedule Report
		x. Schedule Backup
		xi. Language setting and dictionary creation
		xii. Response Plan

3.1.7. Disaster Management software module

#	Specification	Description
70.	**GIS Data**	a. In order to effectively deal with disaster situation certain special layers of GIS data will be required in the GIS application. This include but not limited to the following i. Fire stations ii. Hospitals iii. Crane stations iv. Railway track v. Government offices vi. Helipads vii. Population spread viii. Airports ix. Hotels / Guest houses x. Shelter locations For a tentative list of data layers please refer Annexure 1 of volume 1 of the RFP.
71.	**Communication with external agencies**	a. Disaster management module will provide ability to define and call, specific numbers of external agencies such as fire, ambulances etc that could be used for quick communication and coordination
		b. Disaster Management module will provide ability to add outcomes and action items from interaction with external agencies
72.	**Call routing and incident handling**	a. Disaster management module will provide ability to tag specific calls and incidents as being related to one specific disaster
		b. Disaster management module will provide ability to mark specific work station(s) as being designated to be handling calls and incidents specific to a disaster
		c. Disaster management module will provide ability to route calls to the specific workstation designated to handle calls for that specific disaster
73.	**Reporting**	a. Disaster management module will provide ability to generate MIS/Dashboard against a specific disaster event that would provide information on but not limited to the following – i. Types and status of events reported against the disaster ii. Agencies contacted and outcomes iii. Resources deployed

3.2. IPPBX Requirement

#	Specification	Description
74.	**Redundancy**	a. IP PBX Solution should be configured in full redundancy
		b. System should be a hybrid PBX supporting IP and Analog extension
75.	**Functionality & PRI Support**	a. System should support analog trunks and min 3 PRI Lines (Bidder should

#	Specification	Description
		estimate as per project requirement)
		b. System should support standards-based multi-site networking, using H.323 trunks or advanced networking, to interoperate with other PABX's, allowing feature transparency
		c. System should support VPN connectivity
		d. System should support Remote access server (RAS) functionality.
		e. System should have Integral Static or Dynamic (RIP I/II) routing for both Internet and Branch-to-Branch solutions
		f. System should support Analog Phones, Digital Phones, IP Hard phones type of terminals
		g. System should have in-built DHCP Server, which should be able to assign IP Addresses to the endpoints.
		h. System should be able to support up-to 1000 extensions in any combination of single site or multi site.
		i. System should be able to provide backup/redundancy options in case of failure of one box
		j. System should support PRI/ T1 / Analog Trunks.
		k. System should have in-built 2 port auto-sensing 10/100 Mbps LAN Switch (Layer 3)
		l. System should support internal IVR.
		m. System should support standards-based CTI integration with 3rd party applications

3.3. *Indicative Bill of Material*

This section presents the indicative minimum Bill of Material for the project. However, bidders are free to modify the bill of material as per their solution and to meet all of the RFP requirements and to ensure compliance to SLA requirements listed in this RFP document eg. If the bidder feels that it can meet the SLAs and other requirements without redundancy, and then it is free to propose so, however it will have to give detailed explanation about how the solution will meet the SLA requirements.

#	Description	Unit	Qty.
1.	**Software - SERC : State Level**		
a.	Computer Aided Dispatch Server Software	Nos.	1
b.	Computer Aided Dispatch AVLS Application	Nos.	1
c.	GIS Software for Map maintenance & updation	Nos.	1
d.	Computer Aided Dispatch Web Application for Remote viewer	Nos.	1
e.	EMS/NMS with SLA monitoring and management Software	Nos.	1
f.	Tablet/MDT Application Server License as per project requirement	Nos	1
g.	Relational Database Management System (RDMS)	Nos.	1
h.	Call Centre Operator License (for Call Taker , Supervisor and Administrator)	Nos.	52
i.	AVLS Device Licenses	Nos	950
2.	**Software - DERC :District Level**		
j.	Call Centre Client Software License (for Dispatcher and Supervisor) as per project requirement	Nos.	65
k.	Tablet/MDT Application Client License	Nos	200
3.	**Hardware - SERC :State Level**		
l.	CAD Application Server with operating system and 30 Day storage (Primary and Secondary in Redundant Configuration)	Nos	2
m.	Database Server with operating system (Primary and Secondary in Redundant Configuration)	Nos	2
n.	GIS Server with operating system (Primary and Secondary in Redundant Configuration)	Nos	2
o.	AVLS Server with operating system (Primary and Secondary in Redundant Configuration)	Nos	2
p.	Web Server for Remote Supervisory , SMS and Analytics Server	Nos	1
q.	CTI/ACD/Voice Logger Server (Primary and Secondary in Redundant Configuration)	Nos	2
r.	Mail, Antivirus, DNS Server	Nos	1
s.	Backup and restore server	Nos	1
t.	EMS/NMS with SLA monitoring and management Server	Nos.	1
u.	Digital Tape Library support for monthly backup - 5TB with backup software	Nos.	1
v.	Workstation with Dual Monitor (Call Taker , Supervisor , and Administrator) with operating system	Nos.	52

#	Description	Unit	Qty.
w.	Workstation for IT admin with operating system	Nos	2
x.	Access network L3 switch 48 port	Nos.	2
y.	Core Network L3 Switch 24 Ports	Nos.	2
z.	Distribution DC Switch 24 Ports	Nos.	2
aa.	Core Router for MPLS Connectivity	Nos.	2
bb.	Core Router for Internet Connectivity	Nos.	1
cc.	GSM Modem including SIM cards	Nos.	2
dd.	IP based Communication switch (EPABX with PSTN ,PRI ,Radio, GSM gateway with related software including provision for central voice recording for all conversations)	Nos.	1
ee.	IP Phone with headset for Call centre Agent	Nos.	52
ff.	Internal Unified Threat Management System - Firewall with Intrusion Detection /Prevention system for unified threat mitigation along with VPN support	Nos.	2
gg.	External (Internet) Unified Threat Management System - Firewall with Intrusion Detection /Prevention system for unified threat mitigation along with VPN support	Nos.	2
hh.	Networking Passive Components	Set	1
ii.	Suitable rack solution for stacking Servers having complete electrical connections	Nos.	2
jj.	Multi-Function Laser Printer	Nos.	2
kk.	Silent DG Set - Min 40 KVA	Nos.	1
ll.	UPS (Min Hours Backup)	Nos.	2
mm.	LED TV - 42 Inch (connected with operator workstation)	Nos.	4
4.	**Hardware – DERC: District Level**		
nn.	Workstation with Dual Monitor (Dispatcher , Supervisor with operating system	Nos.	65
oo.	IP Phone with headset for Call taker	Nos.	65
pp.	Router with Firewall / UTM	Nos	54
qq.	Network L2 Access Switch - 24 Port	Nos.	12
rr.	Network L2 Access Switch - 8 Port	Nos.	42
ss.	UPS (Min 2 Hour Backup)	Nos.	27
tt.	Networking Passive Components & Rack solution	Set	27
uu.	Laser Printer	Nos.	27
5.	**AVLS for Police vehicles**		
vv.	Automatic Vehicle locator System for Two Wheelers /Four Wheelers PCR Vehicles with SIM card	Nos	800
ww.	Mobile Data Terminals for PCR Vehicles including device software & SIM card	Nos.	200

#	Description	Unit	Qty.
6.	**Equipments for fire department**		
xx.	Integration with Fire (Automatic Vehicle locator System)	Nos.	150
7.	**Civil work at SERC and DERC**		
yy.	SERC Site Preparation covering , Enclosures , Earthing, Power Cabling etc for 75 Operators	Nos.	75
zz.	SERC - Table and Chair for 75 operators	Nos.	75
aaa.	DC Site Preparation covering Partitioning, False flouring, cooling access control etc.	Set	1
bbb.	DERS Site Preparation covering , Enclosures , Earthing, Power Cabling etc	Nos.	27
ccc.	DERC -Table and Chair for 65 operators	Nos.	65
ddd.	Air conditioners for SERC (Sufficient for 75 operators sitting area)	Nos.	1
8.	**Additional IP phones for Officers**		
eee.	IP Phone for senior officer	No	75
fff.	IP phone Harnessing Cost	No	75
9.	**Other**		
ggg.	GIS Base Map for Punjab State	Nos	1
hhh.	GIS Data Layer as per project requirement	Nos	1
iii.	Other item (if Required)		

4. Project Timelines & Key Deliverables

This section describes the project timelines for the Selected Bidder to Departments. The Selected Bidder shall maintain the stated times lines and provide quality service to Departments.

Activity	Completion Timelines	Deliverables
Project Initiation & Team Mobilization	T	1. Detailed Project Plan,
		2. Resource allocation plan
		3. Deployment of Resource
System Study	T+ 3 weeks	1. Business Process "AS-IS" and "TO-BE" documents
		2. System requirement Specification/ Technical Design Document,
		3. Rollout Plan
Design and Development	T + 9 weeks	1. Technical Architecture Document (Network, and Security)
		2. Gap Analysis / Installation Requirements Report
		3. Development to address system gaps
		4. Unit and Integration testing reports
		5. Test Cases and Test Data
		6. Network connectivity feasibility & Planning
		7. Requirements Traceability Matrix
Procurement of Hardware & Networking components	T + 9 weeks	1. Procurement Reports
		2. Invoices & related warranty information
		3. Deployment of Hardware at SERC & DERC
		4. Site Preparation covering Partitioning, Earthing, Power Cabling etc
GIS Map for the entire State of Punjab	T + 11 weeks	1. Procurement/ development along with all the required data layers
Testing & UAT	T + 11 weeks	1. User Testing Reports
		2. UAT Sign-off Certificate
Installation of System	T + 12 weeks	1. Infrastructure Installation Report of SERC & DERCs
		2. Certificate of successful commissioning
		3. Product Documentation
		4. Maintenance Plan
Training	T + 12 weeks	1. Training Schedule / Plan

Activity	Completion Timelines	Deliverables
		2. Training Material
		3. Training delivery and Satisfactory Training Completion Feedback Report
		4. Training & Change Management report
Project Go-Live	T + 12 weeks (G)	
Operations and Maintenance	Go-Live to G + 5 years	1. Weekly Progress Report 2. Monthly Progress Report

Note:

1. The Bidder must submit a detailed project plan for all the activities mentioned in this document.

5. Service Level Agreement

5.1. Introduction

This section describes the service levels to be established for the services offered by the selected bidder to the Departments. The SI shall monitor and maintain the stated service levels to provide quality service to Departments.

The envisaged benefits for setting these SLA are as follows:

I.   Solution performance optimization and obtaining desired results efficiently.

II.   Standards and operational guidelines for the Departments and Bidders.

III.   Better productivity and better use of skills and experience.

IV.   Faster redressal of defects in the system

Service Level Agreement (SLA) shall become the part of contract between Departments and the Successful Bidder. SLA defines the terms of the successful Bidder's responsibility in ensuring the timely delivery of the deliverables and the correctness of the same based on the agreed Performance Indicators as detailed in this document. The successful Bidder has to comply with Service Levels requirements to ensure adherence to project timelines, quality and availability of services.

The successful bidder will also be responsible to supply software / automated tools to monitor and report all the SLAs mentioned below.

Note: Penalties may not be levied on the successful Bidder in the following cases:

- There is a force majeure event effecting the SLA which is beyond the control of the successful Bidder.

- The non compliance to the SLA has been due to reasons beyond the control of the bidder as established/approved by Departments

5.2. Definitions

(a) **"Scheduled Maintenance Time"** shall mean the time that the System is not in service due to a scheduled activity as defined in this SLA. The scheduled maintenance time would not be during 15X7 timeframe (8 :00 to 23:00 Hrs) . Further, scheduled maintenance time will be planned downtime with the prior permission of Department.

(b) **"Scheduled operation time"** means the scheduled operating hours of the System for the month. All scheduled maintenance time on the system would be deducted from the total operation time for the month to give the scheduled operation time. The total operation time for the systems and applications within the SERC and DERC infrastructure will be 24X7X365.

(c) **"System or Application downtime"** means accumulated time during which the System is not available within the Scheduled Operation Time but outside the scheduled maintenance time and measured from the time Departments and/or its employees log a call with the SI team of the failure or the failure is known to the SI from the availability measurement tools to the time when the system is returned to proper operation.

(d) **"Availability" means the time** for which the services and facilities are available for conducting all the operations on Departments system including application and associated infrastructure. Availability is defined as:

{(Scheduled Operation Time – System Downtime) / (Scheduled Operation Time)} * 100%

5.3. Interpretations

(a) The bidders however recognize the fact that Punjab Police offices will require READi system to work 24x7x365.

(b) A Service Level violation will occur if the SI fails to meet Minimum Service Levels, as measured on a quarterly basis, for a particular Service Level. Overall Availability and Performance Measurements will be on a monthly basis (unless stated otherwise for any specific SLA parameter) for the purpose of Service Level reporting. An "Availability and Performance Report" will be provided by the SI on monthly basis in Departments suggested format and a review shall be conducted based on this report. A monthly Availability and Performance Report shall be provided to Departments at the end of every month containing the summary of all incidents reported and associated SI performance measurement for that period. The monthly Availability and Performance Report will be deemed to be accepted by Departments upon review and signoff by both SI and Departments. Where required, some of the Service Levels will be assessed through audits or reports e.g. utilization reports, measurements reports, etc. as appropriate to be provided by the SI on a monthly basis, in the formats as required by Departments. The tools to perform the audit will need to be provided by the SI. Audits will normally be done on regular basis or as required by Departments and will be performed by Departments or Departments appointed third party agencies.

(c) The SLA parameters shall be monitored as per the frequency defined for each SLA parameter. However, if the performance of the system/services is degraded significantly at any given point in time during the contract and if the immediate measures are not implemented and issues are not rectified to the complete satisfaction of Departments or an agency designated by them, then Departments will have the right to take appropriate disciplinary actions including termination of the contract.

(d) SI is expected to provide the service levels as defined in next section of this document. In case these service levels are not achieved, it shall result in a breach of contract and invoke the penalty clause. Payments to the SI are linked to the compliance with the SLA metrics laid down in next section. The penalties will be computed and calculated as per the computation explained in this document.

(e) During the contract period, it is envisaged that there could be changes to the SLA, in terms of addition, alteration or deletion of certain parameters, based on mutual consent of both the parties i.e. Departments and SI.

5.4. SLA & Associated Penalties

(a) The primary intent of Penalties is to ensure that the system performs in accordance with the defined service levels. Penalties are not meant to be punitive or, conversely, a vehicle for additional fees.

(b) A three monthly performance evaluation will be conducted using the quarterly reporting periods.

(c) Services levels will be measured for the following phases

i. Implementation Phase SLA

ii. Operation/ Post implementation phase SLA

5.4.1. Implementation Phase SLA

"T" - Time of signing of contract with the Bidder (It may also be the date of go-ahead given by the Departments)

5.4.1.1. Implementation Phase SLA

Activity	Target (Weeks)	Minimum Penalty
1) System set-up and initiation of operations	T+12	A Penalty of **1%** of total Capital Expenditure (including implementation cost) per week for first four weeks, **2%** per week for every subsequent week.

Note:

1. The maximum penalty will be governed as per Liquidity Damages clause mentioned in RFP.
2. Every additional day of delay beyond the target day would be rounded off to the next immediate week for the purpose of calculation of penalty. For e.g. an activity that took 1 week and 1 day would be counted as 2 weeks.

5.4.2. Post Implementation SLA

The below tables gives details on the Service Levels the SI should maintain.

#	Items Description	Measurement Period	Target	Minimum Penalty
IT Infrastructure Uptime				
1.	Servers Availability at SERC	Hourly (reporting on Monthly basis)	> = 99.5%	NIL
			>= 99.4% but < 99.5%	**1%** of monthly billed amount
			< 99.4 %	**2%** of monthly billed amount for every 30 mins of downtime beyond 99.4% *[1]
2.	Firewall and any other security appliance Uptime	Hourly (reporting on Monthly basis)	> = 99.5%	NIL
			>= 99.4% but < 99.5%	**1%** of monthly billed amount
			< 99.4 %	**2%** of monthly billed amount for every 30 mins of downtime beyond 99.4% *[1]
Application Performance (includes any user/system application related to the project)				
3.	Overall application(s) availability[2]	Hourly (reporting on Monthly basis)	> = 99.95%	NIL
			>= 99.5% but < 99.95%	**3%** of monthly billed amount
			< 99.5 %	**3%** of monthly billed amount for every 30 mins of downtime beyond 99.8%

#	Items Description	Measurement Period	Target	Minimum Penalty
				[1]
4.	Reports Generation Response Time (Alerts/MIS/Logs etc)	Hourly (reporting on Monthly basis)	98% of Simple query (5 Days Data) reports - <5secs AND 98% of High Complexity query (More than 5 Days Data) - < 15secs	NIL
			98% of Simple query (5 Days Data) - <7.5secs AND 98% of High Complexity query (More than 5 Days Data) - < 20 secs	**0.05%** of monthly billed amount. **0.05%** of monthly billed amount for every additional 1 sec delay in report generation[3]
Technical Helpdesk, Trouble Ticketing, Issue Resolution				
5.	Average Speed of Answer	Monthly	<= 15 secs	Per 10Calls , **0.05%** of monthly billed amount
6.	Average Call Lost Rate	Monthly	0	Per 10Calls , **0.05%** of monthly billed amount
7.	Resolution of Critical Issue (issues that impact one or more production services)[4]	Monthly	60 minutes	**0.10%** of monthly billed amount
8.	Resolution of Medium Level Issue (issues that do not impact production services)	Monthly	120 minutes	**0.10%** of monthly billed amount
9.	Resolution of low level Issue (upgrade, shifting and preventive maintenance (of non-production items)	Monthly	2 days	**0.10%** of monthly billed amount
End-User Equipment Uptime				
10.	Monitoring	Monthly	> = 98%	NIL

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

#	Items Description	Measurement Period	Target	Minimum Penalty
	workstations uptime including system application at SERC and IP Phones		>= 97% but < 98%	**1%** of monthly billed amount
			< 97 %	**2%** of monthly billed amount for every 1% of downtime beyond 97%
11.	Availability of DERC equipments including applications, monitoring workstations, IP Phones etc.	Monthly	> = 98%	NIL
			>= 97% but < 98%	**1%** of monthly billed amount
			< 97 %	**2%** of monthly billed amount for every 1% of downtime beyond 97%
12.	Availability of 1. IP Phones provided to senior officers across the State under this project 2. AVLS & MDT devices	Monthly	> = 97%	NIL
			>= 96% but < 97%	**Rs. 5,000 per device**
			< 96 %	**Rs. 10,000 per device**
Data update				
13.	GIS Data Update	Yearly	Every Year	**1%** of monthly billed amount for every one week delay
14.	Database & Content Update[*3]	Need Basis	Within 3 days of receipt of notification from department	**1%** of monthly billed amount for every one week delay beyond target.

Note:

1. Minutes will be rounded off in multiples of 30 minute. For e.g. for a downtime between 31 minutes to 60 minutes, it will be assumed to 60 minutes
2. For the purpose of calculation of overall application availability the scheduled maintenance downtime will be considered as the downtime of application.
3. Database & Content Update is related to telecom service providers of citizens details & Location base services and call taker scripts update.

6. Acceptance Testing Procedure

Acceptance testing is an essential part of System implementation project. It is at this stage that the user is to test and accept individual items as also the entire system. The primary goal of Acceptance Testing is to ensure that READi system components implemented as part of the project (including all the systems, deliverables and services) meets the pre-defined requirements/ specifications for functionalities, performance and security. This is ensured by defining clear, quantifiable metrics for accountability for each of the following
.

- IT Infrastructure including network connectivity & hardware components
- Application and integration with other IT systems
- Project documentation

The Departments Team along with any other external agency appointed by Departments should carry out the acceptance testing. Such an involvement of an external agency shall not, however, absolve the fundamental responsibility of the selected bidder of installing, testing & commissioning the various components of the project to deliver the services in perfect conformity with the requirements stated in the RFP & the requisite SLAs.

The representative of the selected bidder may be present during the acceptance testing & even in case he is not present, the acceptance testing proceedings should be binding on the selected bidder and the corrections/ modifications suggested should be carried out by the selected bidder. The Departments' Team should ensure that it should commence acceptance testing expeditiously & complete it at the earliest once the system/ document is provided by the Bidder for acceptance. The mutually agreed time frames for completion of the Acceptance Testing are to be laid down & adhered to.

The different acceptance tests & the acceptance criteria to be adopted are mentioned below:

6.1. IT Infrastructure including Network connectivity & hardware components

The selected bidder shall finalize an Acceptance Test schedule at least 15 days in advance of offer for acceptance testing in consultation with Departments. Selected bidder shall also clearly indicate the specifications clause(s) verified by each test. The Acceptance Test schedule shall be exhaustive based on the specifications and should generally cover the following:

- Hardware and network equipment testing before commissioning
- Check on data cabling, electrical cabling and other wiring
- Setting up of the test environment
- Functional test on individual equipment, network, software, reporting etc as per specifications
- System and/or integration test on solution as a whole
- Capacity/ Load test
- Intrusion detection and security preparation test
- Operation of help desk
- User acceptance testing with parallel run

6.2. Partial Acceptance Test

6.2.1. Site Preparation Acceptance

Departments or any external agency appointed by Departments shall perform the site acceptance testing to ensure that respective locations which include installation of hardware, quality and completeness of cabling (both networking, electrical), environment control etc is in compliance with the specifications/ requirements of the project. Any deviations/gaps identified in the site preparation acceptance should have impact on the payments to be made to the selected bidder. This will include SECO, DERCs and any other site where equipment/application pertaining to READi system might be installed

6.2.2. Infrastructure Compliance Review

On receipt of hardware delivered by the selected bidder, Departments or any external agency appointed by Departments should physically check all packages & boxes to check that the items are received as against the quantities& specifications indicated by the selected bidder in its Proposal. All System software being provided must be the latest & complete with all manuals. They must include the licenses and certificate of authenticity. On establishment of the network, installation & integration of the various components of the networks, Departments or any external agency appointed by Departments should carry out acceptance testing of the network/ integrated system to verify the conformity of the performance against the requirements and specifications provided in the RFP and/or as proposed in the proposal submitted by selected bidder.

6.3. Final Acceptance Testing

Pre- requisites of Final Acceptance shall have the following:

- Installation & commissioning of all hardware, software and vehicle supplied under this RFP
- All documentation related to Departments and relevant acceptance test document (including IT Components, non IT components).
- Installation and commissioning shall include:
  o Installation and Commissioning of IT, non – IT components across Departments Control Centre/ PCR Bikes/PCR Vans.
- For both IT & Non-IT equipments / software manuals / brochures / Data Sheets / CD / DVD / media for all the Departments supplied components.
- All hardware and software items must be installed and commissioned as per the specification.
- Availability of all the defined services shall be verified and mutually agreed between Departments and the selected bidder.
- The selected bidder shall be required to demonstrate all the features / facilities / functionalities as mentioned in the RFP.

6.4. Integration testing

After the entire development and installation cycle is over, all the components have to be tested end to end. To achieve this System Integration Testing (SIT) should be done. Here the selected bidder has to demonstrate the system in a controlled production environment. The selected bidder should submit the Test plan, Test cases & the Test Data prior to carrying out the Integration test. The test plan should include the expected results. After the test, the selected bidder should submit the test results which should be used to compare the actual observed results recorded during the test against the expected results. The observations/ shortfalls/ errors detected should be rectified by the selected bidder. This phase should include at least the following activities:

- Test Planning
- Test Data Preparation
- Integration Test Environment Setup in accordance with Technical Architecture Blueprint
- Integration testing (verification of features, inter-operability, application performance, conformance to architecture document, conformance to operations procedures & documentation). Architecture document shall be prepared by selected bidder and submitted to Departments for approval.
- Mock User Acceptance Test
- Mock Parallel Runs
- Problem Resolution

6.5. *User Acceptance Test*

For conducting the User Acceptance Testing, Departments shall identify the officials, who shall be responsible for day-to-day operations of READi system. The system should necessarily satisfy the user acceptance testing process. The system implemented/installed by the selected bidder shall be reviewed and verified against the Functional & Technical Requirements signed-off between Departments and selected bidder. Any gaps, identified as severe or critical in nature, shall be addressed by selected bidder immediately prior to Installation of the system. One of the key inputs for this testing shall be the traceability matrix to be developed by the selected bidder for READi system. Apart from traceability matrix, selected bidder may develop its own testing plans for validation of compliance of system against the defined requirements.

6.6. *Performance Review*

Performance is another key requirement for the project, and Departments or any external agency appointed by the Departments shall review the performance of the deployed solution against certain key parameters defined in SLA. Such parameters include request-response time, work-flow processing time, concurrent sessions supported by the system, disaster recovery drill etc. The performance review also includes full load/ stress test using suitable simulation tools prior to installation once the integration test has been successfully completed. The system should be considered ready to be installed on successful completion of load/ stress testing

The selected bidder shall make available the software programs and testers required for carrying out the acceptance tests as per the schedule. Any additional test equipment deemed required during validation shall be arranged by the selected bidder at no cost to the Departments, so as to complete the validation as per the specified time schedule in this document.

6.7. *Security Audit of the IT Infrastructure*

The selected bidder is also required to conduct security audit of the entire IT infrastructure by a third party, which should be carried out before the operational go-live of the entire system.

7. Instructions to Bidders

7.1. Calendar of Events

The following table enlists important milestones and timelines for completion of bidding activities: The milestones and timelines mentioned in the table below are suggestive in nature and may vary.

#	Milestone	Time for Completion
1.	Release of Request For Proposal (RFP)	04/03/2014
2.	Last date for receiving queries	11/03/2014
3.	Pre-bid conference	13/03/2014 at 12:00 hours at Punjab Police Head Quarters, Chandigarh
4.	Last date for Submission of bids	19/03/2014

7.2. Instructions to Bidders

a. **RFP Document Fees:**

    i. RFP document can be obtained from IGP Law & Order, Punjab Police Headquarters, Sector 9, Chandigarh-160009 from **04/03/2014 to 19/03/2014** between 10:30 am to 5 pm. Tender fees should be Rs. 5,000 (Rupees Five Thousand only), to be submitted in the form of a non-refundable bank demand draft drawn in favour of 'Director General of Police, Punjab Police'.

    ii. The bidder may also download the RFP documents from the Punjab Police website www.punjabpolice.gov.in. In such case, the demand draft of RFP document fees should be submitted along with Technical proposal. Tenders received without or with inadequate RFP document fees shall be liable to get rejected.

b. The bidders are expected to examine all instructions, forms, terms, project requirements and other information in the RFP documents. Failure to furnish all information required as mentioned in the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect should be at the bidder's risk and may result in rejection of the proposal and forfeiture of the bid security.

c. **Pre-Bid Conference**

Departments would host a Pre-Bid Conference, tentatively scheduled according to the date mentioned in section 7.1 at the Conference Hall 6th floor, Punjab Police Headquarters, Sector 9, Chandigarh. The purpose of the conference is to provide bidders with information regarding the RFP and the proposed solution requirements in reference to the particular RFP. Pre-Bid Conference should also provide each bidder with an opportunity to seek clarifications regarding any aspect of the RFP and the project.

d. **Response to Bidder's Enquiries**

All enquiries from the bidders relating to this RFP must be submitted in writing exclusively to the contact person. Contact details for the RFP are as follows:

Name: IG – Law & Order

Address: Punjab Police Headquarters, Sector 9, Chandigarh

E-mail: punjabpolice.readi@gmail.com,

Telephone: 0172-2746222

The queries should necessarily be submitted in the following format:

S. No	Bidding Document Reference(s) (section number/ page number)	Content of RFP requiring clarification	Points of clarification

All enquiries should be sent either through email or Fax. Departments shall not be responsible for ensuring that bidders' enquiries have been received by them. However, Departments neither makes any representation or warranty as to the completeness or accuracy of the responses, nor does it undertakes to answer all the queries that have been posed by the bidders. All responses given by Departments should be distributed to all the bidders.

e. **Supplementary Information / Corrigendum / Amendment to the RFP**

   i. If Departments deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of the provisions of this RFP, it may issue supplements/corrigendum to this RFP. Such supplemental information should be communicated to all the bidders by e-mail or fax and should also be made available on Punjab Police's website. Any such supplement shall be deemed to be incorporated by this reference into this RFP.

   ii. At any time prior to the deadline (or as extended by Departments) for submission of bids, Departments, for any reason, whether at its own initiative or in response to clarifications requested by prospective bidder may modify the RFP document by issuing amendment(s). All bidders should be notified of such amendment(s) by publishing on the websites, and these should be binding on all the bidders.

   iii. In order to allow bidders a reasonable time to take the amendment(s) into account in preparing their bids, Departments, at its discretion, may extend the deadline for the submission of bids.

f. **Proposal Preparation Costs**

   The bidder shall be responsible for all costs incurred in connection with participation in the RFP process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in providing any additional information required by Departments to facilitate the evaluation process, and in negotiating a definitive Service Agreement and all such activities related to the bid process. This RFP does not commit Departments to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award of the contract for implementation of the project.

g. **Departments' Right to terminate the Process**

   Departments make no commitments, explicit or implicit, that this process should result in a business transaction with anyone. Further, this RFP does not constitute an offer by Departments. The bidder's participation in this process may result in Departments selecting the bidder to engage in further discussions and negotiations towards execution of a contract. The commencement of such negotiations does not, however, signify a commitment by Departments to execute a contract or to continue negotiations.

h. **Earnest Money Deposit (EMD)**

i. Bidders shall submit, along with their Bids, an EMD amount of Rs 40,00,000 (Fourty Lakhs)   in the form of a Demand Draft/ Bank Guarantee/Banker's cheque/FDR issued by any Commercial bank in favour of 'Director General of Police, Punjab Police', payable at Chandigarh

ii. EMD should be valid for 180 days from the opening date of the tender. EMD in any other form would not be accepted.

iii. EMD shall be returned to the unsuccessful bidder at the earliest after final bid validity and latest on or before the 30th day after the award of contract to successful bidder. The bid security, for the amount mentioned above, of successful bidder should be returned upon submission of Performance Guarantee.

iv. The bid security amount is interest free and should be refundable to the unsuccessful bidders without any accrued interest on it.

v. The bid submitted without bid security, mentioned above, should be summarily rejected.

vi. The bid security may be forfeited:

   o If a bidder withdraws its bid during the period of bid validity

   o If the bidder fails to sign the contract in accordance with terms and conditions (Only in case of a successful bidder)

   o Fails to furnish performance security

   o Any information given is found wrong

   o Any other related reason, as decided by Departments

i. **Authentication of Bids**

The original and all copies of the bid shall be typed or written in indelible ink and signed by the Bidder or a person duly authorized to bind the Bidder to the contract. A letter of authorization shall be supported by a written power-of-attorney accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initialled and stamped by the person or persons signing the bid.

j. **Interlineations in Bids**

The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

k. **Venue & Deadline for submission of proposals**

Proposals, in its complete form in all respects as specified in the RFP, must be submitted in the tender box kept at the address specified below:

Name: IGP, Law & Order

Address: Punjab Police Headquarters, Sector 9, Chandigarh

Telephone: 0172-2743337

 Name and Address: Office of ADGP Law & Order, Punjab Police Headquarters,

                    Sector 9, Chandigarh - 160009

Last Date & Time of submission: As Mentioned in Section 7.1

l.   **Late Bids**

Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall be returned unopened.

7.3. *Bid Submission Instructions*

Proposals must be direct, concise, and complete. Departments shall evaluate bidder's proposal based on its clarity and the directness of its response to the requirements of the project as outlined in this RFP.

Bidders shall furnish the required information on their technical and commercial proposals in the enclosed formats only. Any deviations in format or if the envelopes are not sealed properly, the tender should be liable for rejection.

a.   **Mode of Submission**

i.   Submission of bids shall be in accordance to the instructions given in the Table below:

Envelope	Instructions
Envelope 1: Bid Security and Tender Fee	The envelope containing the Bid Security and Tender fee (if applicable) shall be sealed and super scribed "Bid Security and Tender Fee – READi system". This envelope *should not* contain any Commercials, in either explicit or implicit form, in which case the bid should be rejected. A board resolution authorizing the Bidder to sign/ execute the proposal as a binding document and also to execute all relevant agreements forming part of RFP shall be included in this envelope.
Envelope 2: **Response to Pre-Qualification Requirements**	The Response to the Pre-Qualification Requirements shall be prepared in accordance with the requirements specified in this RFP and in the format prescribed. The envelope containing the Response to Pre-Qualification Requirements shall be sealed and super scribed "Pre-Qualification Requirements – READi system" on the top right hand corner and addressed to Punjab Police, at the address specified in this RFP. This envelope **should not** contain any Commercials, in either explicit or implicit form, in which case the bid should be rejected. The pre-qualification proposal should be submitted with **two printed copies of the entire proposal and a soft copy on non-rewriteable compact discs (CDs)** with all the contents of the technical proposal. The words "**Response to Pre-Qualification Requirements – READi system "** shall be written in indelible ink on the CD. The Hard Copy shall be signed by the authorized signatory on all the pages before being put along with the CD in the envelope and sealed. In case of discrepancies between the information in the printed version and contents of the CDs, the printed version of the technical proposal should prevail and should be considered as the proposal for the purpose of evaluation.
Envelope 3: Technical Proposal	The Technical Proposal shall be prepared in accordance with the requirements specified in this RFP and in the formats prescribed in this RFP. The envelope shall be sealed and super scribed "**Technical Proposal – READi system"** on the top right hand corner and addressed to Punjab Police, at the address specified in this volume.

Envelope	Instructions
	This envelope *should not* contain any Commercials, in either explicit or implicit form, in which case the bid should be rejected. The technical proposal should be submitted with **two printed copies of the entire proposal and a soft copy on non-rewriteable compact discs (CDs)** with all the contents of the technical proposal. The words "**Technical Proposal – READi system "** shall be written in indelible ink on the CD. The Hard Copy shall be signed by the authorized signatory on all the pages before being put along with the CD in the envelope and sealed. In case of discrepancies between the information in the printed version and the contents of the CDs, the printed version of the technical proposal should prevail and should be considered as the proposal for the purpose of evaluation.
Envelope 4: Commercial Proposal	**The Commercial Proposal should be submitted only in the printed format and the bidder is expected to submit only one copy of the Commercial Proposal as per the forms in this RFP.** All the pages in the commercial response should be on the letterhead of the Bidder with a seal and signature of the authorized signatory of the Bidder. The hard copy shall be signed by the authorized signatory on all the pages before being put in the envelope and sealed. The envelope should also be super scribed **"Commercial Proposal – READi system" (Not to be opened with the Technical Proposal)** at the top right hand corner and addressed to Punjab Police at the address specified in this RFP.
Envelope 5	All the above 4 envelopes should be put in Envelope 5 which shall be properly sealed. The outside of the envelope must clearly indicate the name of the project (**"READi system: Response to the RFP for Selection of Bidder").**
Note: The outer and inner envelopes mentioned above shall indicate the name and address of the bidder agency. Failure to mention the address on the outside of the envelope could cause a proposal to be misdirected or to be received at the required destination after the deadline.	

ii.   Departments should not accept delivery of proposal in any manner other than that specified in this volume. Proposal delivered in any other manner shall be treated as defective, invalid and rejected.

iii.   The bidders are requested to sign/ stamp across the envelopes along the line of sealing to ensure that any tampering with the proposal cover could be detected.

iv.   The envelope with technical and commercial proposals should be submitted along with a certified true copy of the corporate sanctions/approvals authorizing its authorized representative to sign/act/execute documents forming part of this proposal including various RFP documents and binding contract, at the address and time as specified in this RFP.

v.   The proposals shall be valid for a period of Six (6) months from the date of opening of the proposals. A proposal valid for a shorter period may be rejected as non-responsive. On completion of the validity period, unless the bidder withdraws his proposal in writing, it should be deemed to be valid until such time that the bidder formally (in writing) withdraws his proposal.

vi.   In exceptional circumstances, at its discretion, Departments may solicit the bidder's consent for an extension of the validity period. The request and the responses thereto shall be made in writing.

b.   **Commercial Proposal**

i.   In the commercial bid, the Bidder is expected to price for all the items and services it has proposed in the Technical Proposal. Departments may seek clarifications from the Bidder on the Technical Proposal. Any of the clarifications by the Bidder on the technical proposal should not have any commercial implications. The Commercial Proposal submitted by the Bidder should be inclusive of all the items in the technical proposal and should incorporate all the clarifications provided by the Bidder on the technical proposal during the evaluation of the technical offer.

ii.   Unless expressly indicated in this RFP, bidder shall not include any technical information regarding the services in the commercial proposal. All the Prices/ Commercials shall be quoted entirely in Indian Rupees for preparation of Commercial Proposal against this RFP. The Commercial Proposal must be detailed and must cover each year of the contract term. The bidder must provide the Commercial Proposal in hardcopy only and should not comprise of any direct/ indirect conditions. It is required that the all the proposals submitted against the RFP should be unconditional.

c.   Correction of Error

i.   Bidders are advised to exercise adequate care in quoting the prices. No excuse for corrections in the quoted figures should be entertained after the commercial proposals are received by Departments. All corrections, if any, should be initialled by the person signing the proposal form before submission, failing which the figures for such items may not be considered.

ii.   Arithmetic errors in proposals should be corrected as follows: In case of discrepancy between the amounts mentioned in figures and in words, the amount in words shall govern. The amount stated in the proposal form, adjusted in accordance with the above procedure, shall be considered as binding, unless it causes the overall proposal price to rise, in which case the proposal price shall govern.

d.   Prices and Price Information

i.   The Bidder shall quote a price for all the components, the services of the solution to meet the requirements of Departments, as listed in this RFP. All the prices should be in Indian Rupees

ii.   No adjustment of the price quoted in the Commercial Proposal shall be made on account of any variations in costs of labour and materials, currency exchange fluctuations with international currency or any other cost component affecting the total cost in fulfilling the obligations under the contract

iii.   The price quoted in the Commercial Proposal shall be the only payment, payable by Departments, to the successful Bidder for completion of the contractual obligations by the successful Bidder under the Contract, subject to the terms of payment specified as in the proposed commercial bid or the one agreed between Departments, and the Bidder after negotiations. The price should be inclusive of all taxes, duties, charges and levies as applicable.

iv.   The prices, once offered, must remain fixed and must not be subject to escalation for any reason whatsoever within the period of the validity of the proposal and the contract. A proposal submitted with an adjustable price quotation or conditional proposal may be rejected as non-responsive.

v.   Purchases may be increased as per the operational requirements of the project. If the price quoted by the bidder for the O & M (operations and maintenance) part of the system is not justified, the department has full right to re –allocation of rates for the complete work and the rates for O & M of the system but the gross amount should be kept same as quoted by the bidder.

vi.   Bidder should provide all prices, quantities as per the prescribed format given in Format for Bid Response – Commercial Bid. Bidder should not leave any field blank. In case the field is not applicable, Bidder must indicate "0" (zero) in all such fields.

vii.   It is mandatory to provide the break-up of all components in the format specified for detailed Bill of Material. The commercial bid should include the unit price and proposed number of units for each component provided in the Bill of Material in the commercial bid. In case of a discrepancy between the Bill

of Material and the commercial bid, the technical Bill of Material remains valid. In no circumstances shall the commercial bid be allowed to be changed / modified.

viii. It is mandatory to provide break-up of all taxes, duties and levies wherever applicable and/or payable. All the taxes of any nature whatsoever shall be borne by the Bidder including any additional taxes/levies due to change in tax rates through the validity of the bid and contract. The bid amount shall be inclusive of packing, forwarding, transportation, insurance till Installation, delivery charges and any other charges as applicable.

ix. All costs incurred due to delay of any sort, shall be borne by the Bidder.

x. Departments, reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated within specified time frames.

e. Language of Proposals

The proposal and all correspondence and documents (including supporting documents such as Purchase Orders/ Work Orders) shall be written in English. If any document is in language other than English, then the bidder is required to enclose a self attested translated English version of such documents. All proposals and accompanying documentation should become the property of Departments, and should not be returned.

f. Conditions Under which this RFP is issued

i. This RFP is not an offer and is issued with no commitment. Departments, reserves the right to withdraw the RFP and change or vary any part thereof at any stage. Departments, also reserve the right to disqualify any bidder should it be so necessary at any stage.

ii. Timing and sequence of events resulting from this RFP shall ultimately be determined by Departments.

iii. No oral conversations or agreements with any official, agent, or employee of Departments, shall affect or modify any terms of this RFP and any alleged oral agreement or arrangement made by a bidder with any department, agency, official or employee of Departments, shall be superseded by the definitive agreement that results from this RFP process. Oral communications by Departments, to bidders shall not be considered binding on it, nor shall any written materials provided by any person other than Departments.

iv. Neither the bidder nor any of the bidder's representatives shall have any claims whatsoever against Departments or any of their respective officials, agents, or employees arising out of or relating to this RFP or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).

v. Until the contract is awarded and during the currency of the contract, bidders shall not, directly or indirectly, solicit any employee of Departments, to leave Departments, or any other officials involved in this RFP process in order to accept employment with the bidder, or any person acting in concert with the bidder, without prior written approval of Departments.

g. Rights to the Content of the Proposal

i. All proposals and accompanying documentation of the Technical proposal should become the property of Departments, and should not be returned after opening of the technical proposals. The commercial proposals that are not opened should be returned to the bidders. Departments are not restricted in its rights to use or disclose any or all of the information contained in the proposal and can do so without compensation to the bidders. Departments shall not be bound by any language in the proposal indicating the confidentiality of the proposal or any other restriction on its use or disclosure.

h. Withdrawal of Proposals

i. No proposal may be withdrawn in the interval between the deadline for submission of proposals and the expiration of the validity period specified by the bidder on the proposal form. Entire bid security may be forfeited if any of the bidders withdraw their bid during the validity period.

i. Non-Conforming Proposals

A proposal may be construed as a non-conforming proposal and ineligible for consideration:

i. If it does not comply with the requirements of this RFP. Failure to comply with the technical requirements, and acknowledgment of receipt of amendments, are common causes for holding proposals non-conforming

ii. If a proposal appears to be "canned" presentations of promotional materials that do not follow the format requested in this RFP or do not appear to address the particular requirements of the proposed solution, and any such bidders may also be disqualified

j. Disqualification

The Departments may disqualify any proposal in the following cases or in case bidder fails to meet the bidding requirements as indicated in this RFP:

i. Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming proposal

ii. During validity of the proposal, or its extended period, if any, the bidder increases his quoted prices

iii. The bidder qualifies the proposal with his own conditions

iv. Proposal is received in incomplete form

v. Proposal is received after due date and time at the designated venue

vi. Proposal is not accompanied by all the requisite documents

vii. If bidder provides quotation only for a part of the project

viii. Information submitted in technical proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any

ix. Commercial proposal is enclosed with the same envelope as technical proposal

x. Bidder tries to influence the proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the bid process

xi. In case any one bidder submits multiple proposals or if common interests are found in two or more bidders, the bidders are likely to be disqualified, unless additional proposals/bidders are withdrawn upon notice immediately

xii. Bidder fails to deposit the Performance Security or fails to enter into a contract within 30 working days of the date of notice of award of contract or within such extended period, as may be specified by Departments.

xiii. Bidders may specifically note that while evaluating the proposals, if it comes to Departments' knowledge expressly or implied, that some bidders may have colluded in any manner whatsoever or otherwise joined to form an alliance resulting in delaying the processing of proposal then the bidders so involved are liable to be disqualified for this contract as well as for a further period of three years from participation in any of the tenders floated by Departments.

xiv. The bid security envelope, response to the pre-qualification criteria, technical proposal and the entire documentation (including the hard and soft/electronic copies of the same) submitted along with that

should not contain any information on price, pricing policy, pricing mechanism or any information indicative of the commercial aspects of the bid.

k. Conflict of Interest

Bidder shall furnish an affirmative statement as to the absence of, actual or potential conflict of interest on the part of the Bidder or any prospective subcontractor due to prior, current, or proposed contracts, engagements, or affiliations with Departments or State Government. Additionally, such disclosure shall address any and all potential elements (time frame for service delivery, resource, financial or other) that should adversely impact the ability of the Bidder to complete the requirements as given in the RFP. Please use form given in Format – Other Formats for making declaration to this effect.

8. Bidding & Evaluation Process

8.1. Bid Opening Process

a. Total transparency shall be observed while opening the proposals/bids.

b. Departments, reserves the rights at all times to postpone or cancel a scheduled bid opening.

c. The bids shall be opened, in two sessions, one for pre-qualification & Technical and one for Commercial of those bidders whose technical bids qualify, in the presence of bidders' representatives who choose to attend the Bid opening sessions on the specified date, time and address. The bidders' representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for Departments, the Bids shall be opened at the same time and location on the next working day. However if there is no representative of the bidder, Departments, shall go ahead and open the bid of the bidders.

d. During bid opening preliminary scrutiny of the bid documents should be made to determine whether they are complete, whether required bid security has been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids not conforming to such preliminary requirements should be prima facie rejected.

e. The bid security shall be opened by Departments, for bid evaluation, in the presence of bidders' representatives who may choose to attend the session on the specified date, time and address. The Bid Security envelope of the bidders should be opened on the same day and time, on which the Technical Bid is opened, and bids not accompanied with the requisite Bid Security or whose Bid Security is not in order shall be rejected.

8.2. Overall Evaluation Process

a. A tiered evaluation procedure should be adopted for evaluation of proposals, with the technical evaluation being completed before the commercial proposals are opened and compared.

b. Only those bidders who qualify on the pre qualification criteria should qualify for the next level, i.e., evaluation of the technical bids.

c. Departments should review the technical bids of the short-listed bidders to determine whether the technical bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified. Departments may seek inputs from their professional, external experts in the technical and commercial evaluation process.

d. The Departments shall assign technical score to the bidders based on the technical evaluation criteria. The bidders with a technical score above the threshold as specified in the technical evaluation criteria shall technically qualify for the commercial evaluation stage.

e. The commercial bids for the technically qualified bidders should then be opened and reviewed to determine whether the commercial bids are substantially responsive.

8.3. Evaluation of Technical Proposals

The evaluation of the Technical bids should be carried out in the following manner:

a. The bidders' technical solution proposed in the bid document is evaluated as per the requirements specified in the RFP and adopting the evaluation criteria spelt out in this RFP. The bidders are required to submit all required documentation in support of the evaluation criteria specified (e.g. detailed project

citations and completion certificates, client contact information for verification, profiles of project resources and all others) as required for technical evaluation.

b. Proposal Presentations: The Committee constituted by the Departments for the evaluation of bids, may invite each bidder to make a presentation, at a date, time and venue decided by the Departments, The purpose of such presentations should be to allow the bidders to present their proposed solutions to the committee and demonstrate the key points in their proposals.

c. The committee may seek oral clarifications from the bidders. The primary function of clarifications in the evaluation process is to clarify ambiguities and uncertainties arising out of the evaluation of the bid documents. Oral clarifications provide the opportunity for the committee to state its requirements clearly and for the bidder to more clearly state its proposal. The committee may seek inputs from their professional and technical experts in the evaluation process.

d. Following should be the technical evaluation methodology:

o Each Technical Bid should be assigned a technical score out of a maximum of 100 points.

o Only the bidders, who score above the minimum cut-off score in all of the sections AND score a total Technical score of **70 (seventy)** or more, should qualify for the evaluation of their commercial bids.

o The commercial bids of bidders who do not qualify technically shall be returned unopened to the bidder's representatives after the completion of the evaluation process.

o The committee shall indicate to all the bidders the results of the technical evaluation through a written communication. The technical scores of the bidders should be announced prior to the opening of the financial bids.

o The technically shortlisted bidders should be informed of the date and venue of the opening of the commercial bids through a written communication.

8.4. Pre-Qualification Criteria

The invitation for bids is open to all **Public Sector Undertakings (PSUs)** registered in India who fulfil prequalification criteria as specified below

Criteria	
1. The Bidder shall satisfy all of the criteria below:	**Supporting Document Required**
a. The Bidder should be a Public Sector Undertaking (PSU) registered under Indian Companies Act 1956.	Certificate of Incorporation/ Registration
b. The Bidder should have an annual turnover of not less than **Rs. 50 Crore in each of** the last three financial years (as on 31-03-2013) from ICT (Information and Communication Technology) services.	Audited/Certified Annual Financial Statements for the last three financial years and undertaking from authorized signatory to this effect.
c. The Bidder must have a proven track record of providing successful 'Turnkey Solution' for at least one project in India in last 5 years as on 31st March 2013. The turnkey project should include at least 3 of the following i. Setting up and configuring the hardware ii. Implementing software/system solution iii. Setting up and configuring network infrastructure iv. Imparting training to the end users and system administrators Project value should be **Rs. 10 Crore** or above.	For each of the reference cited, the bidder must provide supporting documentary proof in form of work orders confirming year and area of activity, value of services delivered for that project, Completion / Partial Completion Certificate from Client confirming year and value of Bidder's scope of work completed by the Bidder and its value along with Reference details of the Client.

Criteria	
d. The Bidder or the Consortium partner must have a proven track record of successfully implementing **Government ICT projects, of which at least** one project should be of value **Rs. 10 Crore** or above, in last 5 years as on 31st March 2013.	For each of the reference cited, the bidder must provide as a supporting documentary proof in form of work orders confirming year and Area of activity, value of services to be delivered for each of the two projects, Completion / Partial Completion Certificate from Client confirming year and value of Bidder's scope of work, scope of work completed by the Bidder and its value along with Reference details of the Client
e. The Bidder or its Consortium partner for the project must have prior experience of working on at least 1 Police/ Homeland security project of similar nature*[2].	For each of the reference cited, the bidder must provide as a supporting documentary proof in form of work order confirming year and Area of activity, value of services to be delivered for the project, Completion / Partial Completion Certificate from Client, confirming year and value of Bidder's scope of work, scope of work completed by the Bidder, its value, honesty/credibility of the Bidder along with Reference details of the Client

Notes:

1. 'Government projects' are defined as 'projects for Central/ State / UT Government Departments or Government Undertakings in India or Public Sector Units.

2. 'Similar Nature' would mean project involving setting up of Computer Aided Dispatch system for Emergency contact centre (similar to Dial 100/ 911/112/ 999 etc.).

Additional Criteria	
1. The Applicant for Eligibility may be a single entity or a group of entities (the "Consortium[1]") coming together to implement the project. However no applicant applying individually or as a member of a consortium, as the case may be, can be a member or another applicant. The term applicant used here would apply to both a single entity and a consortium.	
2. Applicant (including consortium members) declared by any State/ Central Government as blacklisted may be ineligible to participate in the bidding process subject to gravity of the grounds for said blacklisting. Decision of Departments shall be final in this regard.	
3. The successful bidder can **subcontract** any work related activities to be performed under this project, with prior written consent of the Departments. However the Lead member shall provide the list of all the other services planned to be sub contracted with the Technical proposal only. It is clarified that the lead bidder shall be the principal employer for all claims arising from the liabilities statutory or otherwise, concerning the sub-contractors. The lead bidder will be liable for the entire scope of work and risks involved thereof (the liability will be for the entire value of the contract).	
4. Breach of general or specific instructions for bidding, general and special conditions of contract with Departments,	

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

Additional Criteria	
	or any other Department/ Agency/ Undertaking or Company under the control of Government of Punjab, during the past 5 years may make a firm ineligible to participate in the bidding process
5.	Departments reserves their right to subject the bidders to security clearances as it deems necessary
6.	The participation is restricted to Public Sector Undertakings (PSUs) registered in India.

Note:

1. In case of consortium the following criteria should be met

    a. Number of members in a consortium shall not exceed 3 (Three).

    b. Applicant consortia shall have a valid agreement (duly registered) among all the members signed by the Chief Executives/ Authorized Signatories of the companies dated prior to the submission of the bid. The agreement shall clearly specify the stake of each member and outline the roles and responsibilities of each member. The agreement shall be exclusively for this project and prime bidder shall be responsible in case of failure by any member

    c. Prime bidder shall submit written confirmation of authorization to sign on behalf of other consortium partners.

8.5. *Mandatory Compliance*

Mandatory Compliance	
The technical response must meet all the following mandatory compliance requirements. Failure to meet any of the following criteria should result in the disqualification of the technical bid response.	
1.	Submission of *Undertaking on Patent Rights* in the format prescribed in this RFP
2.	Submission of *Undertaking on Conflict of Interest* in the format prescribed in this RFP
3.	Submission of *Undertaking on Non-malicious Code Certificate* in the format prescribed in this RFP
4.	Submission of *Undertaking on Pricing of Items of Technical Response* in the format prescribed in this RFP
5.	Submission of undertaking on Provision of Required Storage Capacity in the format prescribed in this RFP
6.	Submission of undertaking on Compliance and Sizing of Infrastructure in the format prescribed in this RFP
7.	Submission of undertaking on Provision for Support for Software in the format prescribed in this RFP
8.	Submission of undertaking on Service Level Compliance in the format prescribed in this RFP
9.	Submission of undertaking on Deliverables in the format prescribed in this RFP
10.	Submission of undertaking on Training for Users in the format prescribed in this RFP
11.	Submission of undertaking on Support to Certification in the format prescribed in this RFP
12.	Submission of undertaking on Exit Management and Transition in the format prescribed in this RFP
13.	Submission of undertaking on Continuous Improvement in the format prescribed in this RFP
14.	Submission of undertaking on Personnel in the format prescribed in this RFP
15.	Submission of undertaking on Provision of Work Environment in the format prescribed in this RFP

Mandatory Compliance	
16.	Submission of undertaking on Changes to the Contract Clauses in the format prescribed in this RFP
17.	The client side, server side, and network infrastructure proposed shall meet all the specifications mentioned in this RFP. The bidder shall provide compliance matrix for each of the proposed components indicating compliance.
18.	Submission of undertaking on OEM Authorization

8.6. *Technical Evaluation Scoring Matrix*

For each of the citations that the Bidder should furnish to support the below mentioned criteria, Bidder is required to submit a Work Order and Completion Certificate/ Client Certificate for the experience cited. In case the Certificate does not give a split of the various activities undertaken in the project, the Bidder is required to submit individual bills to support their claim. Committee should evaluate technical proposal as per the scoring matrix below and marks should be awarded in each section.

#	Evaluation Criteria	Max. Score
1	**Previous Project Experience**[1]	**35**
A	Bidder or its Consortium Partner should have both international and domestic experience in designing, developing, installing, implementing and configuring **Computer Aided Dispatch** system for Police Emergency response centre similar to Dial 100/911/112/ 999 etc. The marks would be assigned as follows: a) 3 marks for each International projects, where the CAD application software proposed for this project was implemented, subject to a maximum of 6 marks b) 3 marks for each domestic projects subject to a maximum of 12 marks	18
B	Previous project experience related to implementation and maintenance of relevant IT Infrastructure (Server, Storage, workstations, GIS etc) – 2 marks for each project subject to a maximum of 6 marks	6
C	Previous project experience in Operations & Maintenance of integrated CAD system for Police emergency response systems – 2 marks for each project subject to a maximum of 6 marks	6
D	Previous project experience in implementing Capacity Building / Change Management – 2.5 marks for each project subject to a maximum of 5 marks	5
2	**Proposed Solution**	**30**
A	Solution proposed by the bidder including compliance with Functional and Technical Requirement Specifications (Bidders are mandatorily required to explain how their proposed solution would meet the required SLAs.)	15
B	Proposed CAD solution will be evaluated, in terms of the number of operational implementations. CAD solution with maximum numbers of projects shall be awarded full 15 marks (maximum capped to 50 operational projects) and the others shall be awarded marks on relative (pro-rata) basis. Following implementations shall qualify: • Implementations for police department shall only be considered • If any implementation caters to more than one city it will be counted as one implementation	15

#	Evaluation Criteria	Max. Score
	• Cities with population of more than 1 million will only be considered • Only those implementations which are operational on the date of bidding shall be considered The bidder is required to submit an Undertaking from the OEM confirming the above. This undertaking needs to be signed by the Company Secretary of the OEM. The OEM should also specify the quality standards complied for development of the CAD solution	
3	**Project Plan & Risk Management**	**10**
A	Comprehensiveness of the project plan, Resource Deployment Plan and Innovativeness for adherence to the timelines[2]	7
B	Risk Management & Mitigation plan[3]	3
4	**Key Team Member Profiles**[4]	**10**
A	Project Manager	3
B	Proposed Team lead for CAD/READi system	2
C	Proposed Team Lead for Capacity Building and Change Management	1
D	Proposed Team Lead for Infrastructure Setup, Network and related component	1
E	Proposed CAD Application Expert (Computer Aided Dispatch System)	2
F	Proposed Team Lead for Operations and Maintenance	1
5	**Technical Presentation to Committee**	**15**
	Total	**100**

Notes:

1. Previous Project Experience shall be evaluated on the basis of relevance to the requirements such as state level implementation, number of locations of control rooms in the project, value of the projects, deployment architecture, scope of work etc.
2. Bidders are expected to provide project implementation plan that complies with overall project timelines proposed in this RFP. In order to meet the timelines, bidders would have to propose an innovative and practically implementable plan.
3. Bidders are expected to provide a comprehensive risk register and mitigation plan for each identified risk.
4. Selected bidder is obliged to deploy all key team members, whose profiles would be submitted as part bid, during the implementation of project. None of the key members can be changed until the completion of the project. If any such change in key project members takes place, it will be at the discretion of the Departments to terminate the contract or accept the change.
5. In addition to the key team members, Selected Bidder is required to submit the allocation plan for all project team members along with their profiles upon the award of contract. Selected Bidder is expected to make sure that the team members remain deployed on the project till the completion. However, in certain circumstances where the change is inevitable, the Selected Bidder will intimate the Departments of the same. Outgoing team members would be replaced by resources with equivalent or better skill set in the respective work area after review and grant of permission by Departments.

Requirement of the proposed team by the bidders

Team Details	Academic Qualification	Total Relevant Experience
Project Manager	BE/B.Tech with MBA, Preferably with PMP/PRINCE2 certification	> 10 Years Exp.
Proposed Team lead for CAD/ READi system	All team members should be BE / B.Tech / MCA	>5 years of overall experience > 2 Years Exp. in Dial 100 or emergency response system
Proposed lead for Infrastructure setup, Network and related component	BE / B.Tech / MCA	> 5 Years
Proposed lead for Operations and Maintenance	BE / B.Tech / MCA	> 5 Years experience in operations and maintenance of similar projects, preferably of CAD system
Proposed profile for CAD Application Experts	BA/BSc/B.Tech	> 5 Years relevant experience of the proposed CAD solution
Proposed team lead for Capacity Building/Change management	MCA/MBA/ MSC with experience in capacity building and change management	>5 Years Exp.
Proposed team of Operations and Maintenance[*1] For DC Infrastructure & Application support at SOEC & DERC level	BE (CS) / MCA / M.Sc. (IT/CS) or equivalent	>= 2 Years Experience
Proposed Help Desk Staff	Graduate trained in call centre operations; At least 2 years of experience of working as Call Centre Executive	>2 years experience

Note:
1. The software support engineer should be well versed with the proposed CAD application solution.

8.7. Technical Proposal

1. Technical proposal should include all the mandatory undertakings

2. The technical proposal should address all the areas/ sections as specified by the RFP and should contain a detailed description of how the bidder should provide the required services outlined in this RFP. It should articulate in detail, as to how the bidder's Technical Solution meets the requirements specified in the RFP. **The technical proposal must not contain any pricing information**. If the technical proposal contains any commercial information, the proposer is liable to be rejected. In submitting additional information, please mark it as "supplementary" to the required response. If the bidder wishes to propose additional services (or

enhanced levels of services) beyond the scope of this RFP, the proposal must include a description of such services as a separate and distinct attachment to the proposal.

3. The technical proposal must furnish details about previous project experience for all the criterion in the technical evaluation matrix in the format provided in the RFP

4. The technical proposal should outline the proposed methodology for

   o   GIS/GPS based Computer Aided Dispatch System for Police Control Centre,

   o   Change Management / Capacity building, and

   o   Exit management

5. The Technical Proposal should be structured under the following minimum heads:

   o   Overview of the proposed solution that meets the requirements specified in the RFP

        ▪   **Bidders are mandatorily required to explain how their proposed solution would meet the required SLAs**

   o   Overall proposed Solution, technology, and deployment architecture

   o   Security architecture

   o   Integration and Interfacing Architecture

   o   Network architecture

   o   Details of the Solution as per the format provided in the RFP

   o   Bill of material as per the formats provided in the RFP

   o   Approach & methodology for System installation including the project plan

   o   Overall Governance Structure and Escalation Mechanism

   o   Project team structure, size, capability and deployment plan (Total Staffing plan including numbers)

   o   Training and Communication Strategy for key stakeholders of the project

   o   Key Deliverables (along with example deliverables, where possible)

   o   Project Management, reporting and review methodology

   o   Strategy for conducting Operations & Maintenance

   o   Risk Management approach and plan

   o   Certification from the OEMs on the Infrastructure proposed by bidder

   o   Bidder's experience in all the project related areas as highlighted in Bid evaluation criteria

6. Bidder must provide the team structure and the resumes of key profiles within each team in the format provided in the RFP. The key profiles include Project manager(s), technical experts (GIS/GPS/system administrators), domain experts, team leads.

7. Bidder must ensure that all profiles shared should be unique and separation of duties is ensured.

8. Comprehensive Project Plan along with manpower deployment plan and resources to be dedicated to the project.

9. The technical proposal shall also contain bidder's plan to address the key challenges anticipated during the execution of the project.

10. Departments are also open to any suggestions that the bidder may want to render with respect to the approach adopted for the assignment in the light of their expertise or experience from similar assignments. However, this should not lead to the submission date being missed or extended.

8.8. Evaluation of Commercial Bids

The Commercial Bids of only the technically qualified bidders should be opened for evaluation.

Since the payments to the Bidder should be made over several years, the Discounted Cash Flow (DCF) method should be used to compare different payment terms, including advance payments and progressive stage payments to the Bidders so as to bring them to a common denomination for determining lowest bidder.

The Departments should evaluate the offers received by adopting DCF method with a discounting rate in consonance with the existing government borrowing rate. The DCF is defined in the Glossary of Management and Accounting Terms, published by the Institute of Cost and Works Accountants of India. DCF method should be used for evaluation of bids.

Detailed modalities for applying DCF technique are as below:

1. Net Present Value (NPV) method should be used for evaluation of the Commercial Offer. The Net Present Value of a contract is equal to the sum of the present values of all the cash flows associated with it. The formula for calculating NPV of a Commercial Offer is illustrated in Para (5) below.

2. Discounting rate to be used under the method is to be the Government of India's lending rate on loans given to State Governments. These rates are notified by Budget Division of Ministry of Finance annually. The latest one is Ministry of Finance OM No F5(3) PD/2008 dated 30 October 2008 (**as per which the borrowing rate is 9%).** The State / UT should evaluate the offers received by adopting Discounted Cash Flow (NPV) method with a discounting rate of 9%.

3. NPV should be calculated on the annual cash outflows.

4. Standard software for example 'Excel', 'Lotus 1-2-3' or any other spreadsheet should be used for NPV analysis.

5. The NPV should be calculated using the formula below:

$$NPV = C_0 + C_1/(1+r)^1 + C_2/(1+r)^2 + C_3/(1+r)^3 + C_4/(1+r)^4 + C_5/(1+r)^5 + ... + C_n/(1+r)^n$$

Where,

$C_0 ... C_n$ are the yearly cash outflows as illustrated below

  i. C_0 is the sub-total for Services Provided During Implementation Phase (Sum of items 1 – 12, refer to pricing summary sheet, Section 7)

  ii. C_1 is Cost of Operations and Maintenance Services for the 1st year after "Installation"

  iii. C_2 is Cost of Operations and Maintenance Services for the 2nd year after "Installation"

  iv. C_n is Cost of Operations and Maintenance Services for the Nth year after "Installation"

  v. r is the annual discounting rate as specified in Para (2) above

For Quality and Cost based Selection (QCBS), the following formula should be used for the evaluation of the bids.

The scores should be calculated as:

Bb = 0.8*Tb + (0.2)*(Cmin/Cb * 100)

Where

  i. Bb = overall score of bidder under consideration (calculated up to two decimal points)

  ii. Tb = Technical score for the bidder under consideration

  iii. Cb = NPV (as calculated above) for the bidder under consideration

      iv.   Cmin = Lowest NPV (as calculated above) among the financial proposals under consideration

The bidder achieving the highest overall score should be invited for negotiations for awarding the contract. In case of a tie where two or more bidders achieve the same highest overall score, the bidder with the higher technical score should be invited first for negotiations for awarding the contract. In case of a tie on the technical scores and highest overall scores, the Cb should be calculated to the third place of decimal and the bidder with lesser Cb should be invited for negotiations for awarding the contract.

9. Award of Contract

9.1. Award Criteria

Departments, should award the Contract to the successful bidder whose proposal has been determined to be substantially responsive and has been determined as the best value proposal.

9.2. Departments Right to Accept Any Proposal and to Reject Any or All Proposals

Departments reserve the right to accept or reject any proposal, and to annul the tendering process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for Departments' action.

9.3. Notification of Award

Prior to the expiration of the validity period, Departments, should notify the successful bidder in writing or by fax or email, to be confirmed in writing by letter, that its proposal has been accepted. The notification of award should constitute the formation of the contract. Upon the successful bidder's furnishing of performance bank guarantee, Departments, should promptly notify each unsuccessful bidder and return their EMD/ Bid Security.

9.4. Contract Finalization and Award

Departments shall reserve the right to negotiate with the bidder(s) whose proposal has been ranked best value bid on the basis of Technical and Commercial Evaluation to the proposed Project. Departments reserve the right to present a contract to the bidder selected for negotiations. A contract should be awarded to the responsible, responsive bidder whose proposal conforms to the RFP and is, in the opinion of the Departments, the most advantageous and represents the best value to the proposed project, price and other factors considered. Evaluations should be based on the proposals and any additional information requested by the Departments. Proposed project should involve the payment for the contract based on not only successful delivery of the solution but also on the success of the project after "Installation".

9.5. Signing of Contract

At the same time as Departments notify the successful bidder that its proposal has been accepted, it shall enter into a separate contract, incorporating all agreements (to be discussed and agreed upon separately) between Departments and the successful bidder.

Departments shall have the right to annul the award in case there is a delay of more than 30 days in signing of contract, for reasons attributable to the successful bidder.

9.6. Suggestions on the Draft Contract

a. A draft contract including the standard terms and all the other terms specific to the implementation of the solution is circulated as **Vol. II of RFP**. It is expected that the bidder should be able to execute this contract without any modifications, in case they are selected for doing so.
b. However the bidder is requested to indicate as per the form specified in the Format, the changes the bidder desires to have and the reason for the same. This is only a solicitation of suggestions for change.

c. However, it is neither guaranteed that these requests for changes should be accepted in the final contract nor this process should be construed as any commitment from Departments, to consider those suggestions.

d. The bidder should not suggest any change that has financial or commercial implications during the execution of the contract and is against the basic spirit of procuring the services for the implementation of the project

9.7. *Failure to agree with the Terms and Conditions of the RFP*

Failure of the successful bidder to agree with the Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award.

10. Payment Terms and Schedule

Please refer to **Section 4: Payment Terms and Schedule of Vol. II** of the RFP.

11. Format

11.1. Formats for the pre-qualification response

Pre-Qualification Requirements Proposal: Bidders are requested to submit their responses for the Pre-Qualification Requirements in four (4) parts, clearly labeled according to the following categories.

1. Part I – Details of the Organization

    a. This part must include a general background of the respondent organization (limited to 400 words) along with other details of the organization as per the format provided in the RFP. Enclose the mandatory supporting documents listed in format provided in the RFP.

    b. The bidder must also provide the financial details of the organization (as per format provided in the RFP). Enclose the mandatory supporting documents listed in format provided in the RFP.

    c. Address of the Office in the Punjab or alternatively an undertaking that the same should be established within two months of signing the contract.

2. Part II – Relevant Computer Aided Dispatch System Experience

    a. Respondents must provide details of Computer Aided Dispatch System experience as per the format provided in the RFP. The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format provided in the RFP.

3. Part III – Relevant e-Governance Project Experience

    a. Respondents must provide details of Government project experience in the areas relevant to the READi system implementation requirements, as per the format provided in the RFP. The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format provided in the RFP.

4. Part IV – Relevant System Integration Project Experience

    a. Respondents must provide details of Software Services project experience in the areas relevant to the Computer Aided Dispatch System implementation requirements, as per the format provided in the RFP. The projects mentioned here should match with the projects quoted by the respondent in order to satisfy the qualification requirements. Enclose the mandatory supporting documents listed in format provided in the RFP.

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A. Organizational Details

Details of the Organization	
Name	
Nature of the legal status in India	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
Address of the Headquarters	
Address of the Registered Office in India	
Other Relevant Information	
Mandatory Supporting Documents: a) Certificate of Incorporation from Registrar Of Companies(ROC) b) Relevant sections of Memorandum of Association of the company or filings to the stock exchanges to indicate the nature of business of the company	

B. Financial Strength Details

Financial Information			
	FY 2010-11	**FY 2011-12**	**FY 2012-13**
Revenue (in INR crores)			
Profit Before Tax (in INR crores)			
Other Relevant Information			
Mandatory Supporting Documents: a) Auditor Certified financial statements for the Last three financial years; 2010-11, 2011-12, and 2012-13 (Please include only the sections on P&L, revenue and the assets, not the entire balance sheet.)			

C. Project Experience

Name of the project	
General Information	
Client for which the project was executed	
Name and contact details of the client	
Project Details	
Description of the project	
Scope of services	
Service levels being offered/ Quality of service (QOS)	
Technologies used	
Outcomes of the project	

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

Other Details	
Total cost of the project	
Total cost of the services provided by the respondent	
Duration of the project (no. of months, start date, completion date, current status)	
Other Relevant Information	
Mandatory Supporting Documents: a) Letter from the client to indicate the successful completion of the projects	
Project Capability Demonstration	
Complete details of the scope of the project shall be provided to indicate the relevance to the pre-qualification criterion (which is a part of minimum qualification criteria). These capabilities may be spread over the five projects (which are part of minimum qualification criteria) and not essentially in this project alone.	

11.2. ***Formats for the technical bid response***

11.2.1. Undertaking on Patent Rights

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: **Undertaking on Patent Rights**

Sir,

1. I/We as Bidder do hereby undertake that none of the deliverables being provided by us is infringing on any patent or intellectual and industrial property rights as per the applicable laws of relevant jurisdictions having requisite competence.

2. I/We also confirm that there shall be no infringement of any patent or intellectual and industrial property rights as per the applicable laws of relevant jurisdictions having requisite competence, in respect of the equipments, systems or any part thereof to be supplied by us. We shall indemnify Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, against all cost/claims/legal claims/liabilities arising from third party claim in this regard at any time on account of the infringement or unauthorized use of patent or intellectual and industrial property rights of any such parties, whether such claims arise in respect of manufacture or use. Without prejudice to the aforesaid indemnity, the Bidder shall be responsible for the completion of the supplies including spares and uninterrupted use of the equipment and/or system or any part thereof to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, and persons authorized by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, irrespective of the fact of claims of infringement of any or all the rights mentioned above.

3. If it is found that it does infringe on patent rights, I/We absolve Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, of any legal action.

Yours faithfully,

Authorized Signatory

Designation

11.2.2. Undertaking on Conflict of Interest

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: Undertaking on Conflict of Interest

Sir,

I/We as Bidder do hereby undertake that there is, absence of, actual or potential conflict of interest on the part of the Bidder or any prospective subcontractor due to prior, current, or proposed contracts, engagements, or affiliations with Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, .

I/We also confirm that there are no potential elements (time frame for service delivery, resource, financial or other) that would adversely impact the ability of the Bidder to complete the requirements as given in the RFP.

We undertake and agree to indemnify and hold Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   harmless against all claims, losses, damages, costs, expenses, proceeding fees of legal advisors (on a reimbursement basis) and fees of other professionals incurred (in the case of legal fees & fees of professionals, reasonably) by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   and/or its representatives, if any such conflict arises later.

.Yours faithfully,

Authorised Signatory

Designation

11.2.3. Non-Malicious Code Certificate

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Non-Malicious Code Certificate

Sir,

1.   I/We hereby certify that the system being offered / developed as part of the contract does not and will not contain any kind of malicious code that would activate procedures to:

        (a)   Inhibit the desired and the designed function of the equipment / solution.

        (b)   Cause damage to the user or his equipment / solution during the operational exploitation of the equipment / solution.

        (c)   Tap information regarding network, network users and information stored on the network that is classified and / or relating to National Security, thereby contravening Official Secrets Act 1923.

2.   There are / will be no Trojans, Viruses, Worms, Spywares or any malicious software on the system and in the software offered or software that will be developed.

3.   Without prejudice to any other rights and remedies available to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, we are liable under Information Technology Act, 2000 and Indian Penal Code 1860 in case of physical damage, loss of information and those relating to copyright and Intellectual Property rights (IPRs), caused due to activation of any such malicious code in offered / developed software.

Yours faithfully,

Authorised Signatory

Designation

11.2.4. Undertaking On Pricing of Items of Technical Response

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Clarifications sent to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,

Sir,

I/We do hereby undertake that Commercial Proposal submitted by us is inclusive of all the items in the technical proposal and is inclusive of all the clarifications provided/may be provided by us on the technical proposal during the evaluation of the technical offer. We understand and agree that our Commercial Proposal is firm and final and that any clarifications sought by you and provided by us would not have any impact on the Commercial Proposal submitted by us.

Yours faithfully,

Authorized Signatory

Designation

11.2.5. Undertaking on Provision of Support for System/Software

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Provision of Support for System/Software

Sir,

1.   I/We as Bidder do hereby undertake the provision for Annual maintenance support/Warranty support by OEM for all the primary components of the READi system during the duration of the contract period.

2.   We also undertake to provide the support needed for any 3rd party products proposed as part of System/Software during the duration of the contract period.

Yours faithfully,

Authorized Signatory

Designation

11.2.6. Undertaking on Service Level Compliance

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Service Level Compliance

Sir,

1.   I/We as Bidder do hereby undertake that we shall monitor, maintain, and comply with the service levels stated in the Addendum to the RFP to provide quality service to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,

2.   However, if the proposed number of resources is found to be not sufficient in meeting the tender and/or the Service Level requirements given by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, then we will augment the team without any additional cost to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management

Yours faithfully,

Authorized Signatory

Designation

11.2.7. Undertaking on Deliverables

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Deliverables

Sir,

1.   I/We as Bidder do hereby undertake the adherence of <<>> Certification or above standards to the processes, deliverables/artefacts to be submitted to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management

2.   We also recognize and undertake that the Deliverables/artefacts shall be presented and explained to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   and other key stakeholders (identified by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   ), and also take the responsibility to provided clarifications as requested by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management .

3.   We also understand that the acceptance, approval and sign-off of the deliverables by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management. We understand that while all efforts shall be made to accept and convey the acceptance of each deliverable in accordance with the project schedule, no deliverable will be considered accepted until a specific written communication to that effect is made by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management.

Yours faithfully,

Authorized Signatory

Designation

11.2.8. Undertaking on Training the Users

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Training the Users

Sir,

1.   I/We hereby undertake to train users as per Punjab Police and Department of Revenue, Rehabilitation and Disaster Management's requirements stated in the Request for Proposal (RFP). We further undertake that:

  i.   We shall carry out a comprehensive training needs analysis and accordingly design the training program

  ii.   Our training program would include, at the minimum, classroom training followed by supervised work sessions

  iii. We shall prepare all necessary training materials and deliver the training

Yours faithfully,

Authorized Signatory

Designation

11.2.9. Undertaking on Support to Certification

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Support to Certification

Sir,

1.   I/We understand that system (including the application and the associated IT systems) have to be certified by a 3rd party agency (to be identified by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management) before the system is commissioned.

2.   I/We understand that, the responsibility to ensure successful certification lies with the Bidder.

3.   I/We hereby undertake that we shall do all that is required of the Bidder to ensure that system will meet all the conditions required for successful certification.

Yours faithfully,

Authorized Signatory

Designation

11.2.10. Undertaking on Exit Management and Transition

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: Undertaking on Exit Management and Transition

Sir,

1.   I/We hereby undertake that at the time of completion of the engagement, we shall successfully carry out the exit management and transition (to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   or to an agency identified by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management) to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management's satisfaction.

2.   I/We further undertake to complete the following as part of the Exit Management and Transition:

      i.   Capacity Building at Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,

          a.   We undertake to design team/organization structure at Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   to manage the system

          b.   We undertake to carry out an analysis of the skill set requirement at Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   to manage system and carry out the training & knowledge transfer required at Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   to manage system

      ii.   Transition of project artefacts and assets

          a.   We undertake to complete the updating of all project documents and other artefacts and handover the same to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   before transition

          b.   We undertake to design Standard Operating Procedures to manage system (including application and IT systems), document the same and train Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   personnel on the same.

3.   I/We also understand that the Exit Management and Transition will be considered complete on the basis of approval from Punjab Police and Department of Revenue, Rehabilitation and Disaster Management.

Yours faithfully,

Authorized Signatory

Designation

11.2.11. Undertaking on Continuous Improvement

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Undertaking on Continuous Improvement

Sir,

1.   I/We understand that Continuous improvement of system is highly critical for Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   and that the Bidder is expected to be the prime driver of continuous improvement during the system management phase.

2.   I/We also understand that the improvements proposed as part of this Continuous Improvement initiative will not be the usual run-of-the-mill enhancements, but will be significant changes that result in a quantum leap in meeting user needs and improving the outcomes in policing.

Yours faithfully,

Authorized Signatory

Designation

11.2.12. Undertaking on Personnel

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP, L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: Undertaking on Personnel

Sir,

1. I/We as Bidder do hereby undertake that those persons whose profiles were part of the basis for evaluation of the bids and have been identified as "Key Personnel" of the proposed team, including Project Manager, Lead Experts, Domain experts etc for the READi system , shall be deployed during the Project as per our bid submitted in response to the RFP.

2. We undertake that any of the identified "Key Personnel" shall not be removed or replaced without the prior written consent of Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,

3. Under exceptional circumstances, if the Key Personnel are to be replaced or removed, we shall put forward the profiles of personnel being proposed as replacements, which will be either equivalent or better than the ones being replaced. However, whether these profiles are better or equivalent to the ones being replaced will be decided by Punjab Police and Department of Revenue, Rehabilitation and Disaster Management., Punjab Police and Department of Revenue, Rehabilitation and Disaster Management will have the right to accept or reject these substitute profiles.

4. We also undertake to staff the Project with competent team members in case any of the proposed team members leave the Project either due to voluntary severance or disciplinary actions against them.

5. We undertake that the resources should be full time assigned to the project and will not be working simultaneously on other projects.

6. We acknowledge that Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, have the right to seek the replacement of any member of the Project team being deployed by us, based on the assessment of Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   that the person in question is incompetent to carry out the tasks expected of him/her or found that person does not really possess the skills /experience/qualifications as projected in his/her profile or on the ground of security concerns or breach of ethics.

7. In case we assign or reassign any of the team members, we shall be responsible, at our expense, for transferring all appropriate knowledge from personnel being replaced to their replacements within a reasonable time.

Yours faithfully,

Authorized Signatory

11.2.13. Undertaking on Provision of Work Environment at Punjab Police and Department of Revenue, Rehabilitation and Disaster Management

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: **Undertaking on Provision of Work Environment at premises of Nodal Agency**

Sir,

1. I/We as Bidder do hereby understand that the onsite team operating out of Punjab Police and Department of Revenue, Rehabilitation and Disaster Management,   premises will be provided only with seating space. Any other requirements such as Desktops/PC, software will be Bidder's responsibility.

Yours faithfully,

Authorized Signatory

Designation

11.2.14. Undertaking on Changes to the Contract Clauses

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: **Undertaking on Changes to Contract Clauses**

Sir,

1.   I/We as Bidder do hereby acknowledge that we understand that the request for changes to contract clauses and any other terms and conditions in the RFP, submitted in our proposal as per the RFP are just suggestions for change.

2.   We understand that it is neither guaranteed that these requests for changes will be accepted in the final contract nor this process will be construed as any commitment from Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, to consider those suggestions.

Yours faithfully,

Authorized Signatory

Designation

11.2.15. Undertaking from OEM on Authorization of use of their OEM products

(Company letterhead)

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh – 160009

Sub: **Authorization of <<company name of SI>> to Provide Services Based on Our Product(s)**

Sir,

This is to certify that I/We am/are the Original Equipment Manufacturer in respect of the products listed below. I/We confirm that <name of Bidder> have due authorization from us to provide services to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, that are based on our product(s) listed below as per Request for Proposal (RFP) document relating to providing of the solution, installation, training & maintenance services, Information Technology Infrastructure and System Integration services to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, We further endorse the warranty, contracting and licensing terms provided by Bidder to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management.

Sr. No.	Product Name	Remarks
1.		
2.		

Yours faithfully,

Authorised Signatory

Designation

OEM's company name

CC: Bidder's corporate name

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

11.2.16. Profiles of Previous Project Experience

Relevant Project experience	
General Information	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
Project Details	
Description of the project	
Scope of services	
Service levels being offered/ Quality of service (QOS)	
Technologies used	
Outcomes of the project	
Other Details	
Total cost of the project	
Total cost of the services provided by the respondent	
Duration of the project (no. of months, start date, completion date, current status)	
Other Relevant Information	
Mandatory Supporting Documents: a) Letter from the client to indicate the successful completion of the projects	
Project Capability Demonstration	
Please provide complete details regarding the scope of the project to indicate the relevance to the requested technical evaluation criterion.	

11.2.17. Team Profile

Format for the Profiles	
Name of the person	
Current Designation / Job Title	
Current job responsibilities	
Proposed Role in the Project	
Proposed Responsibilities in the Project	
Academic Qualifications: • Degree • Academic institution graduated from • Year of graduation • Specialization (if any) • Key achievements and other relevant information (if any)	
Professional Certifications (if any)	
Total number of years of experience	
Number of years with the current company	
Summary of the Professional / Domain Experience	
Number of complete CAD installations carried out	
The names of customers (Please provide the relevant names)	

Past assignment details (For each assignment provide details regarding name of organizations worked for, designation, responsibilities, tenure)
 	
Prior Professional Experience covering:
 	
• Organizations worked for in the past
 	
    o Organization name
 	
    o Duration and dates of entry and exit
 	
    o Designation
 	
    o Location(s)
 	
    o Key responsibilities
 	
• Prior project experience
 	
    o Project name
 	
    o Client	

o   Key project features in brief
 	
      o   Location of the project
 	
      o   Designation
 	
      o   Role
 	
      o   Responsibilities and activities
 	
      o   Duration of the project
 	
Please provide only relevant projects.	

Proficient in languages (Against each language listed indicate if read/write/both)	

Each profile must be accompanied by the following undertaking from the staff member:

(Alternatively, a separate undertaking with the same format as below with all the names of the proposed profiles should be provided)

Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes my qualifications, my experience, and me. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Signature:

Date:

[Signature of staff member or authorized representative of the staff] Day/Month/Year

Full name of authorized representative:

11.2.18. Suggestions on Changes to Contract Clauses

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Sub: Changes to the Contract Clauses

Sir,

We request you to consider the following changes to the Contract Clauses:

#	Page Number	Section / Para No.	Original Text	Suggested Change	Reason for Change
1					
2					
3					
4					

Yours faithfully,

Authorized Signatory

Designation

11.3. Formats for the commercial bid response

11.3.1. Commercial Proposal Cover Letter

[Date]

To

The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009
Dear Sir,

Ref: RFP for Selection of Bidder for the Implementation of READi System

Having examined the RFP Document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the services, as required and outlined in the RFP. In order to meet such requirements and to provide services as set out in the RFP document, following is our quotation summarizing our Commercial Proposal.

We attach hereto the Commercial Proposal as required by the Bid document, which constitutes our proposal.

We undertake, if our proposal is accepted, to the services as put forward in the RFP or such modified requirements as may subsequently be agreed mutually by us and Punjab Police and Department of Revenue, Rehabilitation and Disaster Management or its appointed representatives.

We will obtain necessary bank guarantees in the formats given in the bid document issued by a bank in India, acceptable to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management and furnish them within the time frames set out in the RFP

We agree for unconditional acceptance of all the terms and conditions in the bid document and we also agree to abide by this bid response for a period of SIX (6) MONTHS from the date fixed for commercial bid opening and it shall be valid proposal till such period with full force and virtue. Until within this period a formal contract is prepared and executed, this bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between Punjab Police and Department of Revenue, Rehabilitation and Disaster Management and us.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to Punjab Police and Department of Revenue, Rehabilitation and Disaster Management is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead Punjab Police and Department of Revenue, Rehabilitation and Disaster Management as to any material fact.

We agree that you are not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any if the products/ service specified in the bid response without assigning any reason whatsoever.

We have indicated the unit rates for the purpose of payment as well as for price adjustment in case of increase or decrease in any component of the Scope of Work under the contract.

We understand that Departments reserves the right to procure the components/services listed in this RFP in whole or in part. In case of procurement in part, the contract value will be revised according to the unit rates quoted by us in our Commercial Bid.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/ agency/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this   Day of   **2014**

(Signature)   (In the capacity of)

Duly authorized to sign the Bid Response for and on behalf of:

(Name and Address of Company)   Seal/Stamp of Bidder

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am   ……………….   of   the   …………………………….,   and   that ………………………………………………………… who signed the above proposal is authorized to bind the company, pursuant to the resolution passed in the meeting of Board of Directors of the company on _____(date).

Date

(Seal here)

11.3.2. Form 1 – Pricing Summary

Part A: Project Capital Cost

#	Item	Schedule	Total Solution (INR)
1.	SERC - State Level and DERC – District Level	Part -1	
2.	Implementation Phase Services	Part -2	
3.	Handholding Manpower Services at DERC	Part -3	
Sub Total A			

Part B: Operational Cost for 5 Years

#	Item	Schedule	Year 1	Year 2	Year 3	Year 4	Year 5
4.	Network Connectivity	Part -4					
5.	Warranty & AMC	Part -5					
6.	Technical & Operational Manpower Cost	Part -6					
Subtotal							
Sub Total B							

Grand Total (A+B)	
Grand Total (A+B) (in Words)	

11.3.3. Form 2 – Pricing Details

Part 1: SERC - State Level and DERC – District Level

#	Description	Unit	Qty.	Unit Rate (INR)	Total Price (in INR)	Taxes and Other Duties	Make/Model
1.	**Software - SERC : State Level**						
a.	Computer Aided Dispatch Server Software	Nos.					
b.	Computer Aided Dispatch AVLS Application	Nos.					
c.	GIS Software for Map maintenance & updation	Nos.					
d.	Computer Aided Dispatch Web Application for Remote viewer	Nos.					
e.	EMS/NMS with SLA monitoring and management Software	Nos.					
f.	Tablet/MDT Application Server License as per project requirement	Nos					
g.	Relational Database Management System (RDMS)	Nos.					
h.	Call Centre Operator License (for Call Taker , Supervisor and Administrator)	Nos.	52				
i.	AVLS Device Licenses	Nos	950				
2.	**Software - DERC :District Level**						
j.	Call Centre Client Software License (for Dispatcher and Supervisor) as per project requirement	Nos.	65				
k.	Tablet/MDT Application Client License	Nos	200				
3.	**Hardware - SERC :State Level**						
l.	CAD Application Server with operating system and 30 Day storage (Primary and Secondary in Redundant Configuration)	Nos					
m.	Database Server with operating system (Primary and Secondary in Redundant Configuration)	Nos					

n.	GIS Server with operating system (Primary and Secondary in Redundant Configuration)	Nos					
o.	AVLS Server with operating system (Primary and Secondary in Redundant Configuration)	Nos					
p.	Web Server for Remote Supervisory , SMS and Analytics Server	Nos					
q.	CTI/ACD/Voice Logger Server (Primary and Secondary in Redundant Configuration)	Nos					
r.	Mail, Antivirus, DNS Server	Nos					
s.	Backup and restore server	Nos					
t.	EMS/NMS with SLA monitoring and management Server	Nos.	1				
u.	Digital Tape Library support for monthly backup - 5TB	Nos.	1				
v.	Workstation with Dual Monitor (Call Taker , Supervisor , and Administrator) with operating system	Nos.	52				
w.	Workstation for IT admin with operating system	Nos	2				
x.	Access network L3 switch 48 port	Nos.					
y.	Core Network L3 Switch 24 Ports	Nos.					
z.	Distribution DC Switch 24 Ports	Nos.					
aa.	Core Router for MPLS Connectivity	Nos.					
bb.	Core Router for Internet Connectivity	Nos.					
cc.	GSM Modem including SIM cards	Nos.					

dd.	IP based Communication switch (EPABX with PSTN ,PRI ,Radio, GSM gateway with related software including provision for central voice recording for all conversations)	Nos.					
ee.	IP Phone with headset for Call centre Agent	Nos.	52				
ff.	Internal Unified Threat Management System - Firewall with Intrusion Detection /Prevention system for unified threat mitigation along with VPN support	Nos.	2				
gg.	External (Internet) Unified Threat Management System - Firewall with Intrusion Detection /Prevention system for unified threat mitigation along with VPN support	Nos.	2				
hh.	Networking Passive Components	Set	1				
ii.	Suitable rack solution for stacking Servers having complete electrical connections	Nos.	2				
jj.	Multi-Function Laser Printer	Nos.	2				
kk.	Silent DG Set - Min 40 KVA	Nos.	1				
ll.	UPS (Min 2 Hour Backup)	Nos.	2				
mm.	LED TV - 42 Inch (connected with operator workstation)	Nos.	4				
4.	**Hardware – DERC: District Level**						
nn.	Workstation with Dual Monitor (Dispatcher , Supervisor with operating system	Nos.	65				
oo.	IP Phone with headset for Call taker	Nos.	65				
pp.	Router with Firewall / UTM	Nos	54				
qq.	Network L2 Access Switch - 24 Port	Nos.	12				
rr.	Network L2 Access Switch - 8 Port	Nos.	42				
ss.	UPS (Min 2 Hour Backup)	Nos.	27				
tt.	Networking Passive Components & Rack solution	Set	27				

uu.	Laser Printer	Nos.	27				
5.	**AVLS for Police vehicles**						
vv.	Automatic Vehicle locator System for Two Wheelers /four Wheelers PCR Vehicles with SIM card	Nos	800				
ww.	Mobile Data Terminals for PCR Vehicles including device software & SIM card	Nos.	200				
6.	**Equipments for fire department**						
xx.	Integration with Fire (Automatic Vehicle locator System)	Nos.	150				
7.	**Civil work at SERC and DERC**						
yy.	SERC Site Preparation covering , Enclosures , Earthing, Power Cabling etc for 75 Operators	Nos.	75				
zz.	SERC - Table and Chair for 75 Operators	Nos.	75				
aaa.	DC Site Preparation covering Partitioning, False flouring, cooling access control etc.	Set	1				
bbb.	DERS Site Preparation covering , Enclosures , Earthing, Power Cabling etc	Nos.	27				
ccc.	DERC -Table and Chair for 65 operators	Nos.	65				
ddd.	Air conditioners for SERC (Sufficient for 75 operator sitting area)	Nos.	1				
8.	**Additional IP phones for Officers**						
eee.	IP Phone for senior officer	No	75				
fff.	IP phone Harnessing Cost	No	75				
9.	**Other**						
ggg.	GIS Base Map for Punjab State	Nos	1				
hhh.	GIS Data Layer including 5 year data/ layer update as per project requirement	Nos	1				
iii.	Other items (if Required)						
	Total						

Part2: Implementation Phase Services

#	Description	Unit	Qty.	Unit Rate (INR)	Total Price (in INR)	Taxes and Other Duties	Total Amount (INR)
1.	Systems Study	Nos.	1				
2.	Installation, Configuration and Customization	Nos.	1				
3.	Integration with other System	Nos.	1				
4.	Support to 3rd party acceptance testing, audit and certification	Nos.	1				
5.	Change Management & Capacity Building	Nos.	1				
6.	Project Management	Nos.	1				
7.	Other item (if Required)						
	Total						

Part3: Handholding Manpower Services at DERC

#	Description	Qty.	Amount in Rs.		
			1st Month	2nd Month	3rd Month
1	Handholding Man power cost at DERC (Blended cost inclusive of all overhead costs) for 24x7	27			
Total					

Note:

1. It will be at the discretion of departments to specify the number of handholding manpower & support duration required at DERC. The required number of people will be provided by the selected bidder within the time as per the agreed SLA terms.

2. Accommodation, traveling etc cost of all handholding manpower should be borne by selected bidder.

Part4: Network Connectivity

#	Description	Qty. Number of Locations/Link	Amount in Rs.					Name of Service Provider
			1st Year	2nd Year	3rd Year	4th Year	5th Year	
1	**SERC & Data Centre - State Level**							
a.	Internet Leased Line with min 4 Mbps & 4 Static IP for LAN Connection at the SERC for AVLS System and Web System (Configured in full redundancy mode from different service providers as Primary and secondary connectivity)*	1						
b.	PRI One Time charges (30 Channels per PRI , free incoming calls) with PRI Modem in Pair#	3	NA	NA	NA	NA	NA	
c.	MPLS Network Connectivity at DC (Primary connectivity)^ DERC Bandwidth x No of Locations	1						
d.	Internet Broadband Connection at State SERC for READi system Operation (MPLS Backup connectivity)^	1						
e.	Connectivity solution at different officers locations for IP Phone connectivity	75						
2	**DERC - District Level^**							
f.	MPLS Network Connectivity at DERC (Primary connectivity)^	27						
g.	Internet Broadband Connection at State DERC (Backup connectivity)^	27						
h.	Other item (if Required)							
	Total							

* Please note that minimum internet bandwidth should be 6 mbps however bidders are free to propose higher bandwidth, if required, to meet the SLAs. The bidder would be responsible for meeting all the SLAs and hence should propose the internet bandwidth according to their requirements. Also note that the bandwidth should support automatic refresh of PCR vehicles' locations every 15 seconds for urban locations and 20 seconds for rural locations.

\# Please note that recurring cost of PRI would be paid by Departments on actual. However for budgeting purpose, bidders are requested to share estimated recurring cost in the following table:

Part 5A (Not be part of overall bid price)

#	Description	Unit of Locations/Link	Qty. Number of Locations/Link	Amount in Rs. 1st Year	2nd Year	3rd Year	4th Year	5th Year
1.3A	PRI Recurring charges (30 Channels per PRI , free incoming calls) with PRI Modem in Pair#	Nos.	3					

^ Departments may or may not opt or may opt in part for these services from the selected bidder. The selected bidder would be informed about the decision on these components before signing of contract and the final price would be decided accordingly. The unit cost provided here would be used for the purpose of such calculations.

Please note:

1. Initial Setup charges to be borne by Supplier. Where applicable, subsequent recurring charges will be paid by Departments as and when they get due. However, supplier should indicate cost of recurring charges as per the contract with service provider

2. Network Connectivity from State SERC to District DERC will be provided by Departments. However it will be the responsibility of successful bidder to study the WAN connectivity options provided by Departments and make suitable amendments to the same for smooth functioning of CAD application as per the requirements

3. Bandwidth requirement at State - SERC and District DERC to be assessed by supplier as per the application requirements

Part5: Warranty & AMC

#	Description	Unit	Qty.	Amount (in Rs.)				
	5th Year			1st Year	2nd Year	3rd Year	4th Year	5th Year
a.	<Provide AMC for all the components provided under this proposal>							
	Total							

Part6: Technical & Operational Manpower Cost

#	Description	Unit	Qty.	Amount in Rs.				
				1st Year	2nd Year	3rd Year	4th Year	5th Year
1.	Project Manager	Nos.	1					
2.	DC Infrastructure & Application support - Communication, Database & Application Support		12					
3.	Help Desk Staff at SERC	Nos.	5					
4.	Zone level resources	Nos	10					
5.	Project Management Team	Nos	1					
	Total							-

Note:

Quantity (Number of resources) mentioned in the above table is indicative and bidders are free to propose more number of resources if they think the suggested quantity is not sufficient to meet the desired SLAs.

11.4. *Format for submission of Queries for clarification*

Bidders requiring specific points of clarification may communicate with Departments, during the specified period using the following format:

<<Name & Address>>		
BIDDER'S REQUEST FOR CLARIFICATION		
Name of Organization submitting request	Name & position of person submitting request	Full formal address of the organization including phone, fax and email points of contact
		Tel:
		Fax:
		Email:
S. No	**Bidding Document Reference(s) (section number/ page)**	**Content of RFP requiring Clarification**	**Points of clarification Required**

11.5. *Earnest Money Deposit*

1.   In consideration of _____ (hereinafter called the "Government") represented by _____, on the first part and M/s _____ of _____ (hereinafter referred to as "Bidder") on the Second part, having agreed to accept the Earnest Money Deposit of Rs. _____ (Rupees _____) in the form of Bank Guarantee/ FDR/ A/c payee demand draft for the Request for Proposal for procurement of _____ we _____ (Name of the Bank), (hereinafter referred to as the "Bank"), do hereby undertake to pay to the Government forthwith on demand without any demur and without seeking any reasons whatsoever, an amount not exceeding _____ (Rupees _____) and the guarantee will remain valid up to a period of 225 days from the due date of the tender. It will, however, be open to the Government to return the Guarantee earlier than this period to the Bidder, in case the Bidder does not qualify for the commercial negotiations by the Commercial Negotiations Committee (CNC) as constituted by the Government after a recommendation is made by the CNC on the bid(s) after an evaluation.

2.   In the event of the Bidder withdrawing the tender before the completion of the stages prior to the Commercial negotiations or during the Commercial negotiations, as the case may be, the Guarantee deposited by the Bidder stands forfeited to the Government. We also undertake not to revoke this guarantee during this period except with the previous consent of the Government in writing and we further agree that our liability under the Guarantee shall not be discharged by any variation in the term of the said tender and we shall be deemed to have agreed to any such variation.

3.   No interest shall be payable by the Government to the System Integrator on the guarantee for the period of its currency.

Dated this _____day of _____ 2010

For the Bank of _____

(Agent/Manager)

11.6. *Bid Cover Letter*

[Cover Letter]

[Date]

To,
The Nodal Officer, READi system, (ADGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Dear Sir,

Ref: **RFP for Selection of Bidder for Implementation of READi system**

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for the READi system Project.

We attach hereto the technical response as required by the RFP, which constitutes our proposal.

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to Punjabi Police is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of 6 months from the date fixed for bid opening.

We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed in this RFP.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this   Day of   **2014**

(Signature)   (In the capacity of)

'Department of Revenue, Rehabilitation and Disaster Management, Punjab' and 'Punjab Police'

(Name)

Duly authorized to sign the Tender Response for and on behalf of:

(Name and Address of Company)   Seal/Stamp of bidder

Witness Signature:

Witness Name:

Witness Address:

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I,,……………………………, the Company Secretary of ………………………,   certify   that ………………………………………………………………… who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:

Signature:

(Company Seal)   (Name)

11.7. Advance Bank Guarantee

From:

Bank _____

[Date]

To,
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Dear Sir,

1. With reference to contract No. _____ dated _____ concluded between the _____, hereinafter referred to as 'the Buyer' and M/s _____ _____ hereinafter referred to as the "the Bidder" for the development and supply of _____ as detailed in the above contract which is hereinafter referred to as "the Said Contract" and in consideration of the Buyer having agreed to make an advance payment in accordance with the terms of the Said Contract to the said Bidder, we the _____bank, hereinafter called 'the Bank' hereby irrevocably undertake and guarantee to you that if the Said Bidder would fail to develop and supply the deliverables in accordance with the terms of the Said Contract for any reason whatsoever or fail to perform the Said Contract in any respect or should whole or part of the said on account payments at any time become repayable to you for any reason whatsoever, we shall, on demand and without demur pay to you all and any sum upto a maximum of Rs. _____ (Rupees _____ only) paid as advance to the Said Bidder in accordance with the provisions contained in Clause _____ _____ of the Said Contract.

2. We further agree that the Buyer shall be the sole judge as to whether the Bidder has failed to develop and deliver the deliverables in accordance with the terms of the Said Contract or has failed to perform the said contract in any respect or the whole or part of the advance payment made to Bidder has become repayable to the Buyer and to the extent and monetary consequences thereof by the Buyer.

3. We further hereby undertake to pay the amount due and payable under this Guarantee without any demur merely on a demand from the Buyer stating the amount claimed. Any such demand made on the Bank shall be conclusive and binding upon us as regards the amounts due and payable by us under this Guarantee and without demur. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs _____(Rupees _____ only).

4. We further agree that the Guarantee herein contained shall remain in full force and effect for a period of 30 days from the date of 'Installation' unless the Buyer in his sole discretion discharges the Guarantee earlier.

5. We further agree that any change in the constitution of the Bank or the constitution of the SI shall not discharge our liability hereunder.

6. We further agree that the Buyer shall have the fullest liberty without affecting in any way our obligations hereunder with or without our consent or knowledge to vary any of the terms and conditions of the Said Contract or to extend the time of development/delivery from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyer against the Bidder and either to forbear or enforce any of the terms and conditions relating to the Said Contract and we shall not be relieved from our liability by reason of any such variation or any indulgence or for bearance shown or any act or omission on the Buyer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so relieving us.

7. We lastly undertake not to revoke the Guarantee during the currency of the above said contract except with the prior consent of the Buyer in writing.

Yours faithfully,

for _____ Bank

(Authorized Attorney)

Place : _____

Date : _____

Seal of the Bank

11.8. *Performance Bank Guarantee*

[Date]

To
The Nodal Officer, READi system, (IGP - L&O),
Punjab Police Head Quarters,
Sector - 9,
Chandigarh - 160009

Ref: Request for Proposal (RFP): READi system

Dear Sir,

Sub: PERFORMANCE BANK GUARANTEE for Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, Government of Punjab

WHEREAS

M/s. (name of bidder), a company registered under the Companies Act, 1956, having its registered office at (address of the bidder), (hereinafter referred to as "our constituent", which expression, unless excluded or repugnant to the context or meaning thereof, includes its successors and assignees), agreed to enter into a contract dated …….. (Herein after, referred to as "Contract") with you (Punjab Police and Department of Revenue, Rehabilitation and Disaster Management, GOP) for setting up and maintaining READi project.

We are aware of the fact that as per the terms of the contract, M/s. (name of bidder) is required to furnish an unconditional and irrevocable bank guarantee in your favor for an amount INR XXX (Rupees XXX only), and guarantee the due performance by our constituent as per the contract and do hereby agree and undertake to pay the amount due and payable under this bank guarantee, as security against breach/ default of the said contract by our constituent.

In consideration of the fact that our constituent is our valued customer and the fact that he has entered into the said contract with you, we, (name and address of the bank), have agreed to issue this Performance Bank Guarantee. Therefore, we (name and address of the bank) hereby unconditionally and irrevocably guarantee you as under:

In the event of our constituent committing any breach/default of the said contract, and which has not been rectified by him, we hereby agree to pay you forthwith on demand such sum/s not exceeding the sum of amount INR XXX (Rupees XXX only), without any demur.

Notwithstanding anything to the contrary, as contained in the said contract, we agree that your decision as to whether our constituent has made any such default(s) / breach(es), as aforesaid and the amount or amounts to which you are entitled by reasons thereof, subject to the terms and conditions of the said contract, will be binding on us and we shall not be entitled to ask you to establish your claim or claims under this Performance Bank Guarantee, but will pay the same forthwith on your demand without any protest or demur.

This Performance Bank Guarantee shall continue and hold good till the completion of the period 'Contract Duration + 6 months', subject to the terms and conditions in the said Contract.

We bind ourselves to pay the above said amount at any point of time commencing from the date of the said Contract until the completion of the period Contract Duration + 6 months for the total solution as per said Contract.

We further agree that the termination of the said agreement, for reasons solely attributable to our constituent, virtually empowers you to demand for the payment of the above said amount under this guarantee and we would honor the same without demur.

We hereby expressly waive all our rights to pursue legal remedies against Punjab Police and Department of Revenue, Rehabilitation and Disaster Management.

We the guarantor, as primary obligor and not merely surety or guarantor of collection, do hereby irrevocably and unconditionally give our guarantee and undertake to pay any amount you may claim (by one or more claims) up to but not exceeding the amount mentioned aforesaid during the period from and including the date of issue of this guarantee through the period.

We specifically confirm that no proof of any amount due to you under the contract is required to be provided to us in connection with any demand by you for payment under this guarantee other than your written demand.

Any notice by way of demand or otherwise hereunder may be sent by special courier, telex, fax, registered post or other electronic media to our address, as aforesaid and if sent by post, it shall be deemed to have been provided to us after the expiry of 48 hours from the time it is posted.

If it is necessary to extend this guarantee on account of any reason whatsoever, we undertake to extend the period of this guarantee on the request of our constituent upon intimation to you.

This Performance Bank Guarantee shall not be affected by any change in the constitution of our constituent nor shall it be affected by any change in our constitution or by any amalgamation or absorption thereof or therewith or reconstruction or winding up, but will ensure to your benefit and be available to and be enforceable by you during the period from and including the date of issue of this guarantee through the period.

Notwithstanding anything contained hereinabove, our liability under this Performance Guarantee is restricted to amount INR XXX (Rupees XXX only) and shall continue to exist, subject to the terms and conditions contained herein, unless a written claim is lodged on us on or before the aforesaid date of expiry of this guarantee.

We hereby confirm that we have the power/s to issue this Guarantee in your favor under the Memorandum and Articles of Association/ Constitution of our bank and the undersigned is/are the recipient of authority by express delegation of power/s and has/have full power/s to execute this guarantee under the Power of Attorney issued by the bank in your favor.

We further agree that the exercise of any of your rights against our constituent to enforce or forbear to enforce or any other indulgence or facility, extended to our constituent to carry out the contractual obligations as per the said Contract, would not release our liability under this guarantee and that your right against us shall remain in full force and effect, notwithstanding any arrangement that may be entered into between you and our constituent, during the entire currency of this guarantee.

Notwithstanding anything contained herein:

Our liability under this Performance Bank Guarantee shall not exceed amount INR
XXX (Rupees XXX only);

This Performance Bank Guarantee shall be valid only up to the completion of the period of 'Contract Duration + 6 months' for the Total Solution as per contract; and We are liable to pay the guaranteed amount or part thereof under this Performance Bank Guarantee only and only if we receive a written claim or demand on or before …. (Date) i.e. completion of the period or 'Go-Live' + 66 months for the proposed READi system in Design, Development, Implementation, Operation and Maintenance of the solution.

Any payment made hereunder shall be free and clear of and without deduction for or on account of taxes, levies, imports, charges, duties, fees, deductions or withholding of any nature imposts.

This Performance Bank Guarantee must be returned to the bank upon its expiry. If the bank does not receive the Performance Bank Guarantee within the abovementioned period, subject to the terms and conditions contained herein, it shall be deemed to be automatically cancelled.

This guarantee shall be governed by and construed in accordance with the Indian Laws and we hereby submit to the exclusive jurisdiction of courts of Justice in Punjab for the purpose of any suit or action or other proceedings arising out of this guarantee or the subject matter hereof brought by you may not be enforced in or by such count.

Dated ……………………. this ……….. day …………. 2014.

Yours faithfully,
For and on behalf of the ……………
Bank,

(Signature)
Designation
(Address of the Bank)

Note:
This guarantee will attract stamp duty as a security bond.

A duly certified copy of the requisite authority conferred on the official/s to execute the guarantee on behalf of the bank should be annexed to this guarantee for verification and retention thereof as documentary evidence.

11.9. *Format for Non Disclosure Agreement*

This Non-Disclosure Agreement ("Agreement") is made effective from _____ day of _____, 2014 ("Effective Date")

BETWEEN

The Governor of the State of Punjab exercising executive powers of the Government of Punjab represented through Punjab Police, Government of Punjab hereinafter referred to as "GoP", or *"Police Department"*;

AND

_____, having its registered office at _____, hereinafter referred to as "System Integrator" or "SI".

(GoP and SI shall be individually referred to hereinafter as "party" and collectively as "parties").

Background

GoP and SI are working together in connection with implementation of a state level Integrated Emergency Response System (**READi system**) that would perform the dual function of providing disaster response and communication capabilities as well as acting as an emergency response centre for citizens to call and seek help in case of an emergency situation through Dial 100 system (the "Purpose").

GoP has executed a contract dated _____ ("Master Service Agreement") appointing SI as their System Integrator for the design, development, installation and commissioning of the desired solution for READi system and maintaining it for a period of 5 years and the Scope of Services for the System Integrator in connection with the Purpose.

In connection with the Purpose, it will be necessary for certain confidential information to be disclosed between the parties. GoP and SI agree that the following terms and conditions shall apply when one party discloses confidential information to the other party under this Agreement. The objective of this Agreement is to provide appropriate protection for such information whilst maintaining the parties' ability to conduct their respective businesses.

1.   **Definitions**
In this Agreement, the following terms shall have the following meanings:

"Affiliate" means any entity which from time to time controls, is controlled by or is under common control with the relevant party, where control means having the ability (including without limitation by means of a majority of voting rights or the right to appoint or remove a majority of the board of directors) to control the management and policies of an entity.

"Confidential Information" means any information disclosed by or on behalf of one party (or its Affiliates) to the other party, which (i) if disclosed in tangible form is marked confidential or (ii) if disclosed otherwise than in tangible form is confirmed in writing as being confidential or (iii) if disclosed in tangible form or otherwise, is manifestly confidential.

"Disclosing Party" means the party to this Agreement disclosing the Confidential Information.

"Receiving Party" means the party to this Agreement to whom the Confidential Information is disclosed.

2   **Supply   and   Use   of   Information**

2.1   In consideration of the disclosures contemplated by, and of the respective obligations set out in, this Agreement, the Receiving Party agrees, save as otherwise expressly permitted by this Agreement:

   2.1.1   to keep the Disclosing Party's Confidential Information, confidential;
   2.1.2   not to use the Disclosing Party's Confidential Information except in connection with the Purpose; and
   2.1.3   not to disclose the Disclosing Party's Confidential Information to any third party.

2.2   In the case of Confidential Information that is disclosed only orally, the Disclosing Party shall, within seven days after such disclosure, deliver to the Receiving Party a brief written description of such Confidential Information; identifying the place and date of such oral disclosure and the names of the representatives of the Receiving Party to whom such disclosure was made. It is expected that such information will bear a legend or label of "Confidential" or other similar designation manifesting intent that the information is confidential.

2.3   Each party confirms that it and its Affiliates have the right to disclose any Confidential Information that they provide to the other under this Agreement.

3   Confidentiality

3.1   It is hereby agreed that the discretion applied at the time of disclosure would provide the best protection of Confidential Information of either party. Accordingly, the Disclosing Party shall ensure that only such Confidential Information which serves the Purpose shall be disclosed to the Receiving Party.

3.2   The Receiving Party shall protect the Confidential Information of the Disclosing Party through the exercise of the precautions set out in this Agreement and with no less protection and care than it customarily uses in preserving and safeguarding its own confidential information.

3.3   The Receiving Party agrees that it shall keep the Confidential Information of the Disclosing Party confidential in accordance with the terms of this Agreement subject to the exceptions in clause 3.4 below, and the permitted disclosures in clause 3.5 below.

3.4   This Agreement shall not apply to Confidential Information which:

   3.4.1   is in or enters the public domain other than as a result of a breach of an obligation by the Receiving Party under this Agreement; or
   3.4.2   is or has been acquired from a third party who owes no obligation of confidence in respect of the information; or
   3.4.3   is or has been independently developed by the Receiving Party or was known to it prior to receipt; or
   3.4.4   the Disclosing Party discloses to any person or entity without confidentiality restrictions.

3.5   Notwithstanding clause 2.1 above, the Receiving Party may disclose any Confidential Information of the Disclosing Party in the following circumstances:

   3.5.1   with the prior written consent of the Disclosing Party; or
   3.5.2   on a need-to-know basis, internally within the Receiving Party's organization; or
   3.5.3   to its insurers or legal advisers in relation to any actual, potential or threatened dispute in connection

with this Agreement; or

3.5.4   to the extent such disclosure is required by any court of competent jurisdiction, or by a governmental or regulatory authority, or a professional body to which SI or their respective members or employees/staff belong, or where there is a legal duty, requirement or professional obligation to disclose provided that, where reasonably practicable (and without breaching any legal, regulatory or professional requirement) the Receiving Party gives prior prompt notice in writing to the Disclosing Party of such disclosure.

4   Term

Upon signature by both the parties, this Agreement shall come into effect from the Effective Date and shall continue in full force and effect for a term of 5 years and 5 months from the date of execution of this Agreement, subject to the Service Agreement (if any) between the parties, in relation to the Purpose, which includes obligations relating to the protection of the parties' confidential information.

5   General

5.1   No delay by either party in enforcing any of the terms or conditions of this Agreement shall affect or restrict that party's rights and powers arising under this Agreement. No waiver or amendment of any term or condition of this Agreement will be effective unless made in writing and signed by both parties.

5.2   Subject to the Service Agreement (if any), this Agreement forms the entire agreement between the parties relating to Confidential Information disclosed in connection with the Purpose and it replaces and supersedes any previous proposals, correspondence, understandings or other communications whether written or oral relating to the subject matter hereof.

5.3   If any provision of this Agreement is determined to be invalid in whole or in part, the remaining provisions shall continue in full force and effect as if this Agreement had been executed without the invalid provision.

6   Governing law and jurisdiction

This Agreement is governed by and shall be construed in accordance with the laws of India. In the event of dispute, the parties shall attempt to resolve the dispute in good faith by senior level negotiations. In case, any such difference or dispute is not amicably resolved within forty five (45) days of such referral for negotiations, it shall be resolved through arbitration, in India, in accordance with the Arbitration and Conciliation Act, 1996. The venue of arbitration in India shall be Punjab/ Chandigarh. Subject to the foregoing provisions on alternative dispute resolution, the competent courts of Chandigarh shall have jurisdiction in connection with this Agreement. Any claim for damages under this Agreement shall be restricted to direct damages only.

The parties have caused this Agreement to be executed by their duly authorized representatives, and made effective from the Effective Date first written above.

Signed, sealed and delivered

By ------------------------

----------------------------,

For and on behalf of the *Governor of the*

State of Punjab

Signed, sealed and delivered

By ----------------------------

For and on behalf of the "System Integrator",

<u>Witnesses:</u>

(1)

(2)

Annexure 1: Indicative Technical Specifications

This section presents the indicative minimum technical specifications for the project.

1.   Database, AVLS ,Web/ Message ,Voice Logger Server, ACD & CTI   Server Specifications for CAD applications

The servers should be Rack mounted with one 19" Color TFT Monitor.

The minimum hardware specifications for servers are as follows, however bidder should select as per functional requirement of project.

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Processor	Latest series/ generation of 32/64 bit x86/RISC/EPIC/CISC processor(s) with Four (or higher) Cores , Clock Speed 2.4 GHz or Higher , 12 MB Cache or Higher	
2.	Chipset	Server Class Chipset	
3.	RAM	Minimum 32 GB Memory	
4.	Internal Storage	500x5 GB SAS / SATA (15k rpm) disk or Higher	
5.	Network interface	Dual Integrated Gigabit Ethernet ports Optional : Fiber channel adapter (if required)	
6.	Power supply	Dual Redundant Power Supply	
7.	RAID support	As per requirement/solution	
8.	Operating System	Licensed version of 32/64 bit latest version of Linux/ Unix/Microsoft® Windows based Operating system, matching with the processor(s) (i.e. 64 bit processor server to have 64-bit OS)	
9.	Media Drive	DVD Drive R/W	
10.	Form Factor	Rack mountable/ Blade	

Note: For HDD, Color Monitor. Mouse and Key board, Model and make to be specified by the bidder.

2.   Workstation Hardware Specifications

The workstations shall be of the following configuration, however bidder should select as per functional requirement of project.

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Processor	Latest generation Intel Core™ i7/AMD-A10 or Higher	
2.	Chipset	Intel Q77 / AMD A75 or Higher	
3.	RAM	Minimum 4 GB Memory	
4.	Graphics card	Integrated Graphics card	
5.	HDD	320 GB SATA Hard drive @7200 rpm	
6.	Media Drive	NO CD / DVD Drive	
7.	Network interface	1000BaseT, Gigabit Ethernet	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
8.	Audio	Line/Mic IN, Line-out/Spr Out (3.5 mm)	
9.	USB ports	Minimum 6 USB ports (out of that 2 in front)	
10.	Keyboard	104 keys minimum OEM keyboard	
11.	Mouse	2 button optical scroll mouse (USB)	
12.	Accessories	Headphone & Microphone	
13.	Monitor	19" LCD monitor, Minimum 1920 x1080 resolution, 5 ms or better response time	
14.	Operating System	64 bit pre-loaded OS with recovery disc	

Note: For HDD, Color Monitor. Mouse and Key board, Model and make to be specified by the Bidder

3. **Network L2 Access Switch 8/24 Port**

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Ports	• Min 8/24 10/100 Base-TX Ethernet ports and extra 2 nos. of 10/100/1000 Base-Tx ports • Ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps, half-duplex or full duplex and flow control for half-duplex ports.	
2.	Switch type	Layer 2	
3.	MAC	Support 4K MAC address.	
4.	Backplane	4 Gbps (8 port), 8 Gbps (24 ports) or more Switching fabric capacity	
5.	Forwarding rate	Packet Forwarding Rate should be 2 Mpps (8 port), 5 Mpps (24 port) or better	
6.	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks	
7.	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.	
8.	Protocols	• Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • Support based on 802.1p priority bits with at least 8 queues • DHCP support & DHCP snooping/relay/optional 82/ server support • Shaped Round Robin (SRR) or WRR scheduling support. • Support for Strict priority queuing & Sflow • Support for IPV6 ready features with dual stack • Support upto 255 VLANs and upto 4K VLAN IDs	
9.	Access Control	• Support port security • Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication	
10.	VLAN	• Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN • The switch must support dynamic VLAN Registration or equivalent	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
		• Dynamic Trunking protocol or equivalent	
11.	Protocol and Traffic	• Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number	
12.	Management	• Switch needs to have RS-232 console port for management via a console terminal or PC • Must have support SNMP v1,v2 and v3 • Should support 4 groups of RMON • Should have accessibility using Telnet, SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface	

4. **Network L3 Access Switch 48 Port**

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Ports	• Min 48 10/100/1000 Base-TX Ethernet ports and extra 2 nos. of Base-SX/LX ports • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps, half-duplex or full duplex and flow control for half-duplex ports.	
2.	Switch type	Layer 3	
3.	MAC	Support 8K MAC address.	
4.	Backplane	40 Gbps or more Switching fabric capacity	
5.	Forwarding rate	Packet Forwarding Rate should be 40.0 Mpps or better	
6.	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks	
7.	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.	
8.	Protocols	• Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • Support based on 802.1p priority bits with at least 8 queues • DHCP support & DHCP snooping/relay/optional 82/ server support • Shaped Round Robin (SRR) or WRR scheduling support. • Support for Strict priority queuing & Sflow • Support for IPV6 ready features with dual stack • Support upto 255 VLANs and upto 4K VLAN IDs	
9.	Access Control	• Support port security	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
		• Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication	
10.	VLAN	• Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN • The switch must support dynamic VLAN Registration or equivalent • Dynamic Trunking protocol or equivalent	
11.	Routing and IP Services	• Should support routing protocols like BGP, ISPF, IS-IS, VRRP, IPv6, Multicasting, IGMP, DHCP etc.	
12.	Protocol and Traffic	• Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number	
13.	Management	• Switch needs to have RS-232 console port for management via a console terminal or PC • Must have support SNMP v1,v2 and v3 • Should support 4 groups of RMON • Should have accessibility using Telnet, SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface	

5. 24 Port Core, DC Distribution Switch

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Ports	• Min 24 10/100/1000 Base-TX Ethernet ports and extra m 2 nos. of Base-SX/LX ports • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps, half-duplex or full duplex and flow control for half-duplex ports.	
2.	Switch type	Layer 3	
3.	MAC	Support 8K MAC address.	
4.	Backplane	88 Gbps or more Switching fabric capacity	
5.	Forwarding rate	Packet Forwarding Rate should be 65.0 Mpps or better,	
6.	Forwarding Capability	Should support Non-blocking and distributed forwarding hardware architecture	
7.	Forwarding Capability	All interfaces should provide wire speed forwarding for both OFC and copper modules	
8.	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks	
9.	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
10.	Protocols	• Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • Support based on 802.1p priority bits with at least 8 queues • DHCP support & DHCP snooping/relay/optional 82/ server support • Shaped Round Robin (SRR) or WRR scheduling support. • Support for Strict priority queuing & Sflow • Support for IPV6 ready features with dual stack • Support upto 255 VLANs and upto 4K VLAN IDs	
11.	Access Control	• Support port security • Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication	
12.	VLAN	• Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN • The switch must support dynamic VLAN Registration or equivalent • Dynamic Trunking protocol or equivalent	
13.	Routing and IP Services	• Should support routing protocols like BGP, ISPF, IS-IS, VRRP, IPv6, Multicasting, IGMP, DHCP etc.	
14.	Protocol and Traffic	• Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number	
15.	Management	• Switch needs to have RS-232 console port for management via a console terminal or PC • Must have support SNMP v1,v2 and v3 • Should support 4 groups of RMON • Should have accessibility using Telnet, SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface	

6. EPABX Specifications

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Technology	The system should support IP/SIP as well as TDM.	
2.	Interface	Should be compatible with all telecom interfaces/Telecom Service providers	
3.	Type of Interface	It should compatible with ISDN PRI, Analog trunks, H.323 trunk, SIP trunk. It should also provide facility to integrate with GSM, Radio devices.	
4.	No. of Lines - Analog trunk and ISDN PRI lines	Bidder to specify	
5.	Type of Extension Support	Analog, Digital, IP,SIP(3rd party SIP phone), Wireless IP Phone	
6.	Expansion of Extensions	If analog extensions modules for 8, 16, 24 or 32 ports. IP Telephone extensions are expanded based on quantities of data switch ports available. The vendor can provide their own data switches	
7.	Maximum loop resistance for analog extensions	Min 2500 ohms including telephone	
8.	Requirements at the time of supply	Minimum 1 ISDN PRI, 8 trunk lines, 16 IP extension ports, 12 Analog extension ports. Integrated voice messaging system with minimum 4 channel concurrent access for - IVRS function (integrated or External).	
9.	Contract centre expansion available (Max capacity)	It must support at least 30 Control Centre personnel.	
10.	Maximum loop resistance for analog trunk lines	1200 ohms at -48 Volts DC	
11.	Support for Digital Trunk Lines	To be provided.	
12.	a. It should support Industry standard protocols for Communication.	Bidder can specify latest IP Standard	
13.	Support Standard SIP based IP Platform, Session Initiation Protocol over an MPLS or Multiple Label Switching Protocol for connectivity of office to office communications,	Bidder to specify	
14.	Support for ACD Call Centre with CTI and advance call routing	To be provided.	
15.	Should support IP Telephony solution and SIP	Bidder to specify	
16.	Battery backup that should be configured for 2 hours of up time based on the hardware that is	Bidder to specify	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
	purchased.		
17.	Design of EPABX System	The IP PBX should be modular, expandable, embedded IP server-gateway based architecture, having Unix/Linux or equivalent operating system software based platform. The system shall have hot standby arrangement so that it should continue to operate in case of failure/maintenance of main processor/power supply/interfacing card/CPU etc. The system should support IP/SIP as well as TDM.	
18.	Conferencing	Conference bridge that can manage multiple calls (min 5) simultaneous conferees.	
19.	Working on 230v AC mains and DC Voltage	Bidder to specify voltage and current requirements in both AC & DC supply	
20.	IP telephone should be standard SIP phones with HD voice support, Soft SIP client can also be used for the ACD agents	Bidder to specify	
21.	Analog phone shall work on 2 wires - IP phone should be standard SIP based with HD voice support	Bidder to specify	
22.	Provide industry tested standardized switches	Bidder to specify	

Voice Logging System Support

#	Description		Compliance Yes/No
1.	The recording shall be done from IP & Analog extension side. It shall be a built-in voice logger to EPABX		
2.	The recorded voice shall be indexed and linked with the Challan Number. The voice logger shall have the CTI capabilities. It should automatically track the incoming call. The recording shall go on till the t shall be possible to configure automatic voice recording on answering of the call by the personnel.		
3.	Shall be based on server configuration run the Voice Logger	Bidder to specify	
4.	Combo writer with latest read, write speeds	Bidder to specify	
5.	Voice Logger software compatible with the Call Centre Package	Bidder to specify	

ACD Software for IP EPABX System

#	Features of ACD Software	Description	Compliance (Yes/No)
1.	Inbuilt Interactive Voice Response		
	- Inbuilt PRI Ports		
2.	Call blacklist		
3.	Uniform Call Distribution		

#	Features of ACD Software	Description	Compliance (Yes/No)
4.	Flash Operating Panel		
5.	Soft phone extension		
6.	Compatible to IP Phone		
7.	IP Extensions		
8.	Ring Groups		
9.	Call Queue		
10.	Automatic Route Selection		
11.	Toll Restriction		
12.	Call Detail Record Logging		
13.	Line Appearance		
14.	Multiple Language Prompts for IVR		
15.	Call Forwarding , Waiting		
16.	Call Conference		
17.	Call Park		
18.	Public Announcement		
19.	Call Screening		
20.	InterCom		
21.	Call Pickup		
22.	Rapid Backup Recovery		
23.	Remote Management		
24.	Backup & Primary Server		
25.	Automatic Failover		
26.	Standard SIP based Architecture		
27.	Inbuilt Recording & Storage		
28.	Inbuilt Hi-end Processor for Primary & Secondary		
29.	In built RAM for Primary & Secondary		
30.	Inbuilt Call Reporting Software		
31.	Hard disk internal Mirroring		
32.	Rack mountable		
33.	CRM for Caller Support		
34.	Task Creation for every IVR call if not attended by the AGENT		
35.	Task delegation		
36.	Task on Smart Phone		
37.	Task Escalation		
38.	Task Completion		
39.	Task Monitoring		

7. Router with firewall or UTM (Unified Threat Management System) (DERC Locations)

#	Minimum Specifications	Conformance (Yes/No)
	General features:	
1.	Device should have a modular architecture with minimum additional 1 slot for different LAN & WAN I/Os	
2.	Device should have be able to provide the defined performance level as per RFP specs for each of the asked services	
3.	Hardware and interface requirements : *Device should have at least 2 x 10/100/1000 Mbps WAN ports, 1 x 10/100/1000 LAN ports and one sync serial WAN port:* *The Device should support interfaces like E1, Serial V.35, 10/100/1000 Base-Tx, 10/100 Base-Tx, GE SFP Ethernet,*	
	Performance requirements	
4.	The Device should have a minimum Routing performance of 200 Kpps	
	Quality of Service (QoS) requirements	
5.	It should be possible to configure maximum bandwidth and guaranteed bandwidth	
6.	Devices should support Queuing based on VLAN, or filters	
	Routing protocol support	
7.	The Device should support IPv4 and IPv6 routing	
8.	The Device should support VRRP or equivalent	
9.	The Device should support Static Routes	
10.	The Device should support RIPv1 & RIPv2	
11.	The Device should have OSPFv2, OSPFv3 and IS-IS routing	
12.	The Device should support BGP & BGPv4+	
13.	The Device should support Policy Based Routing	
14.	The Device should support Routing over IPSec Tunnels	
15.	Devices should support IPv6 Routing features	
	Multicast Features	
16.	IPv4 Multicast features	
17.	IGMP v1/v2/v3	
18.	PIM-SM	
19.	Multicast over GRE Tunnels	
	Security features	
20.	Devices should support AAA using RADIUS or TACACS	
21.	Devices should support Packet Filters	

#	Minimum Specifications	Conformance (Yes/No)
22.	Devices should have Stateful Firewall features	
23.	Devices should support Network attack detection	
24.	Devices should support DoS and DDoS protections	
25.	Devices should support Tunnels (GRE, IP-in-IP, IPSec)	
26.	Devices should have DES (56-bit), 3DES (168-bit), AES (256-bit) encryption support	
27.	Devices should support MD5 and SHA-1 authentication	
28.	Devices should have role based access mechanisms.	
29.	Devices should support Network address translation (NAT).	
	Management and Troubleshooting	
30.	Device should have Console, Telnet and Web for management	
31.	Devices should support Software upgrades through Web	
32.	Devices should support SNMPv2 and SNMPv3	
33.	Real-time traffic-interface/sub interface statistics.	
34.	Real-Time Performance Monitoring—service-level agreement verification probes/alerts	

8. Router MPLS Connectivity (SERC Location)

#	Minimum Specifications	Conformance (Yes/No)
	General features:	
1.	Router should have a modular architecture with minimum four free slots for WAN connectivity and future scalability.	
2.	Hardware and interface requirements : *Routers should have at least 6 x 10/100/1000 Base-Tx WAN/LAN ports.*	
	Performance requirements	
3.	The device should have a minimum Routing performance of 600 Kpps	
	Quality of Service (QoS) requirements	
4.	Routers should support Class-based queuing with prioritization	
5.	It should be possible to configure maximum bandwidth and guaranteed bandwidth	
6.	Routers should support Queuing based on VLAN, or filters	
	Routing protocol support	
7.	The Router should support IPv4 and IPv6 routing	
8.	The Router should support VRRP or equivalent	
9.	The Router should support Static Routes	
10.	The Router should support RIPv1 & RIPv2	
11.	The Router should have OSPFv2, OSPFv3, and IS-IS routing	
12.	The Router should support BGP & BGPv4+	

#	Minimum Specifications	Conformance (Yes/No)
13.	The Router should support Policy Based Routing	
14.	The Router should support Routing over IPSec Tunnels	
15.	Routers should support IPv6 Routing features	
	Multicast Features	
16.	IPv4 Multicast features	
17.	IGMP v1/v2/v3	
18.	PIM-SM	
	Security features	
19.	Routers should support AAA using RADIUS or TACACS	
20.	Routers should support Packet Filters	
21.	Routers should support Network attack detection	
22.	Routers should support DoS and DDoS protections	
23.	Routers should support Tunnels (GRE, IP-in-IP, IPSec)	
24.	Routers should have DES (56-bit), 3DES (168-bit), AES (256-bit) encryption support	
25.	Routers should support Network address translation (NAT).	
	Management and Troubleshooting	
26.	Router should have Console, Telnet and Web for management	
27.	Routers should support Software upgrades through Web	
28.	Routers should support SNMPv2 and SNMPv3	
29.	Real-time traffic-interface/sub interface statistics.	
30.	Real-Time Performance Monitor—service-level agreement verification probes/alerts	

9. Router Internet Connectivity (SERC Location)

#	Minimum Specifications	Conformance (Yes/No)
	General features:	
1.	Router should have a modular architecture with minimum two free slots for WAN connectivity and future scalability.	
2.	Hardware and interface requirements : *Routers should have at least 4 x 10/100/1000 Mbps WAN/LAN ports.*	
	Performance requirements	
3.	The device should have a minimum Routing performance of 300 Kpps	
	Quality of Service (QoS) requirements	
4.	Routers should support Class-based queuing with prioritization	
5.	It should be possible to configure maximum bandwidth and guaranteed bandwidth	
6.	Routers should support Queuing based on VLAN, or filters	
	Routing protocol support	
7.	The Router should support IPv4 and IPv6 routing	
8.	The Router should support VRRP or equivalent	
9.	The Router should support Static Routes	
10.	The Router should support RIPv1 & RIPv2	
11.	The Router should have OSPFv2, OSPFv3, and IS-IS routing	
12.	The Router should support BGP & BGPv4+	
13.	The Router should support Policy Based Routing	
14.	The Router should support Routing over IPSec Tunnels	

15.	Routers should support IPv6 Routing features	
	Multicast Features	
16.	IPv4 Multicast features	
17.	IGMP v1/v2/v3	
18.	PIM-SM	
	Security features	
19.	Routers should support AAA using RADIUS or TACACS	
20.	Routers should support Packet Filters	
21.	Routers should support Network attack detection	
22.	Routers should support DoS and DDoS protections	
23.	Routers should support Tunnels (GRE, IP-in-IP, IPSec)	
24.	Routers should have DES (56-bit), 3DES (168-bit), AES (256-bit) encryption support	
25.	Routers should support Network address translation (NAT).	
	Management and Troubleshooting	
26.	Router should have Console, Telnet and Web for management	
27.	Routers should support Software upgrades through Web	
28.	Routers should support SNMPv2 and SNMPv3	
29.	Real-time traffic-interface/sub interface statistics.	
30.	Real-Time Performance Monitor—service-level agreement verification probes/alerts	

10. Unified Threat Management System (External)

#	Quantitative Requirement	Compliance (Yes/No)
1.	General	
	a) Hardware based device for network protection with firewall, Antivirus, Anti Spyware, Anti spam, Intrusion Protection System (IPS) and Content Filtering capabilities.	
	b) The device should be capable of being managed from a central location for configuration for, reporting and updates.	
	c) The solution should not be based upon proprietary ASICs and the solution should not use ASICs for any feature and / or application.	
	d) The device should belong to a family of products that attains Common Criteria EAL 4+ certification.	
	e) The solution should have a storage capacity of 1x250GB HDD	
	f) Should provide an Http, Https, SSH, SNMP based management console for managing and configuring various components of the appliance or it should support management which should conforms to ISO Norm 9241 standard.	
	g) Single hardware box should provide firewall, VPN, IPS, SSL IPSec VPN, anti-Spyware & anti Worm functionality.	
	h) Licensing should be as per device and Not user/ IP based (should support unlimited users & devices).	
	i) The communication between all the UTM System and GUI/ WebUI Console should be encrypted with SSL or PKI.	
	j) Be easily backup or restored via GUI and CLI to/from local PC, remote centralized management or USB disk.	
	k) The proposed system shall have built-in high availability (HA) features	

#	Quantitative Requirement	Compliance (Yes/No)
	activated from the day one.	
	l) All applications should be supported for filtering like Telnet, FTP, SMTP, HTTP, DNS, ICMP, DHCP, RPC, SNMP, HTTPS, IMAP, NFS etc.	
	m) The system shall support profile base login account administration, offering gradual access control such as only to Policy Configuration & Log Data Access.	
	n) The proposed solution should support session time out & idle time out facility to forcefully logout the users.	
	o) The proposed solution should support ACL based user creation for administration purpose.	
2.	**Firewall Component.**	
	a. Stateful and deep packet inspection firewall.	
	b. Should prevent DoS, DDoS& flooding attacks.	
	c. Multiple Zones security with separate rules for each zone.	
	d. Rules based on combination of Source and destination IP address / Zone and protocol.	
	e. Support NAT, H.323 & SIP NAT Traversal.	
	f. Firewall should allow the multicast traffic to pass through the firewall system.	
	g. The firewall should be supplied with the support for RIP v2 and OSPF.	
	h. Firewall should support voice based protocols like H.323, SIP etc.	
	i. The firewall should have to provide QoS services to ensure guaranteed bandwidth for mission critical traffic/ application.	
	j. The Firewall should support IEEE 802.1q VLAN Tagging with minimum 256 VLANs supported (in NAT/Route mode).	
	k. Should support application control.	
	l. Should support traffic shaping.	
	m. The firewall must support Active-Passive redundancy.	
	n. It should be possible to operate the firewall in a "bridging" or "routing and NATing mode".	
	o. The Firewall should support authentication protocols like AD, LDAP and should support local data base.	
	p. The proposed solution should support user/IP functionality to map username with IP address / for security reason.	
	q. Should support Inspection of HTTP / HTTPS proxy traffic.	
	r. The proposed solution should be VPNC/ICSA/ certified or any other equivalent certification like EAL4+	
	s. The proposed solution should support IPSec (Site-to-Site, Client-to-site), PPTP VPN connection.	
	t. The proposed solution should support VPN failover for redundancy purpose where more than one connection are in group &(bb) if one connection goes down it automatically switch over to another connection for zero downtime.	
	u. The proposed solution should support VPN failover for redundancy purpose where more than one connection are in group & if one connection goes down it automatically switch over to another connection for zero downtime.	
	v. The proposed solution should support Threat free IPSec/PPTP VPN tunnel.	
	w. The proposed solution must provide on appliance SSL-VPN/L2TPIPSec VPN solution.	
3.	**Antivirus Component.**	

#	Quantitative Requirement	Compliance (Yes/No)
	a. Antivirus scanner should be able to scan POP3, SMTP, FTP, HTTP traffic including compressed packets.	
	b. Detects and removes viruses, worms, spyware and Trojans	
	c. Should provide ability to allow, block and intercept file based upon extension for HTTP.	
	d. Should be capable scanning Encrypted VPN tunnel traffic originating from the unit for malware.	
	e. The Antivirus capability shall minimally attain Internet Computer Security Association (ICSA) AV Certification or equivalent.	
	f. AV Signatures can be updated in 2 different ways: manually, or via automatic pull technology.	
	g. The proposed solution should support Main mode & Aggressive mode for phase 1 negotiation.	
	h. The proposed Integrated Anti-Virus should have at least one Certification as part of a UTM viz. NSS, Web coast Checkmark/ICSA or equivalent.	
	i. The proposed solution should scan http/https, FTP, SMTP, POP3 etc traffic based on username, source/destination IP address or URL based regular expression.	
	j. The proposed solution should provide historical reports based on username, IP address, Sender, Recipient & Virus Names.	
	k. The proposed solution should have an integrated Anti Spam solution.	
	l. Heuristic analysis.	
4.	**IPS Component.**	
	a. Effective against blended threats.	
	b. Automatic attack database update.	
	c. Blocks anonymous proxies with HTTP proxy signatures.	
	d. Custom Signature support.	
	e. Supports attack recognition inside Ipv6 encapsulated packets.	
	f. Security check updates do not require reboot of the unit.	
	g. The device shall allow administrators to create Custom IPS signatures.	
	h. Signature based detection using updated database.	
	i. The proposed solution should be able to protect web servers hosted in the network against SQL Injections, Cross-Site Scripting	
	j. (XSS), Session Hijacking, URL Tampering, Cookie Poisoning with Extensive reporting and Logging.	
5.	**Content & Application Filtering.**	
	a. URL Filtering for HTTP & HTTPS protocols.	
	b. Web Content Filtering (Group and user – based filtering policies).	
	c. Prevents downloads of streaming media selectively.	
	d. Block Based on URL, Keyword or Phrases.	
	e. Filters web contents.	
6.	**Interfaces.**	
	a. 04 x 10/100/100 Base-Tx Ports.	
	b. Should contain Configurable Internal/ DMZ/ WAN ports.	
	c. should have 2 UB Ports	
	d. 1 X Console interface.	
7.	**System Performance.**	
	a. 1mn Concurrent connections.	

#	Quantitative Requirement	Compliance (Yes/No)
	b. 5000 New sessions per second processing.	
	c. 1.7 Gbps of Firewall throughput.	
	d. 250 Mbps of IPS throughput.	
	e. The UTM should support inbuilt support for IPSEC VPN with DES/ 3DES and AES support.	
	f. Support 100 mbps of 3DES/AES VPN Throughput.	
8.	**Networking.**	
	a. Should also be able to handle dynamic routing for IPv4 (such as RIP , OSPF) and Ipv6 (such as RIPng, and OSPFv3)	
	b. Multiple WAN and WAN Backup should be supported	
9.	**High Availability.**	
	a. Active - Passive.	
	b. Stateful link failover.	
	c. Device and link Failure Detection.	
	d. The proposed solution should send notification to admin on change of appliance status in High Availability.	
	e. The proposed solution should support automatic & manual synchronization between appliances in cluster.	
10.	**User Authentication Options.**	
	a. Built in Database.	
	b. AD/LDAP Integration.	
11.	**Reporting and Logging Console.**	
	a. The hardware based reporting and logging device must be capable of generating both generic and user based reports.	
	b. Graphical real-time and historical monitoring.	
	c. Email Notification of events.	
	d. SNMP support.	
	e. Syslog server support.	
12.	**Management and Administration Options.**	
	a. WebUI (HTTP/ HTTPS) and Command Line Interface.	
	b. Role-based administration.	
	c. Multiple Administrators and User Levels.	
	d. Upgrades & changes via Web UI.	
	e. Capable of being centrally managed including configuration and updates.	
13.	**Power.**	
	Input voltage 230V AC, 50 Hz. (Dual hot swappable)	
14.	**Compliance**	
	a. FCC or equivalent.	
	b. CE or equivalent.	
15.	**Central Managing Console.**	
	a. Central console to centrally configure and manage UTMs on the Intranet.	
	b. Deploy Antivirus, Intrusion Prevention, Web Filtering and other updates from a central location.	
	c. Enforcement of global policies for Firewall, Intrusion Prevention System and Antivirus scanning centrally.	
	d. Allows for centralized or distributed role based management.	

11. Unified Threat Management System (Internal)

#	Minimum Specifications	Conformance (Yes/No)
1.	General	
	a. Hardware based device for network protection with firewall, Antivirus, Anti Spyware, Anti spam, Intrusion Protection System (IPS) and Content Filtering capabilities.	
	b. The device should be capable of being managed from a central location for configuration for, reporting and updates.	
	c. The solution should not be based upon proprietary ASICs and the solution should not use ASICs for any feature and / or application.	
	d. The device should belong to a family of products that attains Common Criteria EAL 4+ certification.	
	e. The solution should have a storage capacity of 1x250GB HDD	
	f. Should provide an Http, Https, SSH, SNMP based management console for managing and configuring various components of the appliance or it should support management which should conforms to ISO Norm 9241 standard.	
	g. Single hardware box should provide firewall, VPN, IPS, SSL IPSec VPN, anti-Spyware & anti Worm functionality.	
	h. Licensing should be as per device and Not user/ IP based (should support unlimited users & devices).	
	i. The communication between all the UTM System and GUI/ WebUI Console should be encrypted with SSL or PKI.	
	j. Be easily backup or restored via GUI and CLI to/from local PC, remote centralized management or USB disk.	
	k. The proposed system shall have built-in high availability (HA) features activated from the day one.	
	l. All applications should be supported for filtering like Telnet, FTP, SMTP, HTTP, DNS, ICMP, DHCP, RPC, SNMP, HTTPS, IMAP, NFS etc.	
	m. The system shall support profile base login account administration, offering gradual access control such as only to Policy Configuration & Log Data Access.	
	n. The proposed solution should support session time out & idle time out facility to forcefully logout the users.	
	o. The proposed solution should support ACL based user creation for administration purpose.	
2.	**Firewall Component.**	
	x. Stateful and deep packet inspection firewall.	
	y. Should prevent DoS, DDoS& flooding attacks.	
	z. Multiple Zones security with separate rules for each zone.	
	aa. Rules based on combination of Source and destination IP address / Zone and protocol.	
	bb. Support NAT, H.323 & SIP NAT Traversal.	
	cc. Firewall should allow the multicast traffic to pass through the firewall system.	
	dd. The firewall should be supplied with the support for RIP v2 and OSPF.	
	ee. Firewall should support voice based protocols like H.323, SIP etc.	
	ff. The firewall should have to provide QoS services to ensure guaranteed bandwidth for mission critical traffic/ application.	
	gg. The Firewall should support IEEE 802.1q VLAN Tagging with minimum 256	

#	Minimum Specifications	Conformance (Yes/No)
	VLANs supported (in NAT/Route mode).	
hh.	Should support application control.	
ii.	Should support traffic shaping.	
jj.	The firewall must support Active-Passive redundancy.	
kk.	It should be possible to operate the firewall in a "bridging" or "routing and NATing mode".	
ll.	The Firewall should support authentication protocols like AD, LDAP and should support local data base.	
mm.	The proposed solution should support user/IP functionality to map username with IP address / for security reason.	
nn.	Should support Inspection of HTTP / HTTPS proxy traffic.	
oo.	The proposed solution should be VPNC/ICSA/ certified or any other equivalent certification like EAL4+	
pp.	The proposed solution should support IPSec (Site-to-Site, Client-to-site), PPTP VPN connection.	
qq.	The proposed solution should support VPN failover for redundancy purpose where more than one connection are in group &(bb) if one connection goes down it automatically switch over to another connection for zero downtime.	
rr.	The proposed solution should support VPN failover for redundancy purpose where more than one connection are in group & if one connection goes down it automatically switch over to another connection for zero downtime.	
ss.	The proposed solution should support Threat free IPSec/PPTP VPN tunnel.	
tt.	The proposed solution must provide on appliance SSL-VPN/L2TPIPSec VPN solution.	
3.	**Antivirus Component.**	
m.	Antivirus scanner should be able to scan POP3, SMTP, FTP, HTTP traffic including compressed packets.	
n.	Detects and removes viruses, worms, spyware and Trojans	
o.	Should provide ability to allow, block and intercept file based upon extension for HTTP.	
p.	Should be capable scanning Encrypted VPN tunnel traffic originating from the unit for malware.	
q.	The Antivirus capability shall minimally attain Internet Computer Security Association (ICSA) AV Certification or equivalent.	
r.	AV Signatures can be updated in 2 different ways: manually, or via automatic pull technology.	
s.	The proposed solution should support Main mode & Aggressive mode for phase 1 negotiation.	
t.	The proposed Integrated Anti-Virus should have at least one Certification as part of a UTM viz. NSS, Web coast Checkmark/ICSA or equivalent.	
u.	The proposed solution should scan http/https, FTP, SMTP, POP3 etc traffic based on username, source/destination IP address or URL based regular expression.	
v.	The proposed solution should provide historical reports based on username, IP address, Sender, Recipient & Virus Names.	
w.	The proposed solution should have an integrated Anti Spam solution.	
x.	Heuristic analysis.	
4.	**IPS Component.**	

#	Minimum Specifications	Conformance (Yes/No)
	k. Effective against blended threats.	
	l. Automatic attack database update.	
	m. Blocks anonymous proxies with HTTP proxy signatures.	
	n. Custom Signature support.	
	o. Supports attack recognition inside Ipv6 encapsulated packets.	
	p. Security check updates do not require reboot of the unit.	
	q. The device shall allow administrators to create Custom IPS signatures.	
	r. Signature based detection using updated database.	
	s. The proposed solution should be able to protect web servers hosted in the network against SQL Injections, Cross-Site Scripting	
	t. (XSS), Session Hijacking, URL Tampering, Cookie Poisoning with Extensive reporting and Logging.	
5.	**Content & Application Filtering.**	
	f. URL Filtering for HTTP & HTTPS protocols.	
	g. Web Content Filtering (Group and user – based filtering policies).	
	h. Prevents downloads of streaming media selectively.	
	i. Block Based on URL, Keyword or Phrases.	
	j. Filters web contents.	
6.	**Interfaces.**	
	e. Min 0 06 x 10/100/1000 Base-Tx Ports.	
	f. Should contain Configurable Internal/ DMZ/ WAN ports.	
	g. should have 2 UB Ports	
	h. 1 X Console interface.	
7.	**System Performance.**	
	g. 2mn Concurrent connections.	
	h. 20000 New sessions per second processing.	
	i. 4 Gbps of Firewall throughput.	
	j. 1 Gbps of IPS throughput.	
	k. The UTM should support inbuilt support for IPSEC VPN with DES/ 3DES and AES support.	
	l. Support 200 mbps of 3DES/AES VPN Throughput.	
8.	**Networking.**	
	c. Should also be able to handle dynamic routing for IPv4 (such as RIP , OSPF) and Ipv6 (such as RIPng, and OSPFv3)	
	d. Multiple WAN and WAN Backup should be supported	
9.	**High Availability.**	
	f. Active - Passive.	
	g. Stateful link failover.	
	h. Device and link Failure Detection.	
	i. The proposed solution should send notification to admin on change of appliance status in High Availability.	
	j. The proposed solution should support automatic & manual synchronization between appliances in cluster.	
10.	**User Authentication Options.**	
	c. Built in Database.	
	d. AD/LDAP Integration.	
11.	**Reporting and Logging Console.**	

#	Minimum Specifications	Conformance (Yes/No)
	f. The hardware based reporting and logging device must be capable of generating both generic and user based reports.	
	g. Graphical real-time and historical monitoring.	
	h. Email Notification of events.	
	i. SNMP support.	
	j. Syslog server support.	
12.	**Management and Administration Options.**	
	f. WebUI (HTTP/ HTTPS) and Command Line Interface.	
	g. Role-based administration.	
	h. Multiple Administrators and User Levels.	
	i. Upgrades & changes via Web UI.	
	j. Capable of being centrally managed including configuration and updates.	
13.	**Power.**	
	Input voltage 230V AC, 50 Hz. (Dual hot swappable)	
14.	**Compliance**	
	c. FCC or equivalent.	
	d. CE or equivalent.	
15.	**Central Managing Console.**	
	e. Central console to centrally configure and manage UTMs on the Intranet.	
	f. Deploy Antivirus, Intrusion Prevention, Web Filtering and other updates from a central location.	
	g. Enforcement of global policies for Firewall, Intrusion Prevention System and Antivirus scanning centrally.	
	h. Allows for centralized or distributed role based management.	

12. IP Phone

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Display/Housing	Backlit display – min 3" diagonal, 3 rows by 24 characters.	
2.	Fixed Feature Buttons:	15 plus Four-way navigation cluster button. - Volume up/down (separate volume levels for the handset, speaker, and ringer), Mute button, Speaker button, Headset button. Telephony application button – to return to main telephone screen. - Hold button, Conference button, Transfer button, Drop button. - Contacts button, Call log button, Redial button, Quick-access voicemail Message button.	
3.	Programmable/Contextual buttons	8 line appearance/feature key buttons – with dual LEDs (red, green) and paper labels (Printing tool available). Note: For typical installs, the first 3 buttons are reserved for standard call appearances; a minimum of 2 call appearance buttons is needed for standard operation. - Three contextual softkey buttons.	
4.	Key Labels	Icons used on fixed feature keys. None on programmable feature keys.	
5.	Features Menu	Mobile-Phone style menu with access to most often used features like call forwarding, Park, Settings etc. On screen status indication for activated features like call forwarding	
6.	Speakerphone	High quality two-way hands-free speaker and microphone.	
7.	Hearing Aid Compatible:	Yes - ergonomic hearing aid compatible handset also supporting TTD acoustic coupler.	
8.	Message Waiting Indicator	Yes - also used as ringing call alert indicator.	
9.	Personalized Ring Patterns	Yes - 8.	
10.	Headset Socket	Yes	
11.	Mounting	Desk or wall mountable with optional wall mount adapter.	
12.	Requirements for IP interface :	• Power Supply: IEEE 802.11af Power over Ethernet (PoE) class 2 or individual power supply unit	
13.		• Connect to: LAN using H.323 VoIP.	
14.		• Codecs: G.711	
15.		• QoS Options- Yes	
16.		• SNMP Support: Yes.	
17.		• IP Address Assignment: Static or dynamic IP address assignment.	

#	Parameter	Minimum Specifications	Conformance (Yes/No)
18.		• Ethernet Ports: Ethernet (10/100) line interface with a secondary 10/100 port for collocated laptop or PC with VLAN separation.	

13. Multi-Function Laser Printer

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Print speed, black (normal quality mode)	Up to 16 ppm	
2.	Print resolution, black	Minimum of 600 x 600 x 2 dpi	
3.	Print technology	Laser	
4.	Recommended monthly print volume	Minimum of 2000 pages	
5.	Memory, standard	128 MB	
6.	Memory, maximum	Minimum of 128 MB	
7.	Processor speed	500 MHz or Above	
8.	Paper tray(s)	Minimum 3	
9.	Duplex printing (printing on both sides of paper)	Automatic	
10.	Media sizes, standard	Letter, legal, executive, statement, 8.5 x 13 in, custom 3.0 x 5.0 to 8.5 x 14 in, envelope (Com10, Monarch #7-3/4)	
11.	Media types	Paper (bond, color, letterhead, plain, preprinted, pre-punched, recycled, rough, light), envelopes, labels, cardstock, transparencies, user-defined	
12.	Connectivity	1 Hi-Speed USB 2.0; 1 10/100 Ethernet network port	
13.	Scanner	Flatbed with automatic document feed, upto 1200 dpi, Scan size maximum (flatbed): 215.9 x 297 mm (8.5 x11.7 inches), Scan speed: upto 15 PPM	
14.	Copier	Black-white Up to 600x600 dpi, Copy speed (black, draft quality, A4):Up to 25 cpm, Copy resolution (black graphics): Up to 1200 x 600 dpi, Copier resize: 25 to 400%	

14. Laser Printer

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Print Speed	16 ppm or above	
2.	Resolution	600 X 600 DPI	
3.	Memory	4 MB or above	
4.	Paper Size	A3, A4, Legal, Letter, Executive, custom sizes	
5.	Paper Capacity	200 sheets or above on standard input tray	
6.	Duty Cycle	20,000 sheets or better per month	
7.	OS Support	Linux, Windows, XP, Vista and 7	
8.	Interface	Ethernet Interface	

15. Silent DG Set - 40 KVA

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Rating KVA	Min 40	
2.	Type of Get Set	Silent	
3.	Fuel tank Capacity	Min 200 Ltr	
4.	Starting System	v Electric/12V DC electric starter/ 12V DC battery charging alternator	
	Engine		
5.	Rated Power	58-BHP	
6.	Cooling	Water	
7.	RPM	1500	
8.	No. of Cylinders	4	
9.	Emmission Norms	As per CPCB norms	
10.	Fuel TYPE	Diesel	
11.	Stroke (mm)	Min 120	
12.	Bore (mm)	Min 100	
13.	Displacement (cc)	Min 3000	
	Alternator		
14.	Type	Brushless, H Class Insulation	
15.	Frequency	50Hz	
16.	Voltage	230V	

16. UPS System

#	Parameter	Minimum Specifications	Conformance (Yes/No)
1.	Capacity	Adequate capacity to cover all above IT Components at respective location	
2.	Output Wave Form	Pure Sine wave	
3.	Input Power Factor at Full Load	>0.90	
4.	Input	Three Phase 3 Wire for over 5 KVA	
5.	Input Voltage Range	305-475VAC at Full Load	
6.	Input Frequency	50Hz +/- 3 Hz	
7.	Output Voltage	400V AC, Three Phase for over 6 KVA UPS	
8.	Output Frequency	50Hz+/- 0.5% (Free running); +/- 3% (Sync. Mode)	
9.	Inverter efficiency	>90%	
10.	Over All AC-AC Efficiency	>85%	
11.	UPS shutdown	UPS should shutdown with an alarm and indication on following conditions 1)Output over voltage 2)Output under voltage 3)Battery low 4)Inverter overload 5)Over temperature 6)Output short	
12.	Battery Backup	120 minutes in full load	
13.	Battery	VRLA (Valve Regulated Lead Acid) SMF (Sealed Maintenance Free) Battery	
14.	Indicators & Metering	Indicators for AC Mains, Load on Battery, Fault, Load Level, Battery Low Warning, Inverter On, UPS on Bypass, Overload, etc. Metering for Input Voltage, Output Voltage and frequency, battery voltage, output current etc.	
15.	Audio Alarm	Battery low, Mains Failure, Over temperature, Inverter overload, Fault etc.	
16.	Cabinet	Rack / Tower type	
17.	Operating Temp	0 to 50 degrees centigrade	

17. GIS Map for Punjab State

#	Function	Specification	Compliance (Yes/No)
1.	General	The GIS map should be compatible with the SERC & DERC operational activity.	
2.	Map Scale	Scale of map should min 1:5000 for Urban Area and 1:15000 for Rural Area	
3.	Area	Complete Punjab State	
4.	Resolution	Resolution: Digital GIS maps should be geo referenced and to be created from latest data and supplemented as required by base map	

#		
		features from Survey of India.
5.	Display Scale	There should be provision to display the current scale of the map on screen .
6.	Auto Scroll	There should be provision for Auto Scroll to keep desired vehicle in view.
7.	Layers / Features	This map should include Road, Road Centreline, Water Bodies, River, Open Space, Vegetation etc. in the area mentioned, in different layers. The List of the desired attribute information to be captured in different layers is given in subsequent section.
8.	Caller Location	The GIS shall be integrated with 'SERC core application', so that the caller location can be brought on the screen on a real time basis.

Tentative Layer Attribute Requirement

#	Function/Specification		Compliance (Yes/No)
Layer Attribute for Urban Areas			
Layer No.	**Features**	**Method Description**	
1.	District Boundaries	Name coded to polygon	
2.	Colonies/Residential areas.	Name coded to polygon	
3.	Boundary/Area of Police Stations	Name coded to polygon	
4.	Police Zones/ Ranges Subdivisions	Name coded to polygon	
5.	Vital Installations	Name coded to polygon	
6.	Vulnerable points	Name coded to polygon	
7.	Communally sensitive areas	Name coded to polygon	
8.	Caste sensitive areas	Name coded to polygon	
9.	Arterial Roads	Symbology	
10.	Main roads	Symbology	
11.	Important roads	Symbology	
12.	Industrial areas	Symbology	
13.	Shopping Centres / Malls/ Markets and Bazaars	Symbology	
14.	Built up area	Symbology	
15.	Slum Areas	Symbology	
16.	Parks and Gardens	Symbology	
17.	Forest area	Symbology	
18.	Railway stations	Symbology	
19.	Bus stations (both Inter-state and smaller bus stands)	Symbology	
20.	Toll Plazas	Symbology	
21.	Entry/ Exit points of cities/ towns	Symbology	

22.	Water bodies	Symbology	
23.	Grid (Electricity)	Grid Numbers of Map	
24.	Police stations	Symbology	
25.	Police posts	Symbology	
26.	Hospitals (Government & Private)	Symbology, Name	
27.	Fire stations	Symbology	
28.	Location of residences of VIPs and protected persons	Symbology	
29.	Hotels/Restaurants	Symbology, Name	
30.	Tower Locations of cell providers	Symbology, Name	
31.	Banks & ATMs	Symbology	
32.	Cinemas & Multiplex	Symbology, Name	
33.	Auditoria	Symbology, Name	
34.	Post and Telegraph offices	Symbology	
35.	Historical / religious places	Symbology, Name	
36.	Petrol Pumps	Symbology	
37.	Overhead water tanks	Symbology	
38.	Apartments	Name	
39.	High-rise Buildings (more than 3 storeys)	Name	
40.	Industries	Name	
41.	Landmark buildings	Name	
42.	Other Important Institutions	Name	
43.	Traffic lights	Symbology	
44.	Govt. Buildings/Offices	Symbology, Name	
45.	Educational and Training institutions / Colleges/ Schools	Name	
46.	Judicial Courts	Name	
47.	Clubs	Name	
48.	Centre Lines of Arterial, Main and Important Roads	One ways defines	
49.	Rail Lines	Symbology	
50.	Other Roads Outlines	Symbology	
51.	Arterial road label	Labels of Arterial roads	
52.	Main road Label	Labels of Main roads	
53.	Important Road label	Labels of important roads	
54.	Other road label	Labels of other roads	
55.	Annotation layer	All important names of industries, offices, colonies, parks, water feature and other important points of interest required for navigation	
56.	Arrows	To indicate flows of traffic/water drainage	
Layer Attribute for Rural Areas			
Layer No.	**Features**	**Description**	

1.	District Boundaries	Name coded to polygon	
2.	Colonies/Residential areas.	Name coded to polygon	
3.	Boundary/Area of Police Stations	Name coded to polygon	
4.	Police Zones/ Ranges/ Subdivisions	Name coded to polygon	
5.	Road Layer	Line	
6.	Centre Lines of Arterial, Main and Important Roads	One ways defines	
7.	Rail Lines	Symbology	
8.	Other Roads Outlines	Symbology	
9.	Arterial road label	Labels of Arterial roads	
10.	Main road Label	Labels of Main roads	
11.	Important Road label	Labels of important roads	
12.	Other road label	Labels of other roads	
13.	Annotation layer	All important names of industries, offices, colonies, parks, water feature and other important points of interest required for navigation	
14.	Arrows	To indicate flows of traffic/water drainage	
15.	Flood prone areas	Name coded to polygon	
16.	Earthquake prone areas	Name coded to polygon	
17.	Hospitals (Government & Private)	Symbology, Name	
18.	Judicial Courts	Symbology	
19.	Police Stations	Symbology	
20.	Police Posts	Symbology	
21.	Fire Stations	Symbology	
22.	Educational and Training institutions / Colleges/ Schools	Symbology	
23.	Banks and ATMs	Symbology	
24.	Petrol Pumps	Symbology	
25.	Village boundaries	Name coded to polygon	
26.	Markets/ shops along highways & roads	Symbology	
27.	Forest	Name coded to polygon	
28.	Historical / religious places	Symbology	
29.	Vital Installations	Name coded to polygon	
30.	Vulnerable Points	Name coded to polygon	

Note:

- Rural areas mean the 12,491 villages defined by the Department of Revenue, Government of Punjab. List of these villages is attached as Annexure 5: List of villages of Punjab.
- All other inhabited areas should be considered as urban areas.

18. Automatic Vehicle locator System Hardware specification

The CAD System should include integrated Automatic Vehicle Location System (AVLS) using Geographical Information System (GIS). The equipment listed in tender should include all additional hardware/ software requirements except for

equipment to be supplied by the Police Department i.e. radio sets mounted on vehicles. The AVLS system should have the following features:

- PCR Vehicles/Motor Bikes of the Department should be fitted with Global Positioning System (GPS) based vehicle tracking system. The position of a vehicle should be transmitted to the control Centre computer over communication network without any intervention of the crew of the vehicle.

- The hardware offered should have a very high level of reliability and capable of working in extreme climatic conditions. It should have high, water and dust resistance and should be ruggedized to withstand the transportation vibration.

- Continuous GPS position update at predefined interval of time

- Automatic periodical updating of vehicle locations on the city map of the city on workstation(s) at Police Control Centre. The system should enable the Radio Operator to specify different intervals for different groups of vehicles.

- The information from the control Centre to the PCR vehicle and vice versa shall be through GSM network using GPRS service. The system should also be capable of interfacing with GSM network for communication with the control Centre. Messaging (English) should be supported to and from the vehicle unit.

- Should be capable of sending pre-defined messages to and from the vehicle unit.

- Any message sent to vehicle should have auto acknowledgement from vehicle.

- Facility for configuring the Vehicle unit ID as per the registration no. of vehicle.

- Data exchange for messaging and position data etc. should be encrypted.

Automatic Vehicle Locator Device Features:

The AVL mobile modem shall have the facility to program its identity. When its own identity code is received during the polling, it should respond by sending the required data to the base station Modem.

#	Function/Specification		Compliance (Yes/No)
1.	Network	GSM/GPRS/GPS	
2.	Tracking Channels	16 or More	
3.	Reacquisition Time	1 second	
4.	Storage	4 hours of data on position date & Time	
5.	Band	900/1800/1900MHz or 850/900/1800/1900MHz	
6.	GPS accuracy	Positional Accuracy + or – 30m or better	
7.	Work Voltage	DC 9V-30V	
8.	Battery	Lithium Battery /Li-ion Battery	
9.	Storage Temp.	-20 C to +70C	
10.	Operation Temp.	0 to 55C	
11.	Humidity	5%-90% Non-condensing	
12.	Main Function		
13.	Positioning and tracking	Vehicle can be tracked on GIS Software with position on	

		GEO referenced Digital Map	
14.	Triggering Emergency Alarm	When there is a emergency happened on the vehicle, there should be an option to put on button and the installed unit should send out alarm to the authored number	
15.	GPRS Fallback	GPRS fallback when there is no GPRS signal	
16.	OTA Configuration	Over the Air Configuration	
17.	Restart the unit	Send SMS to resume the default state of unit	
For four wheeler Response Units (PCR vehicles), the following additional functionalities are required:			
18.	Internal Storage	If there is no GPRS signal, then the unit should store waypoints internally for 20000 points and transmit the same after availability of GPRS.	
19.	Hand phone Integration	Two way communication as well as display to send and receive SMS	

19. Mobile Data Terminals

#	Function	Specification	Compliance (Yes/No)
1.	Device Type	Rugged - Tablet PC	
2.	Tablet Data Capacity	Min 4GB	
3.	Network Communication	Built-in 2G/3G,Bluetooth	
4.	Screen Size	Min 7 inch	
5.	Extend Port	DC Jack, Earphone Jack	
6.	Memory Capacity	Min 1GB	
7.	Processor Main Frequency	Quad Core	
8.	Supporting Language	English and Punjabi languages	
9.	Screen Type	Touch Screen	
10.	Feature	Should have inbuilt GPS, Should work as AVLS device for AVLS/CAD application , Multi Touch, Ultra Slim, Dual Camera Cameras, Supports Turn by Turn Navigation	
11.	Display resolution	Min1024x768	
12.	Cell Capacity	Min 4000mAh	
13.	Inbuilt Camera	Front min 1 MP, Back min 2 MP, Dual Cameras	
14.	Ruggedness Standard	IP 65 Certified , Rubberized casing	
15.	Speakerphone	Hands free Support	
16.	Mounting Kit	Mountable on Car dashboard	
17.	Integration Support	Should be integrated with CAD Application	
18.	Accessories	Additional Battery and Charger – 1	

20. Backup Software

- The software shall be primarily used to backup the system database & call recoding from the servers onto backup tapes (when required).
- Scheduled unattended backup using policy-based management for all Server and OS platforms
- The software should support on-line backup and restore of various applications and Databases

- The backup software should be capable of having multiple back-up sessions simultaneously
- The backup software should support different types of backup such as Full back up, Incremental back up, Differential back up, Selective back up, Point in Time back up
- The backup software should support different types of user interface such as GUI, Web-based interface etc

21. Anti-virus Software

- Shall be able to scan through several types of compression formats.
- Must update itself over internet for virus definitions, program updates etc (periodically as well as in push-updates in case of outbreaks)
- Able to perform different scan Actions based on the virus type (Trojan/ Worm, Joke, Hoax, Virus, other)
- Shall be able to scan only those file types which are potential virus carriers (based on true file type)
- Shall be able to scan for HTML, VBScript Viruses, malicious applets and ActiveX controls
- Shall provide Real-time product Performance Monitor and Built-in Debug and Diagnostic tools, and context-sensitive help.
- The solution must support multiple remote installations
- Shall provide for virus notification options for Virus Outbreak Alert and other configurable Conditional Notification.
- Shall have facility to clean, delete and quarantine the virus affected files.
- Should support scanning for ZIP, RAR compressed files, and TAR archive files
- Should support online update, where by most product updates and patches can be performed without bringing messaging server off-line.
- Should use multiple scan engines during the scanning process
- Should support Multi-threaded scanning
- Should support scanning of nested compressed files
- Should support heuristic scanning to allow rule-based detection of unknown viruses
- Updates to the scan engines should be automated and should not require manual intervention
- Updates should be capable of being rolled back in case required
- File filtering should be supported by the proposed solution; file filtering should be based on true file type.
- Should support various types of reporting formats such as CSV, HTML and text files
- Shall scan at least HTTP, FTP traffic (sending & receiving) in real time and protect against viruses, worms & trojan horse attacks and other malicious code.

22. Database Licenses

- Bidder needs to provide Licensed RDBMS, License based/enterprise/full version as required for the proposed system and following all standard industry norms for performance, data security, authentication and database shall be exportable in to XML.

23. Enterprise Management System /Network Management System

The Enterprise Management System /Network Management System is an important requirement of this Project. Various key components of the EMS/NMS are –

- SLA & Contract management System
- Network Monitoring System
- Server Monitoring System
- Helpdesk System

24. **SLA & Contract management System**

The SLA & Contract Management solution should enable the Punjab Police to capture all the System based SLAs defined in this RFP and then calculate quarterly (or for any duration) penalty automatically. Measuring service performance requires incorporation of a wide variety of data sources of the project. The SLA solution should support the collection data from various sources in order to calculate Uptime / Performance / Security SLAs. Various features required in this component to EMS/NMS are -

- It must be a centralized monitoring solution for all IT assets (including servers, network equipments etc)
- The solution must have integrated dashboard providing view of non performing components / issues with related to service on any active components
- The solution must follow compliance and content validations to improve standardization of service level contracts.
- Application should be pre-configured so as to allow the users to generate timely reports on the SLAs on various parameters.
- The solution must support Service Level Agreements & Lifecycle Management including Version Control, Status Control, Effectively and audit Trail to ensure accountability for the project.
- The solution must have the ability to define and calculate key performance indicators from an End to End Business Service delivery perspective related to Project ..
- The solution should support requirements of the auditors requiring technical audit of the whole system.
- The solution should support SLA Alerts escalation and approval process.
- Solution should support effective root cause analysis, support capabilities for investigating the root causes of failed service levels and must make it possible to find the underlying events that cause the service level contract to fail.
- Support for Defining and Calculating service Credit and Penalty based on clauses in SLAs.

24.1. **Reporting**

- Ability to generate reports on penalty and credit due, to check on non-compliance of SLAs for the project
- Monetary penalties to be levied for non-compliance of SLA, thus the system must provide Service Level Performance Report over time, contract, service and more.
- The solution should provide historical and concurrent service level reports for the project in order to ensure accountability of the service provider's performance
- Automatic Report creation, execution and Scheduling, must support variety of export formats including Microsoft Word, Adobe PDF etc.
- The solution must support Templates for report generation, Report Filtering and Consolidation and Context sensitive Drill-down on specific report data to drive standardization
- The solution must support security for drill-down capabilities in dashboard reports ensuring visibility for only relevant personnel of the project
- Support real-time reports (like at-a-glance status) as well as historical analysis reports (like Trend, TopN, Capacity planning reports etc.)
    - Resource utilization exceeding or below customer-defined limits
    - Resource utilization exceeding or below predefined threshold limits

An indicative List of SLAs that needs to be measured centrally by SLA contract management system are given in the RFP document. These SLAs must be represented using appropriate customizable reports to ensure overall service delivery.

24.2. Network Management System

Solution should provide fault & performance management of the entire datacenter infrastructure and should monitor IP\SNMP enabled devices like Routers, Switches, workstations etc. Proposed Network Management shall integrate with SLA & Contract Management system in order to supply KPI metrics like availability, utilization in order to measure central SLA's and calculate penalties. Following are key functionalities that are required which will help measuring SLA's as well as assist administrators to monitor network faults & performance degradations in order to reduce downtimes, increase availability and take proactive actions to remediate & restore network services.

- Solution should provide centralized monitoring console displaying network topology map
- Proposed solution should provide customizable reporting interface to create custom reports for collected data.
- The system must use advanced root-cause analysis techniques and policy-based condition correlation technology for comprehensive analysis of infrastructure faults.
- The system should be able to clearly identify configuration changes as root cause of network problems and administrators should receive an alert in case of any change made on routers spread across project.
- Network Performance management system should provide predictive performance monitoring and should be able to auto-calculate resource utilization baselines for the entire managed systems and networks and allow user to set corresponding upper and lower threshold limits based on baseline data instead of setting up manual thresholds for monitored devices.
- The system must support the ability to create reports that allow the administrators to search all IP traffic over a specified historical period, for a variety of conditions for critical router interfaces
- The proposed system must be capable of providing the following detailed analysis across domain:
- Top utilized links (inbound and outbound) based on utilization of link
- Top protocols by volume based on utilization of link
- Top host by volume based on utilization of link

24.3. Server Performance Monitoring System

- The proposed tool should integrate with network performance management system and support operating system monitoring for various platforms supplied as part of the Project.
- The proposed tool must provide information about availability and performance for target server nodes.
- The proposed tool should be able to monitor various operating system parameters such as processors, memory, files, processes, file systems, etc. where applicable.
- Proposed Network Management shall integrate with SLA & Contract Management system in order to supply KPI metrics like availability, utilization, performance in order to measure central SLA's and calculate penalties.

24.4. Centralized Helpdesk System

- The proposed helpdesk solution must provide flexibility of logging, viewing, updating and closing incident manually via web interface for issues related to the project.
- Helpdesk system should provide incident management, problem management templates along with helpdesk SLA system for tracking SLA's pertaining to incident resolution time for priority / non-priority incidents.
- The proposed helpdesk solution must have a built-in workflow engine to define escalations or tasks to be carried out after issues or change order are logged pertaining to project.
- Centralised HelpDesk System should have integration with Network / Server Monitoring Systems so that the HelpDesk Operators can to associate alarms with Service Desk tickets to help system operators that for what particular alarms corresponding helpdesk tickets got logged.
- Network admin should be able to manually create tickets through Fault Management GUI.
- System should also automatically create tickets based on alarm type

- System should provide a link to directly launch a Service Desk view of a particular ticket created by alarm from within the Network Operation console.

25. Non-IT Requirements Specifications

The selected bidder should adhere to the specifications given below for Non-IT components. It is essential that reputed material be used as far as possible and certification from Fire Department be taken for State Emergency Response Centres before Go Live. The call centre infrastructure should be developed keeping in mind the standard call centre operating conditions such as sound proofing, lighting, air conditioning etc

25.1. Furniture and Fixture

- Workstation size of min. 18" depth made with 1.5mm thick laminate of standard make over 18mm thick commercial board complete with wooden beading including cutting holes & fixing of cable manager etc complete with polish. Edges shall be factory post-formed. The desk shall have the necessary drawers, keyboard trays, cabinets etc. along with sliding / opening as per approved design with quality drawer slides, hinges, locks etc.
- Providing & making of storage unit with 18 mm thick MDF board along with 1.5 mm approved laminate colour outside and 2 coat of enamel paint inside the storage of size 1'6"x1'6"x2'4". The same should be provided with all the required accessories including the handle, lock, sliding channel and necessary hardware, etc. complete with polish
- Cabin table of min. depth 2' made with 1.5mm thick laminate of standard make over 19mm thick commercial board complete with wooden beading including cutting holes & fixing of cable manager etc complete with French polish.
- Providing, making & fixing 6" high laminated strip using 1.5mm thick laminate over 10mm thick commercial board on all vertical surface in the entire server & ancillary areas including low height partition, brick wall, partition wall, cladding etc complete with polish in all respect.
- Providing the partitions wherever required as per approved drawing

25.2. PVC Conduit

- The conduits for all systems shall be high impact rigid PVC heavy-duty type and shall comply with I.E.E regulations for nonmetallic conduit 1.6 mm thick as per IS 9537/1983.
- All sections of conduit and relevant boxes shall be properly cleaned and glued using appropriate epoxy resin glue and the proper connecting pieces, like conduit fittings such as Mild Steel and should be so installed that they can remain accessible for existing cable or the installing of the additional cables.
- No conduit less than 20mm external diameter shall be used. Conduit runs shall be so arranged that the cables connected to separate main circuits shall be enclosed in separate conduits, and that all lead and return wire of each circuit shall be run to the same circuit.
- All conduits shall be smooth in bore, true in size and all ends where conduits are cut shall be carefully made true and all sharp edges trimmed. All joints between lengths of conduit or between conduit and fittings boxes shall be pushed firmly together and glued properly.
- Cables shall not be drawn into conduits until the conduit system is erected, firmly fixed and cleaned out. Not more than two right angle bends or the equivalent shall be permitted between draw or junction boxes. Bending radius shall comply with I.E.E regulations for PVC pipes.
- Conduit concealed in the ceiling slab shall run parallel to walls and beams and conduit concealed in the walls shall run vertical or horizontal.

25.3. Wiring

- PVC insulated copper conductor cable shall be used for sub circuit runs from the distribution boards to the points and shall be pulled into conduits. They shall be stranded copper conductors with thermoplastic insulation of 650 / 1100 volts grade. Color code for wiring shall be followed.

- Looping system of wring shall be used, wires shall not be jointed. No reduction of strands is permitted at terminations.
- Wherever wiring is run through trunking or raceways, the wires emerging from individual distributions shall be bunched together with cable straps at required regular intervals. Identification ferrules indication the circuit and D.B. number shall be used for sub main, sub circuit wiring the ferrules shall be provided at both end of each sub main and sub-circuit.
- Where, single phase circuits are supplied from a three phase and a neutral distribution board, no conduit shall contain wiring fed from more than one phase in any one room in the premises, where all or part of the electrical load consists of lights, fans and/or other single phase current consuming devices, all shall be connected to the same phase of the supply.
- Circuits fed from distinct sources of supply or from different distribution boards or M.C.B.s shall not be bunched in one conduit. In large areas and other situations where the load is divided between two or three phases, no two single-phase switches connected to difference phase shall be mounted within two meters of each other.
- All splicing shall be done by means of terminal blocks or connectors and no twisting connection between conductors shall be allowed.
- Metal clad sockets shall be of die cast non-corroding zinc alloy and deeply recessed contact tubes. Visible scraping type earth terminal shall be provided. Socket shall have push on protective cap.
- Balancing of circuits in three phases installed shall be arranged before installation is taken up. Unless otherwise specified not more than ten light points shall be grouped on one circuit and the load per circuit shall not exceed 1000 watts.

25.4. Earthing

All electrical components are to be earthen by connecting two earth tapes from the frame of the component ring and will be connected via several earth electrodes. The cable arm will be earthen through the cable glands. Earthling shall be in conformity with provision of rules 32, 61, 62, 67 & 68 of Indian Electricity rules 1956 and as per IS-3043. The entire applicable IT infrastructure in the Control Rooms shall be earthed. Provide separate Earthing pits for Servers, UPS & Generators as per the industry standards.

25.5. Cable Work

- Cable ducts should be of such dimension that the cables laid in it do not touch one another. If found necessary the cable shall be fixed with clamps on the walls of the duct. Cables shall be laid on the walls/on the trays as required using suitable clamping/ fixing arrangement as required. Cables shall be neatly arranged on the trays in such manner that a criss crossing is avoided and final take off to switch gear is easily facilitated.
- Each section of the rising mains shall be provided with suitable wall straps so that same the can be mounted on the wall.
- Whenever the rising mains pass through the floor they shall be provided with a built-in fire proof barrier so that this barrier restricts the spread of fire through the rising mains from one section to the other adjacent section.
- Neoprene rubber gaskets shall be provided between the covers and channel to satisfy the operating conditions imposed by temperature weathering, durability etc.
- Necessary earthling arrangement shall be made alongside the rising mains enclosure by Mean of a GI strip of adequate size bolted to each section and shall be earthed at both ends. The rising mains enclosure shall be bolted type.
- The space between data and power cabling should be as per standards and there should not be any criss-cross wiring of the two, in order to avoid any interference, or corruption of data.

Annexure 2: Existing infrastructure

#	Component description	Make & Model	Qty.
1.	EPBAX system with Automatic Call Distribution	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise)	6
2.	Digital telephones instruments	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise) Dialog 4222	90
3.	Head sets for Call Takers & dispatchers	Plantronics	90
4.	ISDN PRI card for connecting one ISDN PRI line from BSNL	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise)	
5.	Fault tolerant RAID configured servers	HP Prolaint DL 180 G6 series	25
6.	Firewall with Intrusion Detection & Prevention system for unified threat mitigation along with VPN	Cyberoam CR25i Firewall	6
7.	Microsoft server OS with media with CAL	--	1 Set
8.	Microsoft SQL Standard Licenses with media with CAL	--	1 Set
9.	16 (digital) + 4(analog) channel voice logging system	HCL/ Voice Logger – Ailogix Card	6
10.	PA-100 Call taker & dispatcher operator workstations	HP Compaq dx7480 PC	66
11.	Heavy duty laser printer	HP Laserjet 5200n	6
12.	10 KVA (n+1 redundant) online UPS with minimum 1 hr backup	Uniline Maxi Power	6
13.	2 KVA (n+1 redundant) online UPS with minimum 1 hr backup	Uniline Maxi Power	1
14.	Heavy duty LCD projector	Infocus IN 2100 Series	7
15.	Vehicle sub-system including GPS receiver, MDT, Model etc.	HCL/ Arya Omnitalk	605
16.	Free standing metallic rack for stacking servers and having electrical connections	HCL/ Dlink	6
17.	Gen Set of 40 KVA	Kirloskar Greens	6
18.	Seamless digital map on scale 1:2000 for urban areas and 1:10000 for rural areas using high resolution satellite data	Tele Atlas Kalyani India Ltd.	Mohali (30 sq.km.), Kharar (29 sq.km.), Zirakpur (20 sq.km.), Jalandhar (105 sq.km.), Amritsar (169 sq.km.), Patiala (67 sq.km.), Ludhiana (172 sq.km.), Bathinda (68 sq.km.)

#	Component description	Make & Model	Qty.
19.	Digital telephony with CTI facility	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise) Dialog 4222	15
20.	24 ports Gigabit LAN switches	HCL / Dlink	6
21.	Krone MDF	Krone	6
22.	Call-centre Supervisor software	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise)	6
23.	Automatic Call Distribution Software	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise)	6
24.	Computer Supported Telephony Application/ Computer & Telephony Integration System (CSTA/ CTI)	Aastra Mx One Telephony Switch (formerly Ericsson Enterprise)	6
25.	Software for call centre operation, CTI, ACD, PCR dispatch centre operations, GPS communication, database management.	Aastra Mx One telephony switch for STI and multimedia contact centre, HCL application software for Emergency Response centre (Dial 100)	6

Note:

Bidder would conduct a site survey of above listed existing infrastructure and reuse the existing hardware/software, wherever possible.

Annexure 3: District Emergency Response Centres Location List

#	Units	Control Centre Location (Whether Located At): 1. DC Office 2. SSP Office 3. Police Lines 4. Any Other (P) Specify	Control Centre Address	Approx Distance Of Control Room From Dc Office (In Meters)
1.	CP/ASR	POLICE STATION DIVISION-C ASR	POLICE STATION DIVISION-C ASR	8 KM
2.	CP/JALL	POLICE LINES	NEAR GENERAL BUS STAND CIVIL LINE ROAD IN POLICE LINES, JALL	1150 MTRS
3.	CP/LDH	POLICE LINES LDH	POLICE LINES, DMC ROAD LDH	5 KM
4.	SSP/ASR (R)	POLICE LINES ASR	POLICE LINES, DUBURJI CAMP, JALL ROAD ASR	10 KM
5.	SSP/BTL	POLICE LINES BTL	POLICE LINES, MODEL TOWN BATALA NEAR COURT COMPLEX	30 KM
6.	SSP/GSP	POLICE LINESS	POLICE LINES NEAR JAHAJ CHOWK G.T ROAD GSP	1-KM
7.	SSP/PATHANKOT	TEMPORARY LOCATED AT POLICE STATION SADAR PATHANKOT	POLICE STATION SADAR PATHANKOT AMRITSAR ROAD, CHOTTI NEHAR, SARNA	5000 MTRS
8.	SSP/TTN	POLICE LINES TTN	POLICE LINES JHABAL CHOWK, ASR ROAD, TTN	3 KM
9.	SSP/JALL (R)	POLICE LINES JALL	POLICE LINES, OPP. BUS STAND JALL	1 KM
10.	SSP/KPT	POLICE LINES KPT	POLICE LINES, NEAR CHOORHWAL CHUNGI	1 KM
11.	SSP/HPR	POLICE LINES HPR	POLICE LINES HPR	500 MTR
12.	SSP/LDH (R)	POLICE LINES JGN	POLICE LINES,TEHSIL ROAD JGN	40 KM
13.	SSP/KHN	SSP OFFICE KHN	NEAR POLICE STATION SADAR KHANNA GT ROAD KHANNA	45 KMS
14.	SSP/FGS	SSP OFFICE	ROOM NO 420, MINI SEC. FGS	SAME PLACE
15.	SSP/PTL	POLICE LINES PTL	POLICE LINES PTL	200 MTRS
16.	SSP/SGR	POLICE LINES SGR	POLICE LINES , OPP. JAIL, BNL ROAD SGR	1.5 KM
17.	SSP/BNL	SSP OFFICE BARNALA	OFF. GRAIN MARKET BNL IN SSP OFFICE BARNALA	1 KM
18.	SSP/RPR	POLICE LINES RPR	POLICE LINES RPR	7 KM
19.	SSP/S.B.S. NAGAR	POLICE LINES SBS NGR	POLICE LINES, KARYAN ROAD, NEW DANA MANDI, SBS NAGAR	3 KM
20.	SSP/S.A.S. NAGAR	NEAR POLICE STATION, PHASE-8, SAS NAGAR	NEAR POLICE STATION PHASE-8, SAS NAGAR	5 KM
21.	SSP/BATHINDA	SSP OFFICE	ADMINISTRATIVE COMPLEX ROOM NO.	100 MTR

#	Units	Control Centre Location (Whether Located At): 1. DC Office 2. SSP Office 3. Police Lines 4. Any Other (P) Specify	Control Centre Address	Approx Distance Of Control Room From Dc Office (In Meters)
			304 SSP OFFICE FZR CANTT	
22.	SSP/MNS	SSP OFFICE MNS	NEAR BAL BHAWAN, KOT ROAD MNS	5 KM
23.	SSP/FDK	POLICE LINES FDK	POLICE LINES, KOTAKPURA ROAD FDK	2500 MTRS
24.	SSP/FZR	SSP/OFFICE	ADMINISTRATIVE COMPLEX ROOM NO 304 SSP OFFICE FZR CANTT.	100 MTRS.
25.	SSP/MOGA	SSP OFFICE MOGA	401, RAVI COMPLEX, 4TH FLOOR, MOGA	SAME
26.	SSP/FAZILKA	POLICE STATION SADAR FAZILKA	POLICE STATTION SADAR FAZILKA	1/2 KM
27.	SSP/MKT SAHIB	SSP OFFICE	GOVT. QUARTER, BATHINDA ROAD MKT	3 KM

Annexure 4: Training Requirement

Training is an important aspect of this project and Departments expect the selected bidder to undertake it in a very professional manner. Selected bidder has to conduct a proper Training Needs Analysis of all the concerned staff and draw up a systematic training plan in line with the overall project plan. For all these training programs the bidder has to provide necessary course material and reference manuals (user/maintenance/administration). Selected bidder will have to arrange for training room infrastructure and setup while the place for training shall be provided by the Departments. Please note that Call center operation training should be provided by specialized call center training professionals.

1. **Operational Training:** This training would focus on the use of the READi system at SERC and DERC so that users are aware of all the operations of READi system and are able to implement the overall process defined by the Departments for optimum use of the system.

Operational training requirements at SERC & DERC are as follows–

Initial training as part of implementation

Training Course	Indicative Location	Number of Batches	Batch Size	Total Person to be trained	Indicative Duration (Days)	Target Group
Operational Training and IT Basics	SERC	10	20	200	4 Days	Constables, Head Constables, Sub Inspectors, Inspectors who will be primary users of computers at SERC and DERCs for their call center operations.
Operational Training and IT Basics	Zone Level (5 Zones)	17	20	340	4 Days	Constables, Head Constables, Sub Inspectors, Inspectors who will be primary users of computers at SERC and DERCs for their call center operations.

On-going training (only for new operators)

Training Course	Indicative Location	Number of Batches	Batch Size	Frequency of training	Indicative Duration (Days)	Target Group
Operational Training and IT Basics	SERC	2	20	Every 3 months	4 Days	Constables, Head Constables, Sub Inspectors, Inspectors who will be primary users of computers at SERC and DERCs for their call center operations.
Operational Training and IT Basics	Zone Level (5 Zones)	8	20	Every 3 months	4 Days	Constables, Head Constables, Sub Inspectors, Inspectors who will be primary users of computers at SERC and DERCs for their call center

						operations.

Note:

- *Call center operation training should be imparted by reputed and well established call center training firms/ agencies/ institutes such as Team Result, Hero Mind Mine, Vantage, International Academy for Certification and Training, etc. However, it is not mandatory that the bidders must go to any of these firms/ agencies. These names have been suggested for benchmarking purposes only.*
- *Initial and ongoing training programmes should also include training on basic computer operations for all trainees with the objective of familiarizing them with basic computer usage. Expected duration for this training is min 1 day for each batch*

2. **Senior Management Training:** This training would focus on how to use the READi system for day-to-day monitoring by the Sr. management and access various exception reports. Broad training requirement defined for the purpose of calculation of effort is as follows:

Initial training as part of implementation

Training Course	Indicative Location	Number of Batches	Batch Size	Total Person to be trained	Indicative Duration (Days)	Target Group
Senior Management Training and IT Basics (For Advanced Users)	SERC	4	10	40	1 Days	Senior Officers who will be users MIS and Decision Support Mechanism.

On-going training (for new officers posted at relevant posts)

Training Course	Indicative Location	Number of Batches	Batch Size	Indicative Duration (Days)	Target Group
Senior Management Training and IT Basics (For Advanced Users)	SERC	1	10	Every 3 Months	Senior Officers who will be users MIS and Decision Support Mechanism.

3. **Administrative Training:** This training would focus on the administration of READi system (including CAD) and server infrastructure. It would be imparted to about 8 – 10 personnel identified by the Departments for administration of the system from Departments side. Selected bidder shall also provide on-going training programme to 1 batch (of 8 - 10 personnel) every 6 months. Expected training time would be 40 hrs (5 days of 8 hrs each). Such training should be provided by specialized trainers/ domain expert of the bidder.

Other requirements to be fulfilled by the selected bidder with respect to training are as follows:

- Prepare the training material in consultation with Departments' & its consultant. Detailed Training Manuals (both in English and Punjabi) would be prepared by the selected bidder prior to the start of the training.
- One Hard Copy & One Soft Copy of the training material should be given by the selected bidder to all the trainees.
- Location for the administrative & Sr. management training would be decided subsequently.
- Training as part of exit management strategy would be as per the details mentioned in section Exit Management of Vol II of this RFP.

Annexure 5: List of Villages of Punjab

Sr.No.	District Name	Number of Rural Villages
1	Mansa	236
2	Fazilka	340
3	Sri Muktsar Sahib	223
4	Pathankot	518
5	SBS Nagar	471
6	Hoshiarpur	1398
7	Kapurthala	702
8	Tarntarn	503
9	Fatehgarh Sahib	422
10	Amritsar	734
11	Jalandhar	929
12	Faridkot	169
13	Bathinda	240
14	Gurdaspur	1205
15	Firozpur	610
16	Moga	313
17	Barnala	130
18	Sangrur	589
19	Roopnagar	635
20	Patiala	852
21	Ludhiana	883
22	Mohali	389
	Total	**12,491**