



Tender No. 20/2019-20
REQUEST FOR PROPOSAL (RFP)
FOR
Selection of System Integrator for Integrated GIS
Enabled ERP solution, Online Establishment Licensing
Solution, Service Level Benchmarking and creation of
Unique Smart Address for Pimpri Chinchwad city
under Smart City Initiative

Office of Chief Executive Officer,
PIMPRI CHINCHWAD SMART CITY LIMITED (PCSCL)
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Price of the RFP document Rs. 67,200/- (Non Refundable)

PIMPRI CHINCHWAD SMART CITY LIMITED
(PCSCL)

INVITATION FOR BID (IFB)

Name & Address of the Procuring Entity	<ul style="list-style-type: none"> • Name: Pimpri Chinchwad Smart City Limited (PCSCL) • Address: 4th Floor, Pimpri Chinchwad Municipal Corporation (PCMC) Main Building, Pimpri, Maharashtra – 411018 • Tel: 020 – 67333333, 67331117 • Fax: 020 - 27425600, 67330000 • e-Mail ID: smartcity@pcmcindia.gov.in
Name & Address of the Project Officer In-charge	<ul style="list-style-type: none"> • Name: Nilkanth Poman • Designation: Joint Chief Executive Officer, PCSCL • Address: 4th Floor, Pimpri Chinchwad Municipal Corporation (PCMC) Main Building, Pimpri, Maharashtra – 411018
Subject Matter of Procurement	Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative
Bid Procedure	Two Envelope / RFP Response Document (e-bid) through http://mahatenders.gov.in
Websites for downloading Bidding Document, Corrigendum's, Addendums etc.	Websites: http://mahatenders.gov.in , www.smartcitypimprichinchwad.in www.pcmcindia.gov.in Will be available from 13/09/2019, 11:00 AM onwards
Period of Sale/download of Bidding Document (Start/End Date)	Start: 13/09/2019, 11:00 AM onwards End: 07/10/2019, Before 3:00 PM
Critical Dates	Refer RFP (Important Dates)

Sd/-
Shravan Hardikar (IAS)
CEO & Director,
Pimpri Chinchwad Smart City
Limited (PCSCL)



Request for Proposal (RFP) for selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad City under Smart City Initiative

Tender No. 20/2019-20

Pimpri Chinchwad Smart City Limited (PCSCL) intends to appoint System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad City under Smart City Initiative. System Integrator shall be selected on the basis of lowest prices quoted (L-1) after successfully clearing Pre-qualification and Technical Qualification.

Interested Bidders may download the RFP document from the website of <http://mahatenders.gov.in> & also PCMC i.e. www.smartcitypimprichinchwad.in or www.pcmcindia.gov.in from **13/09/2019, 11:00 AM onwards**.

No	Name of Work	Non Refundable Document Fee Incl. GST (Rs)	EMD (Rs)
1	Request for Proposal (RFP) for selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad City under Smart City Initiative	67,200	1,20,00,000

Rights to reject any or all tenders without assigning any reasons thereof are reserved by CEO, PCSCL and whose decision will be final and legally binding on all the bidders.

PCSCL/01/158/2019
Date: 09/09/2019

Sd/-
Shravan Hardikar (IAS)
CEO & Director
Pimpri Chinchwad Smart City Limited

Disclaimer

- I. This Request for Proposal ("RFP") is issued by Pimpri Chinchwad Smart City Limited (PCSCL).
- II. The information contained in this Request for Proposal document ("RFP") or subsequently provided to Bidders, whether verbally or in documentary or any other form by or on behalf of the PCSCL (the Purchaser) or any of its employees or advisors, is provided to Bidders, on the terms and conditions set out in this RFP.
- III. This RFP is not a Contract and is neither an offer nor invitation by the Purchaser to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in the formulation of their Proposals in pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at, by the Purchaser, in relation to the project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Purchaser, its employees or advisers to consider the objectives, technical expertise and particular needs of each party, who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct his own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources.
- IV. Information provided in this RFP to the Bidders is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Purchaser accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein. The Purchaser, its employees and advisers make no representation or warrants and shall have no liability to any person including any Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this selection process.
- V. The Purchaser also accepts no liability of any nature, whether resulting from negligence or otherwise, however caused, arising from reliance of any Bidder upon the statements contained in this RFP.
- VI. The Purchaser may, in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP. The issue of this RFP does not imply that the Purchaser is bound to select a Bidder or to appoint the Selected Bidder, as the case may be, for this project and the Purchaser reserves the right to reject all or any of the proposals, without assigning any reason whatsoever.
- VII. PCSCL or its authorized officers / representatives / advisors reserve the right, without prior notice, to change the procedure for the selection of the Successful Bidder or

terminate discussions and the delivery of information at any time before the signing of any agreement for the Project, without assigning reasons thereof.

- VIII. The RFP Document does not address concerns relating to diverse investment objectives, financial situation and particular needs of each party. The RFP Document is not intended to provide the basis for any investment decision and each Bidder must make its / their own independent assessment in respect of various aspects of the techno-economic feasibilities of the Project. No person has been authorized by PCSCL to give any information or to make any representation not contained in the RFP Document.
- IX. The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation and expenses associated with any demonstrations or presentations which may be required by the Purchaser or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses shall remain with the Bidder and the Purchaser shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder, in preparation for submission of the Proposal, regardless of the conduct or outcome of the selection process.

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1 Important Dates

#	Activity	Deadline
1.	Release of RFP	13/ 09/2019, 11:00 AM
2.	Last date for submission of Pre Bid Queries	16/ 09/2019, 05:00 PM
3.	Pre bid Meeting date	17/ 09/2019, 11:00 AM
4.	CSD publishing and Start date for submission of Bids	23/ 09/2019, 11:00 AM
5.	Last date for submission of Bids	07/ 10/2019, 03:00 PM
6.	Date of opening of technical bids	10/ 10/2019, 11:00 AM
7.	Date of Technical Presentation by the Bidders	To be communicated later
8.	Date of Opening of Commercial bids	To be communicated later
9.	Award of Contract	To be communicated later
10.	Commencement of work	To be communicated later

2 Acronyms

#	Term	Meaning
1.	API	Application Programming Interface
2.	BPAS	Building Permission and Approval System
3.	ICCC	Integrated Control and Command Center
4.	EMD	Earnest Money Deposit
5.	FRS	Functional Requirement Specifications
6.	FY	Financial Year
7.	GIS	Geographical Information System
8.	GUI	Graphical User Interface
9.	LAN	Local Area Network
10.	MoHUA	Ministry of Housing and Urban Affairs
11.	O&M	Operations and Maintenance
12.	PCMC	Pimpri Chinchwad Municipal Corporation
13.	PCSCL	Pimpri Chinchwad Smart City Limited
14.	PO	Purchase Order
15.	POC	Proof of Concept
16.	SCADA	Supervisory Control and Data Acquisition
17.	SI	System Integrator
18.	SLA	Service Level Agreement
19.	SLB	Service Level Benchmarking
20.	SRS	System Requirement Specifications
21.	UAT	User Acceptance Test
22.	USA	Unique Smart Address
23.	USB	Universal Serial Bus
24.	WO	Work Order

3 Introduction

3.1 About Pimpri Chinchwad Municipal Corporation

Pimpri Chinchwad is a modern twin city, situated South-East of Mumbai and in the North-West quadrant of Pune. Pimpri-Chinchwad also happens to be the fifth-most populated city of Maharashtra and has long been famous for being one of the most prominent industrial destinations outside Mumbai.

The twin city (Pimpri Chinchwad) is governed by the Pimpri Chinchwad Municipal Corporation (PCMC). Pimpri Chinchwad Council was formed on 4 March 1970 covering area of about 87 sq. km which later on was established as Municipal Corporation in 1982, which now covers an area of approximate 184 square kilometres. As per 2011 census population of Pimpri Chinchwad is 17, 29,000 souls growing at a rate of 6% annually, with a national average of 2.1%. The city is located on the Deccan Plateau and is surrounded by hills. It is situated 530 m above the mean sea level. Pavna River traverses the city, while the Indrayani River flows through the north-western outskirts and Mula River on south side, forms a boundary of Pune and Pimpri Chinchwad Cities. Various particulars of the city are given in below.

Population (2011)	17,29,359 (As per 2011 census)
Estimated population (2018)	22,41,421 (based on Census 2011)
Slum population	1,47,810 (As per 2011 census)
No. of zone	8
No. of wards	32

The city forms a continuous urban stretch, adding to the overall Pune Metropolitan Region (PMR), and contains a thriving industrial belt that primarily consists of engineering and automobile industries. The Information Technology (IT) sector has also got importance in the recent years because of the formation of the Hinjewadi IT Park.

PCMC and Pune, when viewed as a unified geographical unit, make up one of India's largest industrial areas. Pimpri Chinchwad has contributed a lot to the fact that Pune is the second largest industrial city in Maharashtra after Mumbai.

3.2 About Pimpri Chinchwad Smart City Limited

Under Government of India (GoI) Smart Cities Project, the Pimpri-Chinchwad Smart City Limited (the “Authority”), a Special Purpose Vehicle (SPV) for Pimpri-Chinchwad Smart City Project has been established as a company under the Indian Companies Act 2013. The Authority would receive funding from Government of India (GoI) and Government of Maharashtra (GoM, state government) for the development of smart city in Pimpri-Chinchwad and proposes to use a part of this funding for the said assignment. The Authority is a government-owned company with equal shareholding from Pimpri- Chinchwad Municipal Corporation and the state government.

3.3 GIS Enabled ERP Project as a part of Smart City Initiative

Pimpri Chinchwad Smart City Proposal (SCP) was selected by the Government of India (GoI) under Smart City Mission (SCM). After consultation with citizens, more than 30 projects have been identified in the Smart City Plan which were packaged into three modules. The first module talks about institutionalization of Smart City SPV, the second module covers projects for area based development while the third module includes few selected projects from the pan-city development component of the Smart City proposal for Pimpri Chinchwad which involves “Response” as one of the key packages. In order to utilize the data driven and geo spatial approach for decision making, Pimpri Chinchwad Municipal Corporation (PCMC) has decided to design and deploy GIS enabled ERP. Under this initiative, the functionalities of GIS will be interlinked with day to day functioning of departments, so as to update the GIS database of PCMC continuously.

3.4 Department Overview of PCMC

Pimpri Chinchwad Municipal Corporation (PCMC) has divided its operations into several departments. Below table shows departments in PCMC:

#	Department Name	#	Department Name
1	Office of Commissioner	22	Citizen's Facilitation Center
2	Office of Additional Commissioner	23	Urban Community Development
3	Administration	24	Sky sign and License
4	Audit	25	Land and Estates
5	Accounts	26	Garden
6	Civil	27	Birth and Death
7	Building Permission and Unauthorized Construction control	28	Fire Brigade
		29	Legal
8	Property Tax	30	Sports
9	Medical	31	Vehicle Workshop
10	Water Supply	32	Election
11	Drainage & Sewerage	33	Veterinary
12	Health	34	Security
13	LBT	35	Labor Welfare
14	Electrical	36	Auditorium
15	Town Planning	37	Information and Public Relation
16	Primary and Secondary Education	38	Slum Development
17	Department of Information and Technology	39	Water purification sector 23
18	Municipal Secretary	40	Environmental Engineering
19	Central Store	41	Wireless and Telecom
20	ITI	42	Zone Offices
21	Library	43	Record Keeping

More information about the Departments and Processes at PCMC can be accessed at the PCMC's webpage (<https://www.pcmcindia.gov.in/index.php>)

3.5 PCMC Organizational Setup

Organizational Setup		
#	Items	No of Items
1	No of Employees in PCMC	~ 7,000
2	No of Pensioners in PCMC	~ 4,200
3	No of Electrol Wards in PCMC	32
4	No of new recruits every year	~ 50
5	No of new retirees every year	~ 100

IT Setup		
#	Items	No of Items
1	No of desktops in PCMC	~ 2000
2	DC Setup	Available
3	Current Database size	~ 15 GB
4	Current Database	PostgreSQL 8.3 (For majority of applications)

3.6 RFP Format

The intent of this RFP is to invite bids from the Bidders for Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative

The Request for Proposal (RFP) consists of three volumes viz:

- **RFP Volume 1: Structure of Proposal & Bid Process Specifications**
Volume 1 details the instructions with respect to the bid process management, technical evaluation framework, and the technical & financial forms.
- **RFP Volume 2: Scope of Work including Functional & Technical Specifications**
Volume 2 of the RFP provides information regarding the Project Implementation Plan, business requirements/applications to be covered and corresponding process related documentation, scope of work for the selected bidder and functional requirements.
- **RFP Volume 3: Legal Specifications**
Volume 3 contains the contractual, legal terms & conditions applicable for the proposed engagement.

3.7 Datasheet/Factsheet

Sl #	Item	Description
1.	Method of Selection	The method of selection is L1. The Contract shall be awarded to the bidder quoting the lowest 'Total Project Price' post technical qualification. Prices inclusive of applicable taxes, levies etc. shall be considered for arriving at L1 price.
2.	Availability of RFP Documents	Download from e-Procurement Portal (https://mahatenders.gov.in)
3.	Release of RFP	13/09/2019, 11:00 AM onwards
4.	Tender document fee (Non-refundable and Not – exempted)	INR 67,200/- through e-Procurement Portal
5.	Bid Security/Earnest Money Deposit (EMD)	Total EMD amount is INR 1,20,00,000(One Crores Twenty lakhs only)
6.	Pre-bid Meeting date	17/09/2019, 11:00 AM at 3rd Floor, PCMC Head Office
7.	Posting of responses to queries (on website)	e-Procurement Portal (https://mahatenders.gov.in)
8.	Last Date and time for Bid/Bid submission (On or before)	07/10/2019, 3:00 PM
9.	Date of opening of Technical bids	10/10/2019, 11:00 PM
10.	Bid validity	Bid must remain valid up to 180 (One Hundred & Eighty) days from the actual date of submission of the Bid.
11.	Currency	Currency in which the Bidders may quote the price and shall receive payment is INR only.
12.	Name and Address for Correspondence	The CEO, Pimpri Chinchwad Smart City Limited (PCSCL), 4 th Floor, PCMC Main Building, Pimpri, Maharashtra – 411018 Tel: 020 – 67333333, 67331120 Fax: 020 - 27425600, 67330000 e-Mail ID: smartcity@pcmcindia.gov.in

4 Instructions to Bidder

The Chief Executive Officer (CEO), Pimpri Chinchwad Smart City Limited (PCSCL), invites reputed IT Firms to submit their technical proposals and financial offers for the project of Selection of System Integrator for GIS Enabled ERP Solution for PCMC under Smart City Initiatives, in accordance with conditions and manner prescribed in this Request for Proposal (RFP) document.

NOTE

1. References to "Vendor", "Bidder", "SI", "System Integrator" etc. in this RFP document shall be construed to refer to the Bidder itself.
2. References to "PCSCL", "purchaser", "buyer" in this RFP document shall be construed to refer to PCSCL (i.e. Pimpri Chinchwad Smart City Limited) while the "User", "Beneficiary" shall be referred to Pimpri Chinchwad Municipal Corporation (PCMC)

4.1 General

PCSCL has adopted a three-step process (referred to as the "Bidding Process") for selecting Bidders for the award of the Project through the e-tendering system. The Bidding Process shall comprise of two steps, the first relating to qualification of the Bidder and the second relating to the Commercial Proposal of the Bidder. As part of the Bidding Process, the Bidders are being called upon to submit their Bids through the e-Procurement Portal (<https://mahatenders.gov.in>) in accordance with the terms specified in the Bidding Documents. Registered bidders should submit their offer through e-Procurement Portal only. The official shall guide the interested Bidder to document the authorization process & to obtain the Registration Key.

Notes of e-Tendering:

1. All eligible interested Bidders, who want to participate in e-tendering process should get enrolled on e-Procurement portal (<https://mahatenders.gov.in>)
2. Bidder shall contact, for details or any difficulties in submission of online tenders, if any, the CEO, PCSCL
3. It is compulsory for all participants to submit all documents online.
4. It is compulsory to submit cost of Tender Form Fee and Earnest Money Deposit only in the prescribed form/mode of payment. Detailed terms and conditions are displayed on the portal (<https://mahatenders.gov.in>)
5. Right to reject any or all online bids of work without assigning any reasons thereof are reserved with the CEO, PCSCL.
6. While every effort has been made to provide comprehensive and accurate background information and requirements and specifications, Bidders must form their own conclusions about the solution needed to meet the requirements. Bidders and

recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.

7. All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by the Purchaser on the basis of this RFP.
8. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of the Purchaser. Any notification of preferred Bidder status by the Purchaser shall not give rise to any enforceable rights by the Bidder. The Purchaser may cancel this public tendering at any time prior to a formal written contract being executed by or on behalf of the Purchaser.
9. This RFP supersedes and replaces any previous public documentation & communications, and Bidders should place no reliance on such communications.

4.2 Eligible Bidder

Bids may be submitted by a Sole Bidder or by a lead bidder in case of a consortium as per the eligibility norms set forth in this RFP document.

4.3 Completeness of Bidder

1. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
2. Failure to comply with the requirements of this paragraph may render the Proposal noncompliant and the Proposal may be rejected. Bidders must:
 - a. Include all documentation specified in this RFP;
 - b. Follow the format of this RFP and respond to each element in the order as set out in this RFP
 - c. Comply with all requirements as set out within this RFP.

4.4 Code of Integrity

No official of a procuring entity or a bidder shall act in contravention of the codes, which includes:

- a. Prohibition of:
 - a. Making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the Tendering process or to otherwise influence the Tendering process.
 - b. Any omission, or misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
 - c. Any collusion, bid rigging or anticompetitive behavior that may impair the transparency, fairness and the progress of the Tendering process.
 - d. Improper use of information provided by the procuring entity to the bidder with an intent to gain unfair advantage in the Tendering process or for personal gain.

- e. Any financial or business transactions between the bidder and any official of the procuring entity related to tender or execution process of contract
- f. Which can affect the decision of the procuring entity directly or indirectly.
- g. Any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the Tendering process.
- h. Obstruction of any investigation or auditing of the Tendering process.
- i. Making false declaration or providing false information for participation in a tender process or to secure a contract;
- b. Disclosure of conflict of interest.
- c. Disclosure by the bidder of any previous transgressions made in respect of the
 - j. Provisions of sub-clause (a) with any entity in any country during the last three years
 - k. Or of being debarred by any other procuring entity.

In case of any reported violations, the procuring entity, after giving a reasonable opportunity of being heard, comes to the conclusion that a bidder or prospective bidder, as the case may be, has contravened the code of integrity, may take appropriate measures.

4.5 Bidder to Inform

The Bidder shall be deemed to have carefully examined the Terms & Conditions, Scope, Service Levels, Specifications, and Schedules of this RFP. If bidder has any doubts/clarifications as to the meaning of any portion of the Conditions or the specifications, he shall, before the last date for Submission of Pre- Bid Queries, set forth the particulars thereof and submit to Purchaser in writing so that the doubts may be removed or clarifications are provided.

4.6 Pre-bid meeting & Clarification

4.6.1 Bidders Queries

- a) Any clarification regarding the RFP document and any other items related to this project can be submitted to PCSCL as per the submission mode and timelines mentioned in the RFP Datasheet.
- b) Any request(s) for clarifications post the indicated date and time shall not be entertained by PCSCL. Further, PCSCL shall reserve the right to issue clarifications.
- c) The queries of only those bidders would be considered, who shall send the same to e-mail IDs provided in the RFP Datasheet.
- d) It is necessary that the pre-bid queries must be submitted in excel sheet format, along with name and details of the organization submitting the queries as mentioned in Annexure I.

4.6.2 Pre-Bid Conference

PCSCL shall hold a pre-bid meeting with the prospective bidders as mentioned in the RFP Data Sheet. The bidders are expected to submit the pre-bid queries one day prior to the date of Pre-bid conference mentioned in the RFP Datasheet. PCSCL may not respond to the pre-bid queries posted after the last day, and the bidder shall not claim for non-response of the pre-bid queries.

4.6.3 Responses to Pre-Bid Queries and Issue of Corrigendum

- a) The Nodal Officer notified by the Purchaser shall endeavour to provide timely response to all queries. However, Purchaser makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does Purchaser undertake to answer all the queries that have been posed by the Bidders.
- b) At any time prior to the last date for receipt of bids, Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by a corrigendum.
- c) The corrigendum (if any) & clarifications to the queries from all Bidders shall be posted on <https://mahatenders.gov.in>
- d) Any such corrigendum shall be deemed to be incorporated into this RFP.
- e) In order to provide prospective Bidders reasonable time for taking the corrigendum into account, the Purchaser may, at its discretion, extend the last date for the receipt of Proposals.

4.7 Bid Validity Period

Bid shall remain valid for the time mentioned in the RFP Datasheet. In exceptional circumstances, at its discretion, PCSCL may solicit the Bidder's consent for an extension of the validity period. The request and the response shall be made in writing.

4.8 Firm Prices

- a) Prices quoted must be firm and final and shall remain constant throughout the period of the contract and shall not be subject to any upward modifications, on any account whatsoever. The Bid Prices shall be indicated in Indian Rupees (INR) only.
- b) The Commercial Bid should clearly indicate the price to be charged without any qualifications whatsoever and should include all taxes, duties, fees, levies, works contract tax and other charges as may be applicable in relation to the activities proposed to be carried out.
- c) The taxes quoted in the offer should be inclusive of all the taxes except GST
- d) A proposal submitted with an adjustable price quotation or conditional proposal shall be treated as non-responsive and the bid may be rejected.

4.9 Bid Prices

- a) The Bidders shall indicate the unit rates and total Bid Prices of the equipment/services, it proposes to provide under the Contract. Prices should be shown separately for each item as required in the RFP.
- b) Bidder should provide all prices as per the prescribed Commercial Bid format provided in the e-Procurement Portal.
- c) The Bidders shall prepare the bid based on details provided in the tender documents. It must be clearly understood that the Scope of Work is intended to give the Bidders an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by PCSCL. The Bidders shall carry out all the

tasks in accordance with the requirement of the tender documents and it shall be the responsibility of the Bidders to fully meet all the requirements of the tender documents.

- d) If at any stage, during the contract, if Purchaser identifies that the approach/ project plan/ schedule/ work conducted does not meet the functional requirements, conceptual design, performance requirements/ SLA, and other requirements of Tender, the Bidders shall revise the required work plan/ approach/quality of work as required. No additional cost shall be reimbursed for the bidder for the same.
- e) The taxes quoted in the offer should be inclusive of all the taxes except GST

4.10 Submission of Proposal

Bidders shall submit their responses as per the procedure specified in the e-Procurement Portal <https://mahatenders.gov.in> being used for this purpose. Generally, the items to be uploaded on the portal would include all the related documents mentioned in this Model RFP, such as:

- o Tender Fee
- o EMD (Original BG document shall be submitted to PCSCL office on technical document opening date)
- o Pre-Qualification Proposal
- o Technical Proposal
- o Financial proposal

However, each of the above documents must be uploaded in the format specified for this purpose and as per the specified folder structure in the e-Procurement Portal.

The bidder must ensure that the bid is digitally signed by the Authorized Signatory of the bidding firm and has been duly submitted (freeze) within the submission timelines. The PCMC/PCSCL shall in no case be responsible if the bid is not submitted online within the specified timelines.

All the pages of the Proposal document must be sequentially numbered, signed by Authority, should have company seal and must contain the list of contents with page numbers. Any deficiency in the documentation may result in the rejection of the Bidder's Proposal.

4.11 Cost of RFP

The Cost of Tender document INR 67,200 to be submitted online.

4.12 Completeness of the RFP

Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications. The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP documents or submission of a proposal not

substantially responsive to the RFP documents in every respect will be at the bidder's risk and may result in rejection of its Proposal.

The purpose of this RFP is to provide interested parties with information that may be useful to them in making their financial offers pursuant to this RFP (the "Bid"). This RFP includes statements, which reflect various assumptions and assessments arrived at by PCSCL in relation to the project. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the PCMC/PCSCL, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources.

PCMC/ PCSCL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any bidder upon the statements contained in this RFP. PCSCL may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

4.13 Consortium Conditions

The Bidders are allowed to form Consortium subject to the following conditions:

- 1. The number of Consortium members cannot exceed three, including the Lead Member.**
2. Only the Lead Member will submit the Proposal and sign the Contract with PCSCL.
3. All the consortium members including Lead bidder are Jointly & Severally responsible for execution of the Contract
4. No Consortium member can be a part of more than one Consortium. Only one Bid will be allowed from a Consortium. The partners of a Consortium are not allowed to bid individually.
5. In case of a Consortium Bid, the Lead Member would also need to submit the Joint Consortium Agreement, as per format attached Annexure-6 of this RFP between the Consortium members for the Contract clearly indicating their scope of work, relationship, roles and responsibilities and stake percentage. Such Agreement should be prepared on a stamp paper of requisite value and is required to be submitted along with the Pre-qualification Proposal.
6. All the signatories of the Joint Consortium Agreement shall be authorized by a Power of Attorney signed by the respective Managing Director or Board resolution and authorization letters of Board of Directors of the Companies.
7. Each Consortium member shall execute and submit along with the Pre-qualification Proposal, a registered power of attorney in favor of the Lead Member which shall inter-alia, authorize the Lead Member to act for and on behalf of such member of the

Consortium and do all acts as may be necessary to or for the performance under the contract.

8. The Consortium Agreement shall provide at least the following information in respect of the Consortium members that the Bidder will engage to provide any of the services required under this RFP.
 - a. Brief description of nature of products/services to be provided by Consortium member
 - b. Head and Branch offices (if responsible for work under the contract) (provide mailing addresses, phone, fax and email)
 - c. Date, form and state of incorporation of each Consortium member
 - d. Contract Administrator (Name, business address, fax, phone and email address of individual responsible for administering any Contract that might result from this RFP)
 - e. Company Principals (Name, title and business address)
 - f. Current or prior successful partnerships with proposed Consortium member including Client reference (Contact name, phone number, dates when services were performed).
9. The Consortium Agreement concluded by the Lead Member and Consortium member(s) should also be addressed to PCSCL clearly stating that the Agreement is applicable to the contract executed out of this RFP and shall be binding on them for the Contract Period. Notwithstanding the Agreement, the responsibility of completion of job under the contract will be with the Lead Member.
10. Change in members of the Consortium of the successful Bidder anytime during the Contract will be allowed only with prior approval of PCSCL
11. The Lead Member shall be solely liable to and responsible for all obligations towards PCMC/PCSCL for performance of works/services including that of its partners/associates, accuracy of data, validation of data etc. under the contract.

4.14 Sub-contracting Conditions

The bidder shall not be allowed to sub-contract / outsource work, except for the following:

- a. Only the survey component of the project which may include door to door survey, collection of information, data entry, LiDAR Survey or equivalent to LiDAR, Total Station survey, Areal Survey etc. can be sub-contracted with prior approval of the PCMC/PCSCL

However, even if the work is sub-contracted / outsourced, the sole responsibility of the work shall lie with the lead bidder. The lead bidder shall be held responsible for any delay/error/noncompliance etc. of its sub-contracted vendor. The details of the sub-contracting agreements (if any) between both the parties would be required to be submitted to Purchaser, if asked.

5 Key Requirements of Bid

5.1 Right to terminate the process

PCSCL may terminate the RFP process at any time and without assigning any reason. PCMC/PCSCL makes no commitments, express or implied, that this process will result in a business transaction with anyone. This RFP does not constitute an offer by PCMC/PCSCL. The bidder's participation in this process may result in PCSCL selecting the bidder to engage towards execution of the contract.

5.2 RFP Document fees

The fee for purchase of this RFP document as detailed below has to be made through online payment mode. The RFP document can be downloaded from the website: <https://mahatenders.gov.in>. The scanned copy of RFP fee paid receipt should be uploaded with bid documents. Bids that are not accompanied by the RFP fees or accompanied by inadequate RFP fees, shall be considered non-responsive and will be rejected.

S No	Item	Details
1	Tender Fees	Rs. 67,200/- (Including GST)

5.3 Earnest Money Deposit (EMD)

The qualified bidders are requested to deposit the EMD through Online Payment Gateway as integrated in the PCMC e-tendering solution.

S.No	Item	Details
1	EMD Amount	Rs.1,20,00,000

1. An EMD for an amount of Rs.1,20,00,000 (INR One Crore twenty Lakhs) shall be paid as hereunder. The bidders are required to pay Rs. 20,00,000/- (INR Twenty Lakhs) of the EMD online and the rest either as Bank Guarantee from a nationalized bank, valid for at least 12 months. The bidder should ensure that the payment of the EMD is made at least 3 working days prior to submission timeline to avoid any banking transfer delays and the receipt of the same should/must be uploaded during the online submission of bid document. Bank details for EMD in terms of Bank Guarantee (Rs One Crore)

Name of Bank	Bank of Baroda
Address of Bank	Pimpri Chinchwad Municipal Corporation , Pimpri, Mumbai Pune Road, Pune 411 018, Pimpri 411018
Account No	31060200000222
Account Type	Current Account

IFSC Code	BARBODRCCHI (fifth character is zero)
MICR Code	411012025
Branch Code	DRCCHI

2. An earnest money deposit of Rs.1,20,00,000 (INR One Crore twenty Lakhs) should be paid as stated above. Cheque or cash will not be accepted. The EMD is liable to be forfeited, in case the bidder refuses to enter in to the agreement after receiving the letter of acceptance from PCSCL.
3. The bid of those who do not deposit earnest money shall be summarily rejected.
4. The amount of earnest money will be refunded to the unsuccessful bidder on deciding about the acceptance or otherwise of the tender or on expiry of the validity period whichever is earlier. In case of the successful bidder, it will be refunded on his paying the initial security deposit and completing the tender documents or will be transferred towards a part of security deposit to be paid after awarding of the work. If successful bidder does not pay the security deposit in the prescribed time limit and complete the agreement, his earnest money deposit will be forfeited.
5. Exemption certificate will not be accepted in lieu of Earnest Money Deposit.
6. PCSCL shall be entitled to forfeit the full amount of Earnest Money Deposited by the bidder , without prejudice to any rights and powers of the PCSCL hereunder or in law, if,
 - a. The bidder withdraws /modifies the bid after bid opening or otherwise during the period of Bid Validity.
 - b. The successful bidder, after the acceptance of his tender fails or neglects to furnish the Security Deposit in an acceptable form.
 - c. The successful Bidder fails to sign the agreement as per tender stipulations.
 - d. Fraudulent practice is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.
 - e. Submission of wrongful, ambiguous or misleading information, documents, certificates intentionally or unintentionally.
7. Bidders should upload scanned copy of EMD paid receipt during bid preparation.
8. EMD shall be non-transferable
9. Bidders should mention the beneficiary details for EMD refund in the Earnest Money Deposit Form for fields marked as details required for Refund. PCMC/PCSCL or e-Tendering Service Provider will not be liable for delays caused in EMD refund due to incorrect beneficiary details.
10. The earnest money deposit of unsuccessful bidders will be refunded through RTGS, NEFT mode only after finalization of the tender for which the above refund details are required.
11. The refund account details should be correctly mentioned by the bidder and should be active at least 180 days from the date of submission of the bid for appropriate online EMD refund as the case may be.

12. The EMD of unsuccessful bidders will be returned by PCMC/PCSCL, without any interest, as promptly as possible and latest by 120th day of signing of the contract by the successful bidder or when PCMC/PCSCL cancels the bidding process.
13. The EMD of the successful bidder shall be returned/ adjusted latest by 30th day of submission of performance bank guarantee by the bidder.
14. The EMD shall be furnished in Indian Rupees only. No interest shall be payable by PCMC/PCSCL on the EMD.
15. The EMD shall be forfeited and appropriated by PCMC/PCSCL and bid shall be summarily rejected without prejudice to any other right or remedy that may be available to PCMC/PCSCL hereunder or otherwise, under the following conditions:
 - a. If a bidder submits a non-responsive bid
 - b. If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
 - c. If during the bid process, a bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization, the decision of PCMC/PCSCL regarding forfeiture of the Bid Security shall be final and binding upon bidders.
 - d. If during the bid process, any information is found false/fraudulent/mala fide
 - e. If a bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.
 - f. In the case of successful bidder, if he/she fails within the specified time limit
 - i. to sign and return the duplicate copy of LOA in accordance with the terms thereof;
 - ii. to sign the contract within the time specified by PCMC/PCSCL; or
 - iii. to furnish the Performance Security within the period prescribed in the contract; or
 - iv. In case the successful bidder, having signed the contract, commits any breach thereof prior to furnishing the Performance Security.

5.4 Completeness of Response

1. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
2. The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP document in every respect will be at the Bidder's risk and may result in rejection of its Proposal and forfeiture of the Bid EMD.

5.5 Bid Submission

Bidders shall submit their responses as per the procedure specified in the e-Procurement Portal <https://mahatenders.gov.in> being used for this purpose. Generally, the items to be

uploaded on the portal would include all the related documents mentioned in this Model RFP, such as:

- Tender Fee
- EMD (Original BG document shall be submitted to PCSCL office on technical document opening date)
- Pre-Qualification Proposal
- Technical Proposal
- Financial proposal

However, each of the above documents must be uploaded in the format specified for this purpose and as per the specified folder structure in the e-Procurement Portal.

The bidder must ensure that the bid is digitally signed by the Authorized Signatory of the bidding firm and has been duly submitted (freeze) within the submission timelines. The PCMC/PCSCL shall in no case be responsible if the bid is not submitted online within the specified timelines.

All the pages of the Proposal document must be sequentially numbered and must contain the list of contents with page numbers. Any deficiency in the documentation may result in the rejection of the Bidder's Proposal.

5.6 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 PCMC/PCSCL to facilitate the evaluation process, and in negotiating a definitive Master Service Agreement (MSA) and all such activities related to the Bid process. This RFP does not commit PCMC/PCSCL 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.

5.7 Authentication of Bids

The original Bid will be signed by a Bidder's person duly authorized to bind the Bidder to the Contract. A letter of authorization in the name of the person signing the Bid shall be supported by a written Power-of-attorney accompanying the Bid. All pages of the Bid including the duplicate copies, except for un-amended printed literature, shall be initialed and stamped by the person / persons signing the Bid. The bid will then be uploaded on the e-tendering portal.

5.8 Interlineation of bids

The Bid shall contain no interlineations or erasures. In case of any overwriting, the place needs to be signed by the Authorized signatory.

5.9 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.

5.10 Patent Claim

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof, the bidder shall expeditiously extinguish such claim. If the bidder fails to comply and PCMC/PCSCL is required to pay compensation to a third party resulting from such infringement, the Bidder shall be responsible for such compensation, including all expenses, court costs and lawyer fees. PCMC/PCSCL shall give notice to the successful bidder of any such claim and recover it from the bidder if required.

5.11 Language

The proposal should be filled by the bidders in English language only. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the bidders. For purposes of interpretation of the documents, the English translation shall govern.

5.12 Discount

The Bidders are advised not to indicate any separate discount. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, shall not be taken into account for evaluation purpose. The summation of prices of individual components should add up to the final commercial offer including all taxes excluding GST. For variation during execution of contract, unit prices of all individual components shall be considered accordingly.

5.13 Only One Proposal and One Solution

If a Bidder, sole, lead or consortium member, submits or participates in more than one Proposal and / or presents more than one Solution, such Bidders shall be disqualified.

5.14 Supplementary Information/Corrigendum/Amendment to the RFP

At any time prior to the deadline (or as extended by PCSCL) for submission of bids, PCSCL for any reason, whether at its own initiative or in response to clarifications requested by the Bidder may modify the RFP document by issuing amendment(s) or issue additional data to clarify an interpretation of the provisions of this RFP. Such supplements / corrigendum to the RFP issued by PCSCL would be displayed on PCMC's e-Tendering Portal <https://mahatenders.gov.in> and may additionally also be communicated by e-mail to the Bidders who have taken the RFP from PCMC/PCSCL in hard copy. Any such supplement /

corrigendum / amendment shall be deemed to be incorporated by this reference into this RFP.

Any such supplement / corrigendum / amendment will be binding on all the Bidders. PCMC/PCSCL will not be responsible for any misinterpretation of the provisions of this Tender document on account of the Bidders failure to update the Bid documents based on changes announced through the website.

In order to allow Bidders a reasonable time to take the supplement / corrigendum / amendment(s) into account in preparing their bids, PCSCL, at its discretion, may extend the deadline for the submission of bids.

5.15 Local Conditions

1. It shall be incumbent upon each Bidder to fully acquaint himself with the local conditions and other relevant factors, which would have any effect on the performance of the contract and / or the cost.
2. The Bidders are expected to obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into contract. Obtaining such information shall be at Bidders own cost.
3. Failure to obtain the information necessary for preparing the bid and/or failure to perform activities that may be necessary for the providing services before entering into contract shall in no way relieve the successful Bidders from performing any work in accordance with the Tender documents.
4. It shall be imperative for each Bidder to fully inform themselves of all legal conditions and factors, which may have any effect on the execution of the contract as described in the bidding documents. PCMC/PCSCL shall not entertain any request for clarification from the Bidders regarding such conditions.
5. It is the responsibility of the Bidders that such factors have properly been investigated and considered while submitting the bid proposals and that no claim whatsoever including those for financial adjustment to the contract awarded under the bidding documents shall be entertained by PCSCL and that neither any change in the time schedule of the contract nor any financial adjustments arising thereof shall be permitted by the PCSCL on account of failure of the Bidders to appraise themselves of local laws and site conditions.

5.16 Venue & Deadline for Submission of Proposals

Proposals, in its complete form in all respects as specified in the RFP, must be submitted online before last date and time of submission, to PCSCL at the portal specified in Proposal Factsheet/Datasheet.

5.17 Proposals submitted after designated time of submission

1. Bids submitted after the due date shall not be accepted by the e-Procurement Portal (<https://mahatenders.gov.in>), and hence shall automatically be rejected. The

Purchaser shall not be responsible for any delay in the online submission of the proposal.

2. The bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence shall be entertained on this matter.
3. The Purchaser shall not be responsible for any postal delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject shall be entertained.
4. PCSCL reserves the right to modify and amend any of the above-stipulated condition/criterion depending upon project priorities vis-à-vis urgent commitments.

5.18 Deviations

Bids shall be submitted strictly in accordance with the requirements and terms & conditions of the RFP. The Bidder shall submit a No Deviation Certificate as per the format mentioned in Annexure 7.9. The bids with deviation(s) are liable for rejection.

5.19 Modification and Withdrawal of Bids

1. No bid may be altered / modified after submission to the PCSCL. Unsolicited correspondences in this regard from Bidders shall not be considered.
2. No bid may be withdrawn in the interval between the last date for receipt of bids and the expiry of the bid validity period specified by the Bidders in the Bid.
3. Withdrawal of a bid during this interval shall result in the Bidders forfeiture of its EMD.

5.20 Revealing of Prices

Prices in any form or by any reason before opening the Commercial Bid should not be revealed, failing which the offer shall be liable to be rejected.

5.21 Address for Correspondence

The Bidders shall designate the official mailing/e-mail address, place and fax number to which all correspondence shall be sent by the PCSCL.

5.22 Contacting PCMC/PCSCL

1. No Bidders shall contact the PCMC/PCSCL on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
2. Any effort by a Bidders to influence the PCSCL's bid evaluation, bid comparison or contract award decisions shall result in the rejection of the Bidders bid.

5.23 PCMC Visit

1. The Bidder may visit PCSCL/PCMC office at a time to be agreed, and obtain information on the existing processes and functioning of the project that may be necessary for preparing the Bid document. The Bidder may carry out this site visit as per the date and time specified in Bid schedule. The visit may not be used to raise questions or seek clarification on the RFP. The cost of such visits to the site (s) shall be at the Bidder's own expense.

2. No site visits shall be arranged or scheduled after the deadline for the submission of the Bids and prior to the Award of Contract.

5.24 Bidder Related Conditions

1. The bidder shall prepare the bid based on details provided in the RFP documents. It must be clearly understood that the quantities, specifications and diagrams that are included in the RFP document are intended to give the bidder an idea about the scope and magnitude of the work and are not in any way exhaustive and guaranteed by PCMC/PCSCL.
2. The bidder is expected to ensure that the solution proposed meets the functional requirements, conceptual design, performance requirements and other RFP requirements. Performing of any activity required to design an optimal solution shall be at bidder's own cost.
3. The bidder shall carry out the sizing of the solution based on their own assessment and analyses, which may include the use of modelling techniques wherever necessary.
4. The bidder must propose a solution best suited to meet the requirements of the PCMC/PCSCL.
5. If, during the sizing of the solution, any additional product that is not listed in the RFP document is required to be included to meet the conceptual design, performance requirements and other requirements of RFP, all such product(s) should be included by the bidder in the technical proposal and their commercial impact, thereof, included in the commercial bid.
6. PCMC/PCSCL shall, in no case be responsible or liable for any costs associated with the design/sizing of the proposed solution, regardless of the conduct or outcome of the Tendering process.
7. If at any stage during the currency of the contract, the solution proposed does not meet the functional requirements, conceptual design, performance requirements/SLA, and other requirements of the RFP, the bidder shall revise the required specifications and/or quantities as proposed by the bidder in his bid in order to meet the said objectives/targets. All such provisions shall be made by the bidder within the lump sum contract price, at no extra cost to PCMC/PCSCL and without any impact to PCMC/PCSCL whatsoever.
8. It is mandatory to provide the break-up of all components in the format specified in the RFP. The summation of the prices of individual components shall add up to the commercial offer of the bidder. In no circumstances shall the commercial bid be allowed to be changed / modified.
9. It is mandatory to provide break-up of all taxes, duties and levies wherever applicable and/or payable. The bid amount shall be inclusive of packing, forwarding, transportation, insurance, delivery charges and any other charges as applicable. Any other charges as applicable shall be borne by the Bidder.

5.25 Bid Submission

1. Bidder should enroll online on e-Procurement Portal. The Digital Signature enrolment has to be done with the e-token, after logging into the portal. The e-token may be obtained from one of the authorized Certifying Authorities.
2. After downloading / getting the tender schedules, the Bidder should go through them carefully and then submit the documents as per the tender document; otherwise, the bid shall be rejected.
3. The BOQ template must not be modified / replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for that tender. Bidders are allowed to enter the Bidder Name and Values only.
4. The PCMC/PCSCL shall not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders due to local issues.
5. The bidder must submit the bid documents within prescribed time limits in online mode only, through the e-Procurement Portal.
6. After the bid submission, the bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid. The bid summary shall act as a proof of bid submission for a tender floated and shall also act as an entry point to participate in the bid opening event.
7. The time that is displayed from the server clock at the top of the tender Portal, shall be valid for all actions of requesting bid submission, bid opening etc., in the e-Procurement Portal. The Time followed in this portal is as per Indian Standard Time (IST). The bidders should adhere to this time during bid submission.
8. As per disclaimer of the portal, it is recommended that the EMD transfer is done at least 1-3 days prior to the last date of submission to have hassle-free operations.

5.26 Contents of Bid on e-Procurement Portal

#	Category	Response
1	Proof of payment of RFP Document/ fee & Earnest Money Deposit (EMD)	<ul style="list-style-type: none">• Receipt of RFP/Tender Document Fee• Receipt or confirmation of EMD payment, if applicable• Original Copy of Bank Guarantee, if applicable
2	Response to Pre-Qualification Criteria	<ul style="list-style-type: none">• Pre- Qualification Bid Checklist• Pre- Qualification Bid Covering Letter• Response to Pre-Qualification criterion along with required supporting documents
3	Technical Proposal	<ul style="list-style-type: none">• Technical Bid Checklist

		<ul style="list-style-type: none"> • Technical Bid Covering Letter • Response to Technical Evaluation criterion along with the required supporting documents
4	Commercial Proposal	<ul style="list-style-type: none"> • Commercial bid/proposal as per the pre-defined format

5.27 Technical Proposal

Bidder is required to prepare a Technical Proposal as detailed out in Annexure 3 - Format for submission of Technical Bid. The bidder should upload all the associated documents in Online Technical Envelope (T1) in PDF format, if required can be zipped as well and then uploaded. These documents need to be digitally signed by using a digital signature and uploaded during Online Bid Preparation stage. The bidder should submit all the supporting documents as mentioned in Annexure 3 - Format for submission of Technical Bid of this RFP.

5.28 Commercial Bid

All commercial offers must be prepared online (An online BoQ format shall be provided for this purpose during Online Bid Preparation stage). No bidder should quote his commercial offer anywhere directly or indirectly in Technical Envelope, failing which the Commercial Envelope shall not be opened and his tender shall stand rejected.

5.29 Opening of Bids

- a. The bids that are submitted online successfully shall be opened online as per date and time given in Proposal Datasheet, through e-Tendering procedure.
- b. Bids shall be opened either in the presence of bidders or their duly authorized representatives. The bidder representatives who are present shall sign a register evidencing their attendance. Two representatives per bidder shall be permitted to be present at the time of opening the tender.
- c. The Bid submitted without Tender fee and EMD, shall be summarily rejected. Only those Bids whose Tender fee and EMD is received shall be eligible for opening.
- d. Total transparency shall be observed and ensured while opening the Proposals/Bids
- e. PCMC/PCSCL reserves the rights at all times to postpone or cancel a scheduled Bid opening
- f. Bid opening shall be conducted in two stages:
 - i. In first stage, Pre-qualification Proposals would be opened. The EMD of the Bidders shall be opened on the same day and time, on which the Pre-qualification Proposal is opened, and bids not accompanied with the requisite EMD or whose EMD is not in order shall be rejected. Technical Proposals of Bidders who pass the Pre-qualification criteria shall be opened.

- ii. In the second stage, Commercial Proposal of those Bidders who qualify as per the Technical qualification criterion would be opened in the presence of Bidders' representatives who choose to attend the Bid opening sessions on the specified date, time and address.
- g. 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 PCMC/PCSCL, the bids shall be opened at the same time and location on the next working day. In addition to that, if there representative of the Bidder remains absent, PCMC/PCSCL shall continue process and open the bids of the all Bidders.
- h. During Bid opening, preliminary scrutiny of the Bid documents shall be made to determine whether they are complete, whether required EMD 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 shall be *prima facie* rejected. PCMC/PCSCL has the right to reject the bid after due diligence is done.

5.30 Technical Envelope

1. Technical Envelope of the tenderer shall be opened online through e-Tendering procedure to verify its contents as per requirements.
2. If the various documents contained in this envelope do not meet the requirements, a note shall be recorded accordingly by the tender opening authority and the said tenderer's Commercial Envelope shall not be considered for further action but the same shall be recorded.
3. Decision of the tender opening authority shall be final in this regard.
4. The commercial bids shall not be opened till the completion of evaluation of technical bids. The commercial Bids of only technically qualified Bidders as mentioned above shall be opened.
5. Documents submitted by the bidder shall be closely scrutinized and the bidder shall provide all the original documents whenever requested.

5.31 Commercial Envelope

This envelope shall be opened online as per the date and time given in detailed tender schedule through e-Tendering procedure only.

Note: During Online Bid Submission, bidder is allowed to submit/upload additional relevant document apart from the above mentioned documents as part of its bid.

6 Selection Process for Bidder

6.1 Evaluation of Bids

1. PCSCL shall constitute a Tender Evaluation Committee to evaluate the responses of the bidders
2. The Tender Evaluation Committee constituted by the PCSCL shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection. The Bidders' technical solution shall be evaluated as per the requirements and evaluation criteria as spelt out in the RFP document. 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.
3. The Committee may seek inputs from their professional and technical experts in the evaluation process.
4. PCSCL reserves the right to do a reference check of the past experience stated by the Bidder. Any feedback received during the reference check shall be taken into account during the Technical evaluation process
5. The decision of the Tender Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence shall be entertained outside the process of negotiation/ discussion with the Committee.
6. The Tender Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals.
7. The Tender Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations without assigning any reason thereof.
8. Each of the responses shall be evaluated as per the criterions and requirements specified in the RFP.
9. Proposal Presentations: The Tender Evaluation Committee shall invite each pre-qualified Bidder to make a presentation to PCMC/PCSCL at a date, time and venue decided by PCSCL. The purpose of such presentations would be to allow the Bidders to present their proposed solutions to the Committee and orchestrate the key points in their Proposals.
10. The Bidder should cover scope of work, complexity of implementation, end to end integration methodology, Demonstration, Survey Method and critical success factor as specified in the evaluation section

6.2 Opening of Bids

1. The Bids shall be opened by Purchaser in presence of those Bidders or their representatives who may be present at the time of opening.
2. The representatives of the bidders should be advised to carry the identity card or a letter of authority from the bidder firms to identify that they are bona fide representatives of the bidder firm, for attending the opening of bid.
3. The bid shall be opened in the following manner :

Set 1:

- RFP Document Fee & EMD**
- Pre-Qualification bid**
- Technical bid**
- Presentation**

Set 2:

- Commercial bid**

4. The venue, date and time for opening the Pre-qualification & Technical bid are mentioned in the Datasheet.
5. The Technical Bids of only those bidders shall be evaluated who clear the Pre-qualification stage.
6. The Commercial Bids of only those bidders shall be opened whose score equal to or more than qualifying marks in the Technical Bid.
7. The date and time for opening of Commercial bid would be communicated to the qualified bidders.

6.3 Preliminary examination of Bids

1. Initial Proposal scrutiny shall be held to confirm that Proposals do not suffer from the infirmities detailed below. Proposals shall be treated as non-responsive, if a Proposal is found to have been:
 - i. Submitted in manner not conforming with the manner specified in the RFP document
 - ii. Submitted without appropriate EMD as prescribed herein
 - iii. Received without the appropriate or power of attorney
 - iv. Containing subjective/incomplete information
 - v. Submitted without the documents requested in the checklist
 - vi. Non-compliant with any of the clauses stipulated in the RFP
 - vii. Having lesser than the prescribed validity period

The EMD of all non-responsive bids shall be returned to the bidders.

2. All responsive Bids shall be considered for further processing as below:
 - i. PCSCL shall prepare a list of responsive Bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids shall be considered for further evaluation by a Committee according to the Evaluation process defined in this RFP document. The decision of the Committee shall be final in this regard.

6.4 Clarification on Bids

During the bid evaluation, PCSCL may at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted. PCSCL is entitled to ask for clarifications as many times as possible from the bidders to the satisfaction of the Tender Evaluation committee.

6.5 Evaluation Process

Purchaser shall constitute a Tender Evaluation Committee to evaluate the responses of the bidders. The Tender Evaluation Committee shall evaluate the responses to the RFP and all supporting documents/documentary evidence. Inability to submit requisite supporting documents/documentary evidence by bidders may lead to rejection of their bids.

The decision of the Tender Evaluation Committee in the evaluation of bids shall be final. No correspondence shall be entertained outside the process of evaluation with the Committee. The Tender Evaluation Committee may ask for meetings or presentation with the Bidders to seek clarifications or conformations on their bids.

The Tender Evaluation Committee reserves the right to reject any or all bids. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.

The steps for evaluation are as follows:

6.5.1 Stage 1: Pre-Qualification

1. Purchaser shall validate the Set 1 “RFP Document fee & Earnest Money Deposit (EMD)”.
2. If the contents of Set 1 are as per requirements, Purchaser shall open the “Pre-Qualification Bid”. In case, the Bidder does not meet any one of the conditions, the bidder shall be disqualified.
3. Bidders would be informed of their qualification / disqualification based on the Pre-Qualification criteria and subsequently, the EMD amount shall be returned to the respective disqualified Bidders after the submission of Performance Bank Guarantee by the successful Bidder.

6.5.2 Stage 2: Technical Evaluation

1. “Technical bid” shall be evaluated only for the bidders who get qualified in Pre-Qualification.
2. Purchaser shall 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 at Purchaser’s discretion.

3. The bidders' technical solutions proposed in the bid document shall be evaluated as per the requirements and technical evaluation framework specified in the RFP
4. Bidders shall be required to make the detailed presentation, as part of the Technical Evaluation Framework specified in the RFP.
5. Each Technical Bid shall be assigned a technical score as per the Technical Evaluation Framework. Only the bidders who get an Overall **Technical score of 80%** or more including sectional cutoff through the Technical Evaluation Framework shall qualify for commercial evaluation stage. Failing to secure minimum marks shall lead to technical rejection of the Bid.

6.5.3 Stage 3: Financial Evaluation

1. All the technically qualified bidders shall be notified to participate in Commercial Bid opening process.
2. The commercial bids for the technically qualified bidders shall then be opened on the notified date and time, and reviewed to determine whether the Financial bids are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at Purchaser's discretion.
3. Financial Bids that are not as per the format provided in Annexure 4 shall be liable for rejection.
4. As part of Financial bid submission process, on e-Procurement Portal, bidder shall quote Price in the column as per details below:
 - In case of *Unit of Measurement* for a line item as 'Lump Sum', Bidder shall quote the **Total Price** in the column to meet the RFP requirement in totality
 - In case of *Unit of Measurement* for a line item such as 'Nos.', 'Number of licensee's etc., bidder shall quote the **Unit Price** in the column.
5. For the purpose of computation of the Financial Bid Value of the respective submitted bid, purchaser shall consider **Unit / Lump sum Price (Inclusive of all Taxes, levies, duties etc. and except GST)**, for the respective line item quoted by the bidder on e-Procurement Portal and shall consider either of the below quantities for that line item, whichever is higher:
 - Quantities proposed by the bidder as part of its Proposed Unpriced Bill of Material in the technical bid
 - Quantities as prescribed by the purchaser as part of RFP Volume II

6.6 Pre-Qualification Criteria

6.6.1 Pre-Qualification Criteria

The pre-qualification criteria for participating in this tender are mentioned in the table below.

#	Criteria	Details	Documents to be submitted
1	Legal Entity	The Sole bidder or each of the members of the consortium, in case of consortium, should be an entity registered in India under the Companies Act 1956 / 2013 or LLP registered under LLP Act 2008 or Subsequent amendments thereto.	<ul style="list-style-type: none"> • Certificate of Incorporation Or Partnership deed • GST Registration Certificate
2	Board Resolution / Power of Attorney in favour of Authorised Signatory	<p>A Board Resolution or Power of Attorney, in the name of the person executing the bid, authorizing the signatory to sign on behalf of the Bidding entity.</p> <p>The person issuing the Power of Attorney shall possess Board Resolution in his favour for granting such rights.</p> <p>This is applicable to the sole Bidder or each of the members of the consortium, in case of consortium.</p>	<p>Board Resolution OR Power of Attorney with appropriate supporting documents as only as per the formats given in Annexure 7 of this document</p>
3	Consortium	In the event of a consortium, one of the bidder shall be designated as a "Lead Bidder". Consortium is allowed with up to 3 consortium members including the Lead Bidder.	<p>In case of consortium, the bidders shall submit consortium agreement valid for complete project duration (as per Annexure 6 of this RFP) and power of attorney in favour of the lead bidder clearly mentioning their association and stake for the project and nominating the Lead bidder (as per Annexure 8 of this RFP) to participate in the bid. The same shall be signed by the authorized signatory of all the consortium members. The</p>

#	Criteria	Details	Documents to be submitted
			Authorized signatory shall possess Board Resolution in his/her favour for granting such rights and copy of such Board Resolution shall be submitted.
4	Financials (Sole bidder or Lead bidder)	<p>The Sole bidder or Lead bidder of the consortium, in case of a consortium, should have an average annual turnover of minimum INR 250 crore over the last three financial years. The lead member shall have obtained this revenue from software related activities i.e. Software development, software consultancy, software implementation and support etc.</p> <p>In case the lead member is a 100% owned subsidiary of the global parent company, the Global Parent company's credentials shall be considered.</p>	<ul style="list-style-type: none"> • Certificate from the Statutory Auditor along with extracts from the audited balance sheet and profit & loss statement for financial year FY16-17, FY17-18 and FY18-19 as per Annexure-7.4 • If audited financial statements are not available for FY18-19, the provisional statements shall be provided. • CA certificate will not be accepted in any case • Document to substantiate that the entity is 100% owned subsidiary of the global parent company
5	Financials (Consortium member)	Each member of consortium should have an average annual turnover of minimum INR 15 crore over the last three financial years	<ul style="list-style-type: none"> • Certificate from the Statutory Auditor along with extracts from the audited balance sheet and profit & loss statement for financial year FY16-17, FY17-18 and FY18-19 as per Annexure-7.4

#	Criteria	Details	Documents to be submitted
			<ul style="list-style-type: none"> If audited financial statements are not available for FY18-19, the provisional statements shall be provided. CA certificate will not be accepted in any case
6	Net Worth	The Sole bidder or each of the members of the consortium, in case of consortium, should have positive net worth as per the audited consolidated financial statements in each of the last three financial years	<ul style="list-style-type: none"> Certificate from the Statutory Auditor along with extracts from the audited balance sheet and profit & loss statement for financial year FY16-17, FY17-18 and FY18-19 as per Annexure-7.4 If audited financial statements are not available for FY18-19, the provisional statements shall be provided. CA certificate will not be accepted in any case
7	Technical Capability-GIS	The Sole Bidder or Any member in case of consortium should have successfully completed Web GIS system development and integration project (Excluding Survey) in past 8 years for any Government organization in India or Globally with the project of following details:	<p>For completed project; all of the following (a and b):</p> <p>a) Work order OR Signed Contract b) Completion Certificates from the client OR Go-Live certificate from the client</p> <p>For Substantially completed project (c and d):</p> <p>c) Work order OR Signed Contract</p>

#	Criteria	Details	Documents to be submitted										
		<table border="1"> <tr> <td>Project Value (INR)</td><td>Minimum no of projects required to qualify PQ</td></tr> <tr> <td>> 5.0 Cr</td><td>1 Project</td></tr> <tr> <td>> 3.5 Cr to 5.5 Cr</td><td>2 Project</td></tr> <tr> <td>≥ 2.5 Cr to 3.5 Cr</td><td>3 Project</td></tr> <tr> <td>≥ 1.0 Cr to 2.5 Cr</td><td>6 Project</td></tr> </table>	Project Value (INR)	Minimum no of projects required to qualify PQ	> 5.0 Cr	1 Project	> 3.5 Cr to 5.5 Cr	2 Project	≥ 2.5 Cr to 3.5 Cr	3 Project	≥ 1.0 Cr to 2.5 Cr	6 Project	d) Phase Completion Certificates from the client OR Phase wise Go-Live certificate from client OR UAT certificates (as mentioned in Note below) OR Phase Completion Certificates from Statutory Auditor
Project Value (INR)	Minimum no of projects required to qualify PQ												
> 5.0 Cr	1 Project												
> 3.5 Cr to 5.5 Cr	2 Project												
≥ 2.5 Cr to 3.5 Cr	3 Project												
≥ 1.0 Cr to 2.5 Cr	6 Project												
8	Technical Capability-ERP	<p>The Sole Bidder or Any member in case of consortium should have successfully completed ERP development project in past 8 years for any Government organization in India or Globally with the project of following details:</p> <table border="1"> <tr> <td>Project Value (INR)</td><td>Minimum no of projects required to qualify PQ</td></tr> <tr> <td>> 30 Cr</td><td>1 Project</td></tr> <tr> <td>> 15 Cr to 30 Cr</td><td>2 Project</td></tr> <tr> <td>≥ 10 Cr to 15 Cr</td><td>3 Project</td></tr> <tr> <td>> 05 Cr to 10 Cr</td><td>6 Project</td></tr> </table>	Project Value (INR)	Minimum no of projects required to qualify PQ	> 30 Cr	1 Project	> 15 Cr to 30 Cr	2 Project	≥ 10 Cr to 15 Cr	3 Project	> 05 Cr to 10 Cr	6 Project	<p>For completed project; all of the following (a and b):</p> <ul style="list-style-type: none"> a) Work order OR Signed Contract b) Completion Certificates from the client OR Go-Live certificate from the client <p>For Substantially completed project (c and d):</p> <ul style="list-style-type: none"> c) Work order OR Signed Contract d) Phase Completion Certificates from the client OR Phase wise Go-Live certificate from client OR UAT certificates as mentioned in Note below) OR Phase Completion Certificates from Statutory Auditor
Project Value (INR)	Minimum no of projects required to qualify PQ												
> 30 Cr	1 Project												
> 15 Cr to 30 Cr	2 Project												
≥ 10 Cr to 15 Cr	3 Project												
> 05 Cr to 10 Cr	6 Project												
9	Certification	<p>Following certifications are required to clear Pre-qualification criteria</p> <p>Lead Member/Sole Bidder</p> <ul style="list-style-type: none"> • Mandatory Certificate <ol style="list-style-type: none"> 1. CMMI Level 3 or higher 	Copy of Valid Certificate(s) issued by competent authority. The certification shall										

#	Criteria	Details	Documents to be submitted
		<ul style="list-style-type: none"> • Any two of following <ol style="list-style-type: none"> 1. ISO/IEC 20000 certification for IT Service management 2. ISO 9001:2000/2008 or latest 3. ISO 27001:2005 or latest <p>Other Members of consortium</p> <ul style="list-style-type: none"> • Any one of following <ol style="list-style-type: none"> 1. CMMI Level 3 or higher 2. ISO/IEC 20000 certification for IT Service management • Any one of following <ol style="list-style-type: none"> 1. ISO 9001:2000/2008 or latest 2. ISO 27001:2005 or latest 	be valid on bid submission date
10	Self Declaration on Non Blacklisting	The Sole Bidder or each of the members of the consortium, in case of consortium, should not have been blacklisted / debarred by any Govt. entity or any PSU in India or globally as on the date of bid submission	As per the Annexure 2 Form 7.7 of this document and to be counter signed by Bidder's Country Head or the Company Secretary
11	Manpower Strength	The Sole Bidder or at least one member of the consortium should have at least 20 GIS professionals on its roll (as Permanent Employees); and at least one member should have 50 software professionals on its rolls, as on date of submission of the bid	<ul style="list-style-type: none"> • A self-declaration or Certificate issued by Company's HR Head/Any competent person authorized by the CEO or MD for this purpose/Company Secretary of the company • If letter is signed by a person other than Company's HR Head/Company Secretary, documentary evidence/ Undertaking shall be provided to substantiate claim that the signing person is a competent person

#	Criteria	Details	Documents to be submitted
			to make such declarations

Note:

- **Note for Criteria 7 (Technical Capability-GIS) and Criteria 8 (Technical Capability-ERP)**
 - If bidders have executed /are executing projects in consortium with some other organization(s). In such case(s), they must clarify their scope of work as a part of the consortium along with percentage of total fees for the said project. The clarification must be backed by adequate proofs in the form of
 - a. An Agreement between relevant parties
 - b. MoU between relevant parties
 - c. Client certification
 - d. Joint declaration by relevant parties
 - e. Any other verifiable document(s).
 - In case, such documentation is not available, the Authority may ignore the project at their discretion during evaluation of this bid.
- The substantially completed projects are;
 - GIS Project: UAT has been completed for all modules/tasks/work and UAT certification is available
 - ERP Project: UAT has been completed for Human Resource Management System, Financial Management System, Procurement Management System and UAT certification is available
 - Work Flow Management and Document Management System: : UAT has been completed for all modules/tasks/work and UAT certification is available
- For the large ongoing projects, client certificate shall clearly state the quantum of work completed
- The bidders must submit all the supporting documents required along with Technical bid. No new qualifying documents will be entertained. The documents received in the Technical bid will be treated as full and final, and evaluation will be carried out accordingly. However, PCSCL reserves the right to seek clarification/documents pertaining to information submitted as a part of the Technical bid.
- In case the proposed solution (For ERP, GIS and WFM+DMS) is different from the projects submitted for evaluation then SI shall ensure that OEM services are mandatorily provided during various phases of implementation according to Table-1. The SI shall have to submit a letter from OEM on OEM's letter head mentioning such details along with the technical bid. OEM shall have to submit an undertaking that the OEM shall make available personnel as per the requirements mentioned in section 6.7 containing the Technical Evaluation Framework of the RFP to the satisfaction of PCSCL. Such OEM personnel shall be on payroll of OEM for at least 6 months prior to the bid due date. A letter certifying the same and including the CVs shall be provided by the

OEM signed by HR Head/ Company Secretary of OEM after issuance of Letter of Intent but prior to receiving the work order.

Table 1 Minimum Mandatory OEM Services to be provided by OEM

#	Activity	Timeline (Weeks given to complete the task)	Minimum People required from OEM	Minimum OEM Service Required (Weeks)	Total Man weeks
1	FRS and SRS documents	12	2	3	6
2	IT Architecture design (Overall System Architecture, Infra. Architecture, Entity Diagrams etc.)	4	1	1	1
3	Data Migration	8	1	2	2
4	Development of Software Modules	12	2	3	6
5	UAT	8	2	2	4
6	Integration among Software Modules (Core, Non-core, Work flow management, GIS Portal, SLB)	10	2	2	4
7	UAT of integrated modules (Core, Non-core, Work flow management, GIS Portal, SLB)	4	1	1	1
Total				14	24

- The SI and OEM shall ensure that the proposed solution (ERP, GIS and WFM+DMS products of OEM) should have been successfully implemented in at least 2 organizations in last 5 years in India/Globally. SI and OEM shall substantiate such claims by submitting relevant proofs. SI and OEM shall note that the untested products/ IT applications etc. will not be accepted.

6.7 Technical Evaluation Framework

The Bidder's technical solution proposed in the Technical Evaluation bid shall be evaluated as per the evaluation criteria in the following table:

Note: For the Criteria 2.1, 2.5 and 2.6, in case projects submitted fit into different slabs, the marks obtained for each project per slab shall be considered for arriving at the total marks for that criteria subject to maximum marks. E.g. in criteria TQ 2.5, if a bidder submits one project of 40 Cr project value and 2 projects of 18 Cr project value, the marks would be 6 (For 40 Cr project) plus 3 marks per project (For Rs 18 Cr) equating to 12 marks.

Sr. No.	Evaluation Criteria		Maximum Marks
TQ.1.0	Company Profile		
TQ1.1	The Sole Bidder (Lead Member in case of Consortium) should have average annual turnover of minimum INR 250 Cr for the last 3 financial years.		5
	Average Annual Turnover (INR)	Allocated Marks	
TQ2.0	> 1000 Cr	5 Marks	
	> 500 Cr to 1000 Cr	4 Marks	
	≥ 250 Cr to 500 Cr	3 Marks	
	Relevant Experience		
TQ2.1	The Sole Bidder or any member of its consortium should have successfully completed Web GIS Projects ¹ (Excluding Survey) for any Central Govt. / State Govt. / ULB / PSU in past 8 (Eight) years in India/Globally		16
	Project Value (INR)	Minimum no of projects required to qualify PQ and get 6 marks	Marks for each additional project subject to maximum marks of 12
	> 5.0 Cr	1 Project	6 Marks
	> 3.5 Cr to 5.0Cr	2 Project	3 Marks
	≥ 2.5 Cr to 3.5 Cr	3 Project	2 Marks
	≥ 1.0 Cr to 2.5 Cr	6 Project	1 Marks

¹ The Web GIS Project shall include at least 3 of the following components:

1. GIS Data Conversion/Migration, data modelling
2. Development, customization and Commissioning of proposed Enterprise Web GIS Solution
3. Operations and Maintenance of IT infrastructure for Enterprise Web GIS
4. Capacity building and handholding for Enterprise Web GIS
5. Creation of Multiple Geo-Spatial Layers

Sr. No.	Evaluation Criteria	Maximum Marks								
	<ul style="list-style-type: none"> If bidder has previous experience of implementing Web GIS Project on COTS product and same has been proposed, then 4 additional marks will be allotted 									
TQ2.2	<p>Sole bidder or any member of its consortium should have successfully executed single project involving preparation of GIS base map for a city in past 8 (Eight) years</p> <table border="1"> <thead> <tr> <th>Area of city (km²)</th><th>Allocated Marks</th></tr> </thead> <tbody> <tr> <td>≥ 150</td><td>10 Marks</td></tr> <tr> <td>≥ 80 to 150</td><td>5 Marks</td></tr> </tbody> </table>	Area of city (km ²)	Allocated Marks	≥ 150	10 Marks	≥ 80 to 150	5 Marks	10		
Area of city (km ²)	Allocated Marks									
≥ 150	10 Marks									
≥ 80 to 150	5 Marks									
TQ2.3	<p>The sole bidder or any member of its consortium should have successfully executed/ executing single project involving property survey and linking of property tax/property attribute data with GIS in past 8 (Eight) years</p> <table border="1"> <thead> <tr> <th>Number of Properties</th><th>Allocated Marks</th></tr> </thead> <tbody> <tr> <td>> 6,00,000</td><td>10 Marks</td></tr> <tr> <td>≥ 3,00,001 to 6,00,000</td><td>5 Marks</td></tr> <tr> <td>≥ 2,00,000 to 3,00,000</td><td>2 Marks</td></tr> </tbody> </table>	Number of Properties	Allocated Marks	> 6,00,000	10 Marks	≥ 3,00,001 to 6,00,000	5 Marks	≥ 2,00,000 to 3,00,000	2 Marks	10
Number of Properties	Allocated Marks									
> 6,00,000	10 Marks									
≥ 3,00,001 to 6,00,000	5 Marks									
≥ 2,00,000 to 3,00,000	2 Marks									
TQ2.4	<p>The Sole Bidder OR any member of the consortium should have successfully executed and have experience of capturing images of road features and building features along with measurement/dimensional data with appropriate technology (such as LiDAR or equivalent to LiDAR) in a single project for a ULB in past 8 (Eight) years in India/Globally.</p> <ul style="list-style-type: none"> If technology used is LiDAR <table border="1"> <thead> <tr> <th>Number of kilometers</th><th>Allocated Marks</th></tr> </thead> <tbody> <tr> <td>> 3,000</td><td>5 Marks</td></tr> <tr> <td>≥ 1,000 to 3,000</td><td>3 Marks</td></tr> </tbody> </table> <ul style="list-style-type: none"> If technology used is different from LiDAR 	Number of kilometers	Allocated Marks	> 3,000	5 Marks	≥ 1,000 to 3,000	3 Marks	5		
Number of kilometers	Allocated Marks									
> 3,000	5 Marks									
≥ 1,000 to 3,000	3 Marks									

Sr. No.	Evaluation Criteria			Maximum Marks									
		Area covered (km ²)	Allocated Marks										
		> 200	5 Marks										
		≥ 100 to 200	3 Marks										
TQ2.5	Any bidder should have successfully completed/Substantially Completed COTS ERP Project ² for any Central Govt. / State Govt. / PSU in past 8 (Eight) years in India/Globally			18									
	Project Value (INR)	Minimum no of projects required to qualify PQ and get 6 marks	Marks for each additional project (other than those considered in the previous column) subject to maximum marks of 12										
	> 30 Cr	1 Project	6 Marks										
	> 15 Cr to 30 Cr	2 Project	3 Marks										
	≥ 10 Cr to 15 Cr	3 Project	2 Marks										
	> 05 Cr to 10 Cr	6 Project	1 Marks										
	AND If projects provided for evaluation in the above table are implemented in ULBs in India, additional marks would be awarded as follow:												
<table border="1"> <thead> <tr> <th>Project Value (INR)</th> <th>Marks for each project implemented in ULB subject to maximum marks of 03</th> </tr> </thead> <tbody> <tr> <td>> 30 Cr</td> <td>1.50 Marks</td> </tr> <tr> <td>> 15 Cr to 30 Cr</td> <td>0.75 Marks</td> </tr> <tr> <td>≥ 10 Cr to 15 Cr</td> <td>0.50 Marks</td> </tr> <tr> <td>> 05 Cr to 10 Cr</td> <td>0.25 Marks</td> </tr> </tbody> </table>			Project Value (INR)	Marks for each project implemented in ULB subject to maximum marks of 03	> 30 Cr	1.50 Marks	> 15 Cr to 30 Cr	0.75 Marks	≥ 10 Cr to 15 Cr	0.50 Marks	> 05 Cr to 10 Cr	0.25 Marks	
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> 30 Cr	1.50 Marks												
> 15 Cr to 30 Cr	0.75 Marks												
≥ 10 Cr to 15 Cr	0.50 Marks												
> 05 Cr to 10 Cr	0.25 Marks												

² The ERP project should consist of at least 3 of the following modules

1. Human Resource Management System
2. Procurement Management System
3. Financial Management System
4. Inventory Management System
5. Project Management System
6. Asset Management System

Sr. No.	Evaluation Criteria	Maximum Marks										
	<p>AND</p> <p>If bidder has previous experience of implementing the proposed solution i.e. bidder is proposing the solution which he is already implemented, additional marks would be awarded for previously implemented projects as follow:</p> <table border="1"> <thead> <tr> <th>Project Value (INR)</th><th>Marks for each project subject to maximum marks of 03</th></tr> </thead> <tbody> <tr> <td>> 30 Cr</td><td>1.50 Marks</td></tr> <tr> <td>> 15 Cr to 30 Cr</td><td>0.75 Marks</td></tr> <tr> <td>≥ 10 Cr to 15 Cr</td><td>0.50 Marks</td></tr> <tr> <td>> 05 Cr to 10 Cr</td><td>0.25 Marks</td></tr> </tbody> </table>	Project Value (INR)	Marks for each project subject to maximum marks of 03	> 30 Cr	1.50 Marks	> 15 Cr to 30 Cr	0.75 Marks	≥ 10 Cr to 15 Cr	0.50 Marks	> 05 Cr to 10 Cr	0.25 Marks	
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> 30 Cr	1.50 Marks											
> 15 Cr to 30 Cr	0.75 Marks											
≥ 10 Cr to 15 Cr	0.50 Marks											
> 05 Cr to 10 Cr	0.25 Marks											
TQ 2.6	<p>Any bidder should have successfully completed project of Development, Implementation, Integration and Maintenance of Work Flow Management and Document Management System for any Govt. organizations/ULB in past 8 (Eight) years in India</p> <table border="1"> <thead> <tr> <th>Number of ULBs/Government organizations</th><th>Marks allotted subject to maximum marks of 10</th></tr> </thead> <tbody> <tr> <td>1</td><td>2.5 Marks</td></tr> <tr> <td>2</td><td>5.0 Marks</td></tr> <tr> <td>3</td><td>7.5 Marks</td></tr> <tr> <td>4</td><td>10 Marks</td></tr> </tbody> </table> <p>If projects provided for evaluation are implemented in ULBs in India, additional 0.5 marks per project would be awarded subject to maximum Marks</p>	Number of ULBs/Government organizations	Marks allotted subject to maximum marks of 10	1	2.5 Marks	2	5.0 Marks	3	7.5 Marks	4	10 Marks	12
Number of ULBs/Government organizations	Marks allotted subject to maximum marks of 10											
1	2.5 Marks											
2	5.0 Marks											
3	7.5 Marks											
4	10 Marks											
TQ 2.7	<p>If the lead member or the consortium partner who is going to handle GIS works has following certification (Valid on bid submission date), marks would be allotted as follows</p> <table border="1"> <thead> <tr> <th>Certifications</th><th>Marks allotted subject to maximum marks of 04</th></tr> </thead> <tbody> <tr> <td>CMMI Level 3 or higher</td><td>3</td></tr> <tr> <td>ISO/IEC 20000 certification for IT Service management</td><td>1</td></tr> <tr> <td>ISO 9001:2000/2008 or latest</td><td>No Marks</td></tr> <tr> <td>ISO 27001:2005 or latest</td><td>No Marks</td></tr> </tbody> </table>	Certifications	Marks allotted subject to maximum marks of 04	CMMI Level 3 or higher	3	ISO/IEC 20000 certification for IT Service management	1	ISO 9001:2000/2008 or latest	No Marks	ISO 27001:2005 or latest	No Marks	04
Certifications	Marks allotted subject to maximum marks of 04											
CMMI Level 3 or higher	3											
ISO/IEC 20000 certification for IT Service management	1											
ISO 9001:2000/2008 or latest	No Marks											
ISO 27001:2005 or latest	No Marks											

Sr. No.	Evaluation Criteria	Maximum Marks
TQ 3.0	Key Personnel (10 Marks)	
TQ 3.1	Project Manager	3
TQ 3.2	GIS Integration Expert	2
TQ 3.3	Database Administrator	1
TQ 3.4	Server Administrator	1
TQ 3.5	ERP Specialist	1
TQ 3.6	GIS Developer	1
TQ 3.7	GIS Analyst	1
TQ 4.0	Technical Presentation (Minimum Qualifying Marks 7.5 out of 10 Marks)	
TQ 4.1	Understanding of Scope of Work	3
TQ 4.2	Approach & Methodology	1
TQ 4.3	Proposed Solution Architecture and Project Roll-out Plan	3
TQ 4.4	Team Structure	1
TQ 4.5	Operation & Maintenance Plan	2
Total		100

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
1	Project Manager	<ul style="list-style-type: none"> • Minimum Education: (MBA/PGDM or equivalent) + B.Tech / B.E./MCA/MSc from a recognized institute • Total Exp: At least 10 yrs. • Languages known (Read, Write and Speak): Hindi, English and Marathi • Should have operating knowledge of computers and networking • Prior project management experience of at least 5 years of handling such large projects • PMP / Prince2 certification from recognized institution 	<ul style="list-style-type: none"> • Establishes, monitors, and reviews all project deliverables • Manages project hardware • Plans and manages the project team's activities from contract initiation to completion • Evaluates risks and recommends contingency plans • Manages quality assurance and ensures compliance with policies and procedures • Meets and communicates project milestones to PCMC/PCSCL on timely basis • Establishes appropriate metrics for measuring key project criteria • Maintains awareness on emerging technologies from ERP Solution perspective and applies the same to the project

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<ul style="list-style-type: none"> • Onsite contact for all escalations • Responsible for monthly reviews • Provides management summary reports • Supports Root Cause Analysis with Technical Specialist/Consultants • Acts as local point of contact for customer and end user management communication and escalation of issues • Acts as local point a contact for Technical Support Management for the escalation of support issues and concerns • Any other work as per RFP requirement
2	GIS Integration Expert	<p>Qualification - Post Graduate/ PG Diploma in Geomatics with graduation</p> <p>Relevant GIS Experience – 8+ years of experience on large MIS-GIS development projects in urban sector in government departments. Knowledge of major GIS software products, GPS, total station, coordinate reference systems and satellite remote sensing technology. Should be familiar with latest government procedures, standards and guidelines for developing GIS, digitization, thematic maps, etc.</p>	<ul style="list-style-type: none"> • Takes responsibility and monitors base map preparation, outdoor survey • Mostly Establishes, monitors, and reviews all project deliverables corresponding to GIS • Manages project GIS hardware • Plans and manages the project team's activities from contract initiation to completion • Evaluates risks and recommends contingency plans for GIS • Manages quality assurance and ensures compliance with policies and procedures • Maintains awareness on emerging technologies from GIS Solution perspective and applies the same to the project • Responsible for monthly reviews • Supports Root Cause Analysis with Technical Specialist/Consultants • Any other work as per RFP requirement

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
3	Database Administrator	MCA / B.Tech / BE (IT or CS) / Certified DBA (e.g. certifications like OCA-DBA/OCP-DBA/MCDBA etc.) with minimum of 5 years of work experience with 2 years or more as a DBA for an IT project.	<ul style="list-style-type: none"> • Installing and upgrading the database server and application tools • Allocating system storage and planning storage requirements for the database system • Modifying the database structure, as necessary, from information given by application developers • Enrolling users and maintaining system security • Ensuring compliance with database vendor license agreement • Controlling and monitoring user access to the database • Monitoring and optimizing the performance of the database • Planning for backup and recovery of database information • Maintaining archived data • Backing up and restoring databases • Contacting database vendor for technical support • Generating various reports by querying from database as per need • Managing and monitoring data replication • Any other work as per RFP requirement
4	Server Administrator (GIS,ERP)	MCA / B.Tech / BE (IT or CS) / networking certification with minimum of 5 years of work experience with 2 years or more as a Server Administrator for an IT project.	<ul style="list-style-type: none"> • Manage network servers and technology tools • Install and configure software and hardware on servers • Set up accounts and workstations • Monitor performance and maintain systems according to requirements • Troubleshoot issues and outages

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<ul style="list-style-type: none"> • Ensure security through access controls, backups and firewalls • Upgrade systems with new releases and models • Any other work as per RFP requirement
5	ERP Developer	<ul style="list-style-type: none"> • MCA / B.Tech / BE (IT or CS) • At least 3 years of experience of working on proposed ERP solutions. 	<p>Functional:</p> <ul style="list-style-type: none"> • Understands the current business process, designs current business flows, studies current business processes and its complication. • Preparation of Flow diagrams and DFD of AS IS processes. • Everything configured has to be documented as per their categories in the form of predefined templates, these have to be then approved by the team leads or whoever the consultant is reporting to • Performs GAP analysis for each module • Prepares DFD/ERD before starting configuring future business processes in ERP, GIS, Work flow management etc. i.e. TO BE process. • Prepares test scripts for testing the configured scenarios. • Prepares end user manual and provides training to end user. • Analyses Functional Specifications and get clarifications from Business owners • Creates technical specifications • Develops Custom reports (Classical, Interactive) • Develops Online Interfaces and BDC programs • Fine-tunes and modifies of the custom programs

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<ul style="list-style-type: none"> • Performs Pre-Delivery Reviews and Final Testing • Prepares Unit Test Plans, coordinating with middleware and Legacy developers during process chain testing • Supports Unit Testing & Business Acceptance testing • Any other work as per RFP requirement <p>Technical:</p> <ul style="list-style-type: none"> • Technical expertise of the ERP Solution • In case of COTS products, manages ERP Licences and ensure compliance with OEM • Contributes to hardware and software evaluations and recommendations • Plans growth and changes (capacity planning), hardware sizing and network planning • Defines and formulates disaster recovery plans, procedures and test scenarios and participates in regular DR rehearsals • Guide/lead junior Basis Consultant on technical issues • Possess Advanced knowledge and skills in all related to ERP Solution and system software • Possess extensive knowledge and experience in maintaining and configuring ERP Systems • Installs and configures ERP software and other related products and upgrades /patches • Manages ERP Login Credentials i.e. User

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<p>administration (setup and maintaining account, Setup security policies for users)</p> <ul style="list-style-type: none"> • Manages and support various hardware platform environments - Linux/UNIX/Windows (as applicable) • Participates in the administration of the server • Evaluates, tests and updates system as soon as new version of OS and/or application software is released (after obtaining a formal approval from PCMC/PCSCL) • Assists in developing, implementing, testing and maintaining backup and disaster recovery policies and procedures • Carries out backups and recoveries as per schedule decided by PCMC/PCSCL like daily, weekly, monthly, etc. • Writes the backup data on DVD/Data Cartridge and submits to PCMC/PCSCL as per decided schedule • Provides suggestions and implements software-related measures for maximizing uptime • Supports development team whenever required • Monitors system performance to ensure high availability of the system • Ensures ERP application / user security and authorization management, ERP change correction management / ERP

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<p>Landscape System management system, etc.</p> <ul style="list-style-type: none"> • Any other work as per RFP requirement
6	GIS Developer	<p>Qualification: MCA / B.Tech / BE (IT or CS) with minimum 3 years of work of relevant experience in the proposed solution</p> <p>Relevant Experience Hands on experience in Web-GIS development, Database Management, C,C++ or Java Development, SQL Scripting Knowledge and experience in SOAP, WCS, WFS, WFS-T, WMS, REST-API, C, C++/ Java script, SQL Scripting and database query</p>	<ul style="list-style-type: none"> • Technical expertise of the GIS Solution • In case of COTS products, manages GIS Licenses and ensure compliance with OEM • Contributes to hardware and software evaluations and recommendations • Plans growth and changes (capacity planning), hardware sizing and network planning • Defines and formulates disaster recovery plans, procedures and test scenarios and participates in regular DR rehearsals • Guide/lead junior Basis Consultant on technical issues • Possess Advanced knowledge and skills in all related to ERP Solution and system software • Possess extensive knowledge and experience in maintaining and configuring GIS Systems • Installs and configures GIS software and other related products and upgrades /patches • Manages and support various hardware platform environments - Linux/UNIX/Windows (as applicable) • Evaluates, tests and updates system as soon as new version of OS and/or application software is released (after

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
			<p>obtaining a formal approval from PCMC/PCSCL)</p> <ul style="list-style-type: none"> • Assists in developing, implementing, testing and maintaining backup and disaster recovery policies and procedures • Carries out backups and recoveries as per schedule decided by PCMC/PCSCL like daily, weekly, monthly, etc. • Writes the backup data on DVD/Data Cartridge and submits to PCMC/PCSCL as per decided schedule • Provides suggestions and implements software-related measures for maximizing uptime • Supports development team whenever required • Monitors system performance to ensure high availability of the system • Ensures GIS application / user security and authorization management, GIS change correction management / GIS Landscape System management system, etc. • Any other work as per RFP requirement
7	GIS Analyst	<p>Qualification - Post Graduate/ PG Diploma in GIS with graduation</p> <p>Relevant GIS Experience – 5+ years of experience on large MIS-GIS development projects including GIS mapping in urban sector in government departments.</p>	<ul style="list-style-type: none"> • Digitalization of maps • Base map creation • GIS data modelling • GIS quality assurance • Updation of GIS data

#	Role	Qualification & Experience (all education must be Full time) (all experience must be post-qualification)	Duties & Responsibilities
		Relevant experience in working on GIS systems and improving workflow through development of an integrated GIS databases, Experience in developing and maintaining MIS is also essential.	

6.8 Requirements of GIS Enabled ERP Solution

The System Integrator should take into consideration following requirements;

- The offered solution components such as GIS, ERP, and Workflow management should have been implemented in Government Organizations/ State Governments Organizations/ Public Sector Undertakings (PSUs) / municipal corporations in India. In case of GIS and ERP, projects implemented outside India can be valid provided that adequate certifications from clients can be made available.
- On server side, the offered solution should work on Microsoft Windows/Linux (all flavors)/Unix (all flavors).
- On client/user side, the offered solution should work on Microsoft Windows, Apple MAC, Linux (all flavors), Unix (all flavors) etc.
- The offered solution should have localization functionalities like TDS, GST, HR and Payroll related localization requirements
- The offered solution should provide clear method and roadmap to incorporate any future changes in Policy of the government from time to time.
- The offered solution must allow for integration with third party applications

7 Award of Contract

7.1 Right to Accept Any Proposal and To Reject Any or All Proposal(s)

The Purchaser reserves the right to accept or reject any proposal, and to annul the tendering process / Public 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 Purchaser action.

7.2 Notification of Award

- a. Prior to the expiration of the validity period, PCSCL shall notify the successful bidders in writing or by fax or email, that its proposal has been accepted. In case the tendering process / public tendering process has not been completed within

- the stipulated period, PCSCL may like to request the bidders to extend the validity period of the bid.
- b. The decision to extend the validity period of a Bidder's Proposal shall be the Bidder's sole prerogative.

7.3 Negotiations with the successful bidder

If required, negotiations shall be held at the date, time and address intimated to the qualified and selected bidder. Representatives conducting negotiations on behalf of the bidder must have written authority to negotiate and conclude a Contract.

7.4 Contract Finalization and Award

- a. The Purchaser shall reserve the right to negotiate with the Bidder(s) whose Proposal has been ranked Least Cost Bid post Technical and Financial Evaluation , as per the guidance provided by Central Vigilance Commission (CVC).
- b. On this basis the draft contract agreement would be finalized for award & signing.
- c. The selected Bidder(s) should convey acceptance of the award of contract by returning duly signed and stamped duplicate copy of the award letter within 7 days of receipt of the communication.
- d. Upon notification of award to the successful Bidder, PCSCL shall promptly notify each unsuccessful Bidder.

7.5 Performance Bank Guarantee (PBG)

Within fifteen (15) working days from the date of issuance of LOI, the successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to the Purchaser. The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in Annexure 5 (a), payable on demand, for the due performance and fulfilment of the contract by the bidder.

This Performance Bank Guarantee shall be for an amount equivalent to 5% of total contract value. PBG shall be invoked by Purchaser, in the event the Bidder:

- a. fails to meet the overall penalty condition as mentioned in RFP Volume II or any changes agreed between the parties,
- b. fails to perform the responsibilities and obligations as set out in the RFP to the complete satisfaction of Purchaser,
- c. misrepresents facts/information submitted to Purchaser

The performance bank guarantee shall be valid until satisfactory completion of Project. The performance bank guarantee may be discharged/returned by Purchaser upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the performance bank guarantee.

In the event of the Bidder being unable to service the contract for whatever reason(s), Purchaser shall have the right to invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of Purchaser under the contract in the matter, the proceeds of the PBG shall be payable to Purchaser as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.

Purchaser shall notify the bidder in writing of the exercise of its right to receive such compensation within 40 days, indicating the contractual obligation(s) for which the bidder is in default. Purchaser shall also be entitled to make recoveries from the bidder's bills, performance bank guarantee, or from any other amount due to him, an equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

In case the project is delayed beyond the project schedule as mentioned in RFP Vol II, the performance bank guarantee shall be accordingly extended by the Bidder until completion of scope of work as mentioned in RFP Volume II.

On satisfactory performance and completion of the order in all respects and duly certified to this effect by the Project Coordinator, Contract Completion Certificate shall be issued and the PBG would be returned to the Bidder.

7.6 Warranty & Maintenance

Bidder shall also provide complete maintenance support for all the proposed integrated solution as outlined in this RFP for a period of 5 years from the date of go-live i.e. "Go-Live" + 5 years. "Go-live" is the date on which the proposed solution is operational as per the requirements provided in this RFP and all the acceptance tests are successfully concluded to the satisfaction of Purchaser.

Warranty would be for 5 years and should start from the Go live date for all the solutions. During the warranty period of 5 years, the bidder shall warrant that the hardware supplied under the contract are new, unused, of the most recent version/models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The bidder further warrants that the hardware supplied under this contract shall have no defects arising from design, materials or workmanship.

Purchaser or designated representatives of the bidder shall promptly notify successful bidder in writing of any claims arising under this warranty. Upon receipt of such notice, the bidder shall, within the warranty period and with all reasonable speed, repair or replace the

defective systems, without costs to Purchaser and within time specified and acceptable to Purchaser.

If the successful bidder, having been notified, fails to remedy the defect(s) within the period specified in the contract, Purchaser may proceed to take such reasonable remedial action as may be necessary, at the successful bidder's risk and expense and without prejudice to any other rights, which Purchaser may have against the bidder under the contract.

During the comprehensive warranty period, the successful bidder shall provide all product(s) and documentation updates, patches/fixes, and version upgrades within 15 days of their availability and should carry out installation and make operational the same at no additional cost to Purchaser.

The successful bidder hereby undertakes Purchaser that:

1. The implemented integrated solution represents a complete, integrated solution meeting all the requirements as outlined in the RFP and further amendments if any, and provides the functionality and performance, as per the terms and conditions specified in the contract.
2. The proposed integrated solution shall achieve parameters delineated in the technical specification/requirement.
3. The successful bidder shall be responsible for warranty services from licensors of products included in the systems.
4. The successful bidder undertakes to ensure the maintenance of the acceptance criterion/standards in respect of the systems during the warranty period.

7.7 Signing of Contract

After the notification of award, Purchaser shall issue Work Order (WO) / Letter of Intent (LOI). Accordingly, a contract shall be signed between successful bidder and Purchaser or the agency designated by Purchaser. As an acceptance of the WO/LOI, the Bidder shall sign and return a duplicate copy of the Work Order to Purchaser or the agency designated by Purchaser. The bidder shall return the duplicate copy along with a Performance Bank Guarantee within 15 working days from the date of issuance of WO/LOI.

On receipt of the Performance Bank Guarantee, Purchaser or the agency designated by Purchaser shall enter into a contract with the successful bidder.

7.8 Failure to agree with the Terms & 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, in which event Purchaser may award the contract to the next best value bidder or call for new bids. In such a case, Purchaser shall invoke the PBG and/or forfeit the EMD.

7.9 Rejection Criteria

Besides other conditions and terms highlighted in the RFP document, bids may be rejected under following circumstances:

7.9.1 General Rejection Criteria

- a. Bids not qualifying under eligibility criteria.
- b. Bids submitted without or improper EMD or tender fees
- c. Bids received through Telex /Telegraphic / Fax / E-Mail
- d. Bids which do not confirm unconditional validity of the bid as prescribed in the Tender
- e. If the information provided by the Bidders is found to be incorrect / misleading at any stage / time during the Tendering Process
- f. Any effort on the part of a Bidders to influence the PCSCL's bid evaluation, bid comparison or contract award decisions
- g. Bids received by the PCSCL after the last date for receipt of bids prescribed in the fact sheet.
- h. Bids without signature of person(s) duly authorized on required (specified) pages of the bid
- i. Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidders
- j. Technical Bid containing commercial details or any such hints/ calculations /extrapolations/ records.
- k. Revelation of Prices in any form or by any reason before opening the Commercial Bid

- I. Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect
- m. Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidders
- n. Bidders not complying with the General Terms and conditions as stated in the Tender Documents
- o. The Bidders not confirming unconditional acceptance of full responsibility of providing services in accordance with the Scope of work and Service Level Agreements of this tender

7.9.2 Commercial Rejection Criteria

- a) Incomplete Price Bid
- b) Price Bids that do not conform to the Tender's price bid format
- c) Total price quoted by the Bidders does not include all statutory taxes and levies applicable

8 Annexure 1 – Format for Pre-Bid Queries

Bidder shall submit all pre-bid queries as **excel sheet** in the following format.

Name of Person(s) Representing the Company/ Firm:

Name of Person	Designation	Email-ID(s)	Mobile No.	Tel. Nos. & Fax Nos.

#	Category (ERP, GIS, Survey, Base Map etc.)	RFP Document Reference (s) (Page Number and Section Number)	Content of RFP Requiring Clarification	Point of Clarification

- Pre-Bid conferences of the Bidders shall be convened at the designated date, time and place.
- Only duly authorized representatives of the Bidders shall be allowed to participate in the Pre-Bid conference.
- Maximum of 5 (Five) (Including consortium members) representatives of each Bidder shall be allowed to participate on production of authority letter from the Bidder.
- During the course of Pre-Bid conference, the Bidders will be free to seek clarifications and make suggestions for consideration of PCSCL/PCMC. PCSCL/PCMC shall endeavor to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

9 Annexure 2 – Formats for Submission of the Pre-Qualification Bid

9.1 Pre-qualification bid checklist

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

#	Checklist Item	Compliance (Yes/No)	Page No. in bid
1.	Tender Fee		
2.	Earnest Money Deposit (Online and Bank Guarantee)		
3.	Bank Guarantee for Earnest Money Deposit		
4.	Pre-Qualification Bid Covering letter		
5.	Are all pages of response document numbered, stamped and signed by authorized person		
6.	Company Profile		
7.	Incorporation Certificate		
8.	GST Registration		
9.	PoA for Authorized Person for each member		
10.	PoA for lead member		
11.	Consortium Agreement		
12.	Financials (Sole bidder or Lead bidder)		
13.	Financials (Consortium member)		
14.	Net Worth (Each Member)		
15.	Technical Capability-GIS		
16.	Technical Capability-ERP		
17.	Certification		
18.	Self-Declaration on Non Blacklisting (Each Member)		
19.	Manpower Strength		
20.	Undertaking of Total Responsibility Certificate (Each Member)		
21.	No Deviation Certificate		
22.	Any other supporting credential/documents		

9.2 Pre-Qualification Bid Covering Letter

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

Date: dd / mm / yyyy

To,

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

**Subject: Request for Proposal for Ref: RFP No. <<.....>>
dated <<>>**

Dear Sir,

With reference to “**Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative**”, we hereby submit our Prequalification bid, Technical Bid and Commercial Bid for the same.

We hereby declare that:

- a. We hereby acknowledge and unconditionally accept that the Purchaser can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of Agency for providing services.
- b. We have submitted EMD of INR _____ and Tender fee of INR _____ through _____
- c. We hereby declare that all information and details furnished by us in the Bid are true and correct, and all documents accompanying such application are true copies of their respective originals.
- d. We agree to abide by our offer for a period of 180 days from the date of opening of pre-qualification bid prescribed by **Purchaser** and that we shall remain bound by a communication of acceptance within that time.
- e. We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.
- f. In the event of acceptance of our bid, we do hereby undertake:
 - i. To supply the products and commence services as stipulated in the RFP document

- ii. To undertake the project services for entire contract period from the date of signing of the contract as mentioned in the RFP document.
 - iii. We affirm that the prices quoted are inclusive of design, development, delivery, installation, commissioning, training, providing facility management and handholding support, and inclusive of all out of pocket expenses, taxes, levies discounts etc.
- g. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.
- h. We understand that the **Purchaser** may cancel the bidding process at any time and that **Purchaser** is not bound to accept any bid that it may receive without incurring any liability towards the bidder.
- i. We fully understand and agree to comply that on verification, if any information as provided by us in our bid found to be misleading or misrepresented or suppression of facts, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, along with blacklisting / debarment at PCSCL and PCMC office and purchaser may also send such recommendations to Government of Maharashtra

In case of any clarifications, please contact _____ email at _____

Thanking you,

Yours sincerely,

(Signature of the Lead bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

9.3 Company profile

(To be provided on the Company letterhead by the Sole bidder or each member of consortium, in case of consortium)

Sr. No.	Particulars	Description or Details
1.	Name of Bidder	
2.	Legal status of Bidder (company, Pvt. Ltd., LLP etc.)	
3.	Main business of the Bidder	
4.	Registered office address	
5.	Incorporation date and number	
6.	GST number	
7.	PAN details	
8.	Primary Contact Person (Name, Designation, address, mobile number, fax, email)	
9.	Secondary Contact Person (Name, Designation, address, mobile number, fax, email)	

9.4 Turnover Certificate for Sole bidder/Lead Bidder/ Consortium Members

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Turnover Certificate

This is to certify that (Name of the Applicant) has following financials.

#	Financial Year	Turnover (In Crore)	Net Worth (In Rs Crore)
1			
2			
3			

We also certify that the Turnover mentioned in above table against the respective years has been obtained only from software related activities i.e. Software development, software consultancy, software implementation and support etc.

Name of the Auditor:

Seal of the firm:

Date:

(Signature, name and designation of the authorized signatory)

Note: Please attach the Audited Balance sheets for the last three years.

9.5 Bidder's Experience - Client Citations

Name of the Project & Location	
Client's Name and Complete Address	
Contact Person of client and contact details	
Narrative description of project	
Contract Value for the bidder (in INR)	
Date of Start	
Date of Completion	
Activities undertaken by prime bidder	

Note - If the project is ongoing, bidder must clearly specify which of the stages/phases/milestones are completed and which are ongoing and at what stage of completion

9.6 IT Certification details

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: IT Certificate

We confirm that our company or firm, has below mentioned certification as requested in RFP document.

#	Certification	Issuance Authority	Issue date	Expiry Date
1				
2				
3				

Date:

(Signature, name and designation of the authorized signatory)

Note: Please attach the certification copy

9.7 Declaration of Non-Blacklisting

(To be provided on the Company letterhead by the Sole bidder or each member of consortium, in case of consortium)

Place:

Date:

To,

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Subject: Self Declaration of not been blacklisted in response to Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative Ref: RFP No. <<.....>> dated <<>>

Dear Sir,

We confirm that our company or firm, _____, is currently not blacklisted in any manner whatsoever by any of the State or UT and or Central Government in India on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

(Signature of the Lead Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

9.8 Self-certificate for Project execution experience

(To be provided on the Company letterhead by the Sole bidder or each member of consortium, in case of consortium)

This is to certify that < Name of the Bidding entity > has been awarded with < Name of the Project > as detailed under:

Name of the Project	
Client's Name, Contact no. and Complete Address	
Contract Value for the bidder (in INR)	
Current status of the project (Completed/Ongoing)	
Activities completed by bidding entity as on bid submission date (Only relevant activities as sought in the Criteria to be included)	
Value of Work completed for which payment has been received from the client.	
Date of Start	
Date of Completion	

(Authorised Signatory)

Signature:

Name:

Designation:

Bidding entity's name

Address:

Seal:

Date:

9.9 No Deviation Certificate

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

This is to certify that our offer is exactly in line with your tender enquiry/RFP (including amendments) no. _____ dated _____. This is to expressly certify that our offer contains no deviation either Technical (including but not limited to Scope of Work, Business Requirements Specification, Functional Requirements Specification, Hardware Specification and Technical Requirements Specification) or Commercial in either direct or indirect form.

(Authorised Signatory, Lead / Sole Bidder)

Signature:

Name:

Designation:

Address:

Seal:

Date:

10 Annexure 3 – Formats for Submission of the Technical Bid

10.1 Technical Bid Check-List

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

Sr. No.	Checklist Items	Compliance (Yes or No)	Page No. in bid
1.	Technical Bid Letter		
2.	Are all pages of response document numbered, stamped and signed by authorized person		
3.	Certificate/Documents against Technical Evaluation Framework Criteria		
4.	Overview of Proposed Solution : <ul style="list-style-type: none"> • Project Understanding • Proposed Technology Solution • Approach & Methodology • Technical & Functional Requirement Specification Compliance • Project Plan • Manpower Plan and • Other technical details pertaining to the Solutions Proposed 		
5.	Compliance to Requirement (Technical /Functional Specifications) on the respective OEM Letterhead with counter sign of Bidder's authorized signatory		
6.	Project Plan		
7.	Manpower Plan		
8.	Compliance to requirements		
9.	Proposed Unpriced Bill of Material		
10.	Manufacturers'/Producers' Authorization Form		
11.	Proposed Manpower		
12.	Anti-Collusion Certificate		
13.	Non-Disclosure Agreement		
14.	Self-Declaration by the Bidder		
15.	OEM Declaration		
16.	Declaration on Source Code and Intellectual Property Rights		
17.	Undertaking on Patent Rights		

Sr. No.	Checklist Items	Compliance (Yes or No)	Page No. in bid
18.	Undertaking on Compliance and Sizing of Infrastructure		
19.	Undertaking on Service Level Compliance		
20.	Undertaking on Deliverables		
21.	Undertaking on Support to Third Party Solution acceptance and certification		
22.	Declaration of Activities sub-contracted		
23.	Undertaking on Exit Management and Transition		
24.	Any other supporting credential/documents		

10.2 Technical Bid Covering Letter

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

Date: dd/mm/yyyy

To,

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Request for Proposal for Selection of System Integrator for GIS Enabled ERP solution for Pimpri Chinchwad Municipal Corporation under Smart City Initiative Ref: RFP No. <<.....>> dated <<>>

Dear Sir,

I, having read and examined in detail all the bidding documents in respect of "**Selection of System Integrator for GIS Enabled ERP solution for Pimpri Chinchwad Municipal Corporation under Smart City Initiative**" do hereby propose to provide our services as specified in the bid submitted by us.

It is hereby confirmed that I am 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.

I declare that all the services shall be performed strictly in accordance with the RFP documents.

I 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 PCSCL 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 evaluation process. We also confirm that we shall not attract conflict of interest in principle.

I hereby declare that in case the contract is awarded to us, we shall submit the contract Performance bank guarantee, in the form as prescribed in the RFP.

I hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

I understand that our bid is binding on us and that you are not bound to accept a Bid you receive. This bid is valid for 180 days after opening of technical bid. We shall extend the validity of the bid if required by Purchaser.

Thanking you,

Yours sincerely,

(Signature of the Lead Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

10.3 Credential Summary

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

Sr. No.	Project Name	Client Name	Client Type	Project Value (in INR)	Project Components	Documentary evidence provided (Yes or No)	Project Status (Completed or Ongoing or Withheld)
1.							
2.							
3.							
4.							
5.							
6.							
7.							

- Client type – Indicate whether the client is Government or PSU or Private
- Project Components – Indicate the major project components
- Documentary evidence provided – Indicate the documentary evidence provided with the detailed project credential like work order or purchase order or completion certificate or letter of appointment
- Project Status – Completed (date of project completion) or Ongoing (project start date)

10.4 Bidder's Experience - Client Citations

Name of the Project & Location	
Client's Name and Complete Address	
Client's key person contact details	
Narrative description of project	
Contract Value for the bidder (in INR)	
Date of Start	
Date of Completion	
Activities undertaken by prime bidder	

N.B- If the project is ongoing, bidder must clearly specify which of the stages/phases/milestones are completed and which are ongoing and at what stage of completion.

10.5 Total Responsibility Certificate

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

Date: dd/mm/yyyy

To,

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Request for Proposal for Selection of System Integrator for GIS Enabled ERP solution for Pimpri Chinchwad Municipal Corporation under Smart City Initiative Ref: RFP No. <<.....>> dated <<>>

This is to certify that we undertake the total responsibility for the defect free operation of the proposed solutions as per the requirement of the RFP for the duration mentioned in all the volumes of the RFP.

(Authorised Signatory)

Signature:

Name:

Designation:

Address:

Seal:

Date:

10.6 Overview of Proposed Solution

Structure of Proposed Solution:

Bidders are required to provide a detailed Approach & Methodology to execute the entire project. Bidders are advised to comply with the below provided headers / approach components while detailing out their solution.

Sr. No.	Item
1	Understanding of requirement and Implementation approach <ul style="list-style-type: none">• Understanding of requirements• Work Plan & its adequacy
2	Robustness and quality <ul style="list-style-type: none">• End-to-end integrated solution proposed• Proposed Survey Activities• Hardware deployment and integration approach encompassing all solutions• Timelines and modalities for implementation in a time bound manner• Project implementation approach or strategy and operations and maintenance plan including comprehensiveness of fall-back strategy and planning during rollout• Strategy for SLA, System Security etc.• Any other area relevant to the scope of work and other requirements of the project
3	Assessment of Manpower deployment, Training and Handholding plan <ul style="list-style-type: none">• Deployment strategy of Manpower• Contingency management• Mobilization of existing resources and additional resources as required• Training and handholding strategy
4	Operations and Maintenance <ul style="list-style-type: none">• O&M Strategy and plan

10.7 Project Plan

A **Detailed Project Plan** covering break-up of each phase into the key activities, along with the start and end dates must be provided as per format given below.

Activity-wise Timelines							
Sr. No.	Item of Activity	Month wise Program					
		1	2	3	4	5	..
	Project Plan						
1	Activity 1						
1.1	Sub-Activity 1						
1.2	Sub-Activity 2						
2							
2.1							
2.2							
3							
3.1							
4							

Note: The above activity chart is just for the purpose of illustration. Bidders are requested to provide detailed activity & phase wise timelines for executing the project with details of deliverables & milestones as per their bid.

10.8 Manpower Plan

I. Till Go-Live (Implementation)

Manpower distribution									
Sr. No.	Role	Month wise time to be spent by each personnel (in days)							Total
		Month 1	Month 2	Month 3	Month 12		..
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
									Onsite/Offsite
Total									

II. After Go-Live (Operation & Maintenance)

Manpower distribution							
Sr. No.	Manpower	Years					Total
		Year 1	Year 2	Year 3	Year 4	Year 5	
1							Onsite/Offsite
2							Onsite/Offsite
3							Onsite/Offsite
4	<Add more rows as required>						Onsite/Offsite
Total							

Note: The above chart is just for the purpose of illustration. Bidders are requested to provide detailed manpower distribution for executing the project

10.8.1 Detail of Resources Proposed

(To be provided on the Company letterhead by the Sole bidder or the Lead Bidder, in case of consortium)

#	Name of the Resource	Proposed Role	Highest degree	Basic Qualification (E.g. B.Sc. Or B.E. or MCA or Diploma)	Certifications (ex. PMI or ITIL or TOGAF or CCNP etc.)	Total Experience (in years)	Compliance to RFP Requirements (Yes / No)
1							
2							
3							
4							
5							
6							
7							
8							
9							
Provide CVs for the mentioned resources							

10.9 Proposed Unpriced Bill of Material

The Bidder should provide the proposed unpriced Bill of Material (BoM) here; Bidder should refer to scope of work of the project RFP Volume II, and accordingly shall produce its Bill of Material in order to fulfil the RFP and project requirements in totality. The bidder may add any additional line item (with adequate details) in the proposed BoM table below (towards the end of the table), that is envisaged by the bidder to fulfil the RFP requirements in totality. The Bidder may provide a lump sum price for additional item(s) that may be required, as part of its financial bid.

Also, bidder to produce the details of make/brand and model against each line item, wherever applicable; the bid shall be considered non-responsive in the absence of such details.

Once the bidder provides this information in the submitted bid, the bidder cannot change it with any other component / equipment etc. of lower specifications / performance; it can only be upgraded at the time of actual deployment/installation at the discretion of the purchaser.

Kindly note that the estimated quantity provided in the RFP is indicative only and the payment shall be done on actual usage basis.

#	Item	Unit	Indicative Qty	Make	Model	Additional Information	Fully Complied (Y/N)
1	Hardware-1						
2	Hardware-1						
	Software-1						
	Software-2						
	Software-3						
	<Addmore rows>						

10.10 Manufacturers'/Producers' Authorization Form

(To be provided by the respective OEMs on its letterhead and should be signed by OEM and bidder's authorized signatory)

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Manufacturer's Authorization Form

Ref: RFP No. <<.....>> dated <<>>

Dear Sir,

We _____ (Name of the OEM) who are established and reputable manufacturers of _____ (List of Quoted Goods, as mentioned below) having factories or product development centres at the locations _____ or as per list attached, do hereby authorize _____ (Name and address of the Bidder) to bid, negotiate and conclude the contract with you against RFP No. _____ dated _____ for the above goods manufactured or developed by us.

List of Quoted Goods:

- 1.
- 2.
- 3.

We hereby extend, our warranty for the hardware goods supplied by the bidder and or maintenance or support services for software products against this invitation for bid by _____ (Name of the Bidder) as per requirements of this RFP.

Thanking you,
Yours faithfully,
(Signature)

For and on behalf of: _____ (Name of the OEM)

Authorised Signatory

Name:

Designation:

Place:

Date:

10.11 Anti-Collusion Certificate

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Anti-Collusion Certificate

We hereby certify and confirm that in the preparation and submission of our Bid for **Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative dated [Date]** (RFP) against the RFP issued by Purchaser, We have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing, which is or could be regarded as anti-competitive. We further confirm that we have not offered nor shall offer any illegal gratification in cash or kind to any person or organization in connection with the instant bid.

(Signature of the Lead Bidder)

Printed Name

Designation

Seal

Date:

Place:

Business Address:

10.12 Non-Disclosure Agreement

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date:

The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune,
Maharashtra - 411018

Subject: Non-Disclosure Agreement

WHEREAS, we the undersigned Bidder, _____, having our principal place of business or registered office at _____, are desirous of bidding for RFP No. <>> dated <>> DD-MM-2018 >> “Selection of System Integrator for Integrated GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Benchmarking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative” (hereinafter called the said 'RFP') to the “PCSCL”, hereinafter referred to as 'Purchaser'

and,

WHEREAS, the Bidder is aware and confirms that the Purchaser's business or operations, information, application or software, hardware, business data, architecture schematics, designs, storage media and other information or documents made available by the Purchaser in the RFP documents during the bidding process and thereafter, or otherwise (confidential information for short) is privileged and strictly confidential and or or proprietary to the Purchaser,

NOW THEREFORE, in consideration of disclosure of confidential information, and in order to ensure the Purchaser's grant to the Bidder of specific access to Purchaser's confidential information, property, information systems, network, databases and other data, the Bidder agrees to all of the following conditions.

It is hereby agreed as under:

1. The confidential information to be disclosed by the Purchaser under this Agreement (“Confidential Information”) shall include without limitation, any and all information in written, representational, electronic, verbal or other form relating directly or indirectly to processes, methodologies, algorithms, risk matrices, thresholds, parameters, reports, deliverables, work products, specifications, architecture, project information, security or zoning strategies & policies, related computer programs, systems, trend analysis, risk plans, strategies and information communicated or obtained through meetings,

documents, correspondence or inspection of tangible items, facilities or inspection at any site to which access is permitted by the Purchaser.

Confidential Information disclosed shall be marked as "Confidential" or if incapable of marking, communicated as "confidential" in writing at the time of disclosure. Confidential Information shall exclude information developed independent of the Confidential Information. Further, notice in case of compelled disclosure shall be made only if permitted by law.

2. Confidential Information does not include information which:

- a. the Bidder knew or had in its possession, prior to disclosure, without limitation on its confidentiality;
- b. information in the public domain as a matter of law;
- c. is obtained by the Bidder from a third party without any obligation of confidentiality;
- d. the Bidder is required to disclose by order of a competent court or regulatory authority;
- e. is released from confidentiality with the written consent of the Purchaser.

The Bidder shall have the burden of proving hereinabove are applicable to the information in the possession of the Bidder.

3. The Bidder agrees to hold in trust any Confidential Information received by the Bidder, as part of the Tendering process or otherwise, and the Bidder shall maintain strict confidentiality in respect of such Confidential Information, and in no event a degree of confidentiality less than the Bidder uses to protect its own confidential and proprietary information. The Bidder also agrees:

- a. to maintain and use the Confidential Information only for the purposes of bidding for this RFP and thereafter only as expressly permitted herein;
 - b. to only make copies as specifically authorized by the prior written consent of the Purchaser and with the same confidential or proprietary notices as may be printed or displayed on the original;
 - c. to restrict access and disclosure of Confidential Information to their employees, agents and representatives strictly on a "need to know" basis, to maintain confidentiality of the Confidential Information disclosed to them in accordance with this clause; and
 - d. to treat Confidential Information as confidential unless and until Purchaser expressly notifies the Bidder of release of its obligations in relation to the said Confidential Information.
4. Notwithstanding the foregoing, the Bidder acknowledges that the nature of activities to be performed as part of the Tendering process or thereafter may require the Bidder's personnel to be present on premises of the Purchaser or may require the Bidder's personnel to have access to software, hardware, computer networks, databases, documents and storage media of the Purchaser while on or off premises of the Purchaser.

It is understood that it would be impractical for the Purchaser to monitor all information made available to the Bidder's personnel under such circumstances and to provide notice to the Bidder of the confidentiality of all such information.

Therefore, the Bidder shall disclose or allow access to the Confidential Information only to those personnel of the Bidder who need to know it for the proper performance of their duties in relation to this project, and then only to the extent reasonably necessary. The Bidder shall take appropriate steps to ensure that all personnel to whom access to the Confidential Information is given are aware of the Bidder's confidentiality obligation. Further, the Bidder shall procure that all personnel of the Bidder are bound by confidentiality obligation in relation to all proprietary and Confidential Information received by them which is no less onerous than the confidentiality obligation under this agreement.

5. The Bidder shall establish and maintain appropriate security measures to provide for the safe custody of the Confidential Information and to prevent unauthorised access to it.
6. The Bidder agrees that upon termination or expiry of this Agreement or at any time during its currency, at the request of the Purchaser, the Bidder shall promptly deliver to the Purchaser the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information and promptly certify such destruction.
7. Confidential Information shall at all times remain the sole and exclusive property of the Purchaser. Upon completion of the Tendering process and or or termination of the contract or at any time during its currency, at the request of the Purchaser, the Bidder shall promptly deliver to the Purchaser the Confidential Information and copies thereof in its possession or under its direct or indirect control, and shall destroy all memoranda, notes and other writings prepared by the Bidder or its Affiliates or directors, officers, employees or advisors based on the Confidential Information within a period of sixty days from the date of receipt of notice, or destroyed, if incapable of return. The destruction shall be witnessed and so recorded, in writing, by an authorized representative of the Purchaser. Without prejudice to the above the Bidder shall promptly certify to the Purchaser, due and complete destruction and return. Nothing contained herein shall in any manner impair rights of the Purchaser in respect of the Confidential Information.
8. In the event that the Bidder hereto becomes legally compelled to disclose any Confidential Information, the Bidder shall give sufficient notice and render best effort assistance to the Purchaser to enable the Purchaser to prevent or minimize to the extent possible, such disclosure. Bidder shall not disclose to a third party any Confidential Information or the contents of this RFP without the prior written consent of the Purchaser. The obligations of this Clause shall be satisfied by handling Confidential Information with the same degree of care, which the Bidder applies to its own similar Confidential Information but in no event less than reasonable care.

For and on behalf of:

(BIDDER)

Authorised Signatory

Name:

Designation:

Office Seal:

Place:

Date :

10.13 Self-declaration by Bidder

[On the Letterhead of the Bidders]

To,

{Procuring entity},

In response to the RFP Ref. No. _____ dated _____ for
{Project Title}, as an Authorized Signatory of _____, I/
We hereby declare that presently our Company/ firm _____, at the time of
bidding:

- a. possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Purchaser;
- b. is having unblemished record and is not declared ineligible for corrupt & fraudulent practices either indefinitely or for a particular period of time by any State/ Central government/ PSU/ UT.
- c. does not have any debarment by any other procuring entity
- d. is not insolvent in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and is not the subject of legal proceedings for any of the foregoing reasons;
- e. does not have, and our directors and officers not have been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
- f. shall comply with the code of integrity and all the prevalent regulations and norms of the competent authority in order to execute the defined scope of work during the contract period.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken as per the provisions of the applicable Act and Rules thereto prescribed by GoM, my/ our bid, to the extent accepted, may be cancelled.

Thanking you,

Name of the Bidder: -

Authorised Signatory: -

Seal of the Organization: -

Date:

Place:

10.14 Format for OEM Declaration

To,
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Subject: Self-Declaration for Tender Reference No.

Sir,

We, <OEM Name> having our registered office at <OEM address>, hereinafter referred to as OEM are an established manufacturer/provider of the following items, as mentioned below, quoted by <Bidder Name> having their registered office at <Bidder address>, hereinafter referred to as Bidder.

List of Items:

We confirm that we have understood the delivery & installation time lines defined in the tender. We confirm that we have worked out all necessary logistics and pricing agreement with <SI name>, and there won't be any delay in delivery, installation and support due to any delay from our side. Our full support as per pre-purchased support contract is extended in all respects for supply and maintenance of our products. We also ensure to provide the required spares and service support as pre-purchased for the supplied equipment for entire contract period. In case of any difficulties in logging complaint at bidder end, user shall have option to log complaint at our call support centre.

We hereby declare that

- a. We have an authorized presence in India either directly or through channel partner(s) as on the date of release of RFP.
- b. Products or technology quoted are neither end-of-sale nor end-of-life as on the date of installation and commissioning and are not end-of-support till the successful completion of O&M period of the project.
- c. If any product is declared end of sale, we shall proactively ensure that a suitable equivalent or higher roll over product is offered through the SI to PCSCL
- d. We understand that any false information/commitment provided here may result in getting blacklisted / debarred from doing business with PCSCL.
- e. We have quality certifications like ISO 9001:2000 as attached
- f. All the proposed active components / devices and smart solutions are not be manufactured in China and are also not manufactured / assembled using Chinese spare parts at any other country.

- g. We have not been blacklisted by any State / Central Government Department or Central /State PSUs as on bid submission date.
- h. We either have existing capability and infrastructure to provide 24x7x365 technical support in India, or shall be establishing the requisite infrastructure and capability to provide 24x7x365 technical support, on emerging a winner in this bidding process, refer attached undertaking.

Note: Point (f) is valid for proposed additional hardware components.

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Location: _____ Date: _____

10.15 Declaration on Source Code and Intellectual Property Rights

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date

The CEO,

Pimpri Chinchwad Smart City Limited (PCSCL),

PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Self-certificate regarding the source code and Intellectual property rights under this Project

Respected Sir,

I, authorized representative of _____, hereby solemnly affirm to the IPR and Source Code rights as defined in Clause _____ of this RFP document.

In the event of any deviation from the factual information/ declaration, PCSCL reserves the right to terminate the Contract without any compensation to the System Integrator.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.16 Undertaking on Patent Rights

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date

The CEO,

Pimpri Chinchwad Smart City Limited (PCSCL),

PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking on Patent Rights

Respected Sir,

I/We 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.

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 equipment's, systems or any part thereof to be supplied by us. We shall indemnify PCSCL 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, I/We 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 PCSCL and persons authorized by PCSCL, irrespective of the fact of claims of infringement of any or all the rights mentioned above.

If it is found that it does infringe on patent rights, I/We absolve PCSCL of any legal action.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.17 Undertaking on Service Level Compliance

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking on Service Level Compliance

Respected Sir,

I/We do hereby undertake that we shall monitor, maintain, and comply with the service levels stated in the RFP to provide quality service to PCSCL.

However, if the proposed resources and infrastructure are found to be insufficient in meeting the RFP and/or the service level requirements given by PCSCL, then we will augment the same without any additional cost to PCSCL.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.18 Undertaking on Deliverables

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking on Deliverables

Respected Sir,

I/We as Bidder do hereby undertake that processes, deliverables/artifacts submitted to PCSCL will adhere to the quality and standards specified in this RFP.

We also recognize and undertake that the deliverables/artifacts shall be presented and explained to PCSCL and other key stakeholders (identified by PCSCL, and also take the responsibility to provide clarifications as requested by PCSCL.

We agree to abide by the procedures laid down for acceptance and review of deliverables / artifacts by the PCSCL as stated in this RFP or as communicated to us from time-to-time.

We also understand that the acceptance, approval and sign-off of the deliverables by PCSCL will be done on the advice of PCSCL and any other agency appointed by the PCSCL for the same. 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 PCSCL.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.19 Undertaking on Support to Third Party Solution acceptance and certification

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date

The CEO,

Pimpri Chinchwad Smart City Limited (PCSCL),

PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking on Support to Third Party Solution Acceptance and Certification

Respected Sir,

I/We understand that the System (including the application and the associated IT systems) may be assessed and certified by a 3rd party agency (to be identified by PCSCL before the system is commissioned).

I/We understand that while the certification expenses will be borne by PCSCL, the responsibility to ensure successful acceptance and certification lies with the Bidder.

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 acceptance and certification.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.20 Declaration of activities sub-contracted

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Declaration on Sub-contracting

Respected Sir,

I/ We hereby declare the following list of activities which we would be sub-contracted.

Sr No	Activity

I/ We would be responsible for ensuring that the sub-contracted work meets the requirements of the PCSCL.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

10.21 Undertaking on Exit Management and Transition

(To be provided on the Company letterhead by the Sole bidder or the Lead member, in case of consortium)

To,

Date

The CEO,

Pimpri Chinchwad Smart City Limited (PCSCL),

PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking on Exit Management and Transition

Respected Sir,

I/We hereby undertake that at the time of completion of our engagement with the PCSCL, either at the End of Contract or termination of Contract before planned Contract Period for any reason, we shall successfully carry out the exit management and transition of this Project to the PCSCL or to an agency identified by PCSCL to the satisfaction of the PCSCL.

I/We further undertake to complete the following as part of the Exit management and transition:

- a) We undertake to complete the updation of all Project documents and other artefacts and handover the same to PCSCL before transition.
- b) We undertake to design standard operating procedures to manage system (including application and IT systems), document the same and train PCSCL personnel on the same.
- c) If PCSCL decides to take over the operations and maintenance of the Project on its own or identifies or selects any other agency for providing operations & maintenance services on this Project, then we shall provide necessary handholding and transition support, which shall include but not be limited to, conducting detailed walkthrough and demonstrations for the IT Infrastructure, handing over all relevant documentation, addressing the queries/clarifications of the new agency with respect to the working / performance levels of the infrastructure, conducting Training sessions etc.

I/We also understand that the Exit management and transition will be considered complete on the basis of approval from PCSCL.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

11 Annexure 4 – Format for Submission of Commercial Bid

1. The format provided is for SI's reference only however, the SI shall submit all the rates on e-Tendeting system only
2. SI shall take utmost important while submitting the commercial bid
3. Refer the notes before submitting the commercial bid

	Item	Item	Unit	Qty	Rate	Cost
A-Total License Cost						
L-1:Core ERP License Cost						
*	License cost for core ERP Modules-Applications for 600 Employees	Nos. of Licenses	600			
	License cost for Employee Self Services	Nos. of Licenses	3200			
	License cost for Payroll services	Nos. of Licenses	11200			
	License cost for core ERP Modules-Database	Lumpsum	1			
L-2:Work flow management						
**	License cost for work flow management for 2000 employees, if any	No. of licenses	2000			
***	License cost for Digital Signature for 2000 employees	No. of licenses	2000			
L-3:GIS Desktop and Server License						
****	License cost for GIS Server, if any	Lumpsum	1			
	License cost for Desktop Software	No. of licenses	10			
B-Total Implementation Cost						
I-1: Core ERP Implementation Cost						
	Development,Integration and implementation cost	Lumpsum	1			
I-2:Work flow management						
	Development, Integration and implementation Cost for Work Flow Management Module	Lumpsum	1			
I-3: Non core Modules(Department Specific Modules)						
	Development,Integration and implementation cost for Non core Modules(Department Specific Modules)	Lumpsum	1			
	Development, Integration and implementation of Data entry portal and Dashboard for Service Level Benchmarking	Lumpsum	1			
	Development and implementation of GIS Portal	Lumpsum	1			
I-4: Survey						
#	survey	Lumpsum	1			
	Survey of PCMC area building/structure properties as indicated on satellite imagery and integration of survey and analysis data on web based GIS system	Nos.	500000			
##	Base Map Creation with all survey details	Sq.km	184			
I-5: Other Charges						

	Item	Item	Unit	Qty	Rate	Cost
	Training Charges	Lumpsum	1			
	Certification Costs (As defined in RFP)	Lumpsum	1			
	Integration Charges	Lumpsum	1			
	Data Migration Cost	Lumpsum	1			
	Manpower Charges for Implementation	Lumpsum	1			
	Additional Charges, if any	Lumpsum	1			
	C-O&M Cost					
	O-1: O&M for Core ERP					
\$	Annual Technical Support for core ERP Modules- Applications for 1000 Employees	Per year	5			
	Annual Technical Support for Employee Self Services	Per year	5			
	Annual Technical Support for Payroll services	Per year	5			
	Operation & Maintenance Cost	Per year	5			
	O-2: O&M for Work Flow Management					
	Annual Technical Support for work flow management for 2000 employees, if any	Per year	5			0
	Annual Technical Support for Digital Signature for 2000 employees	Per year	5			0
	Operation & Maintenance Cost	Per year	5			0
	O-3:O&M for GIS Desktop and Server License					
	Annual Technical Support for GIS Server, if any	Per year	5			-
	Annual Technical Support for Desktop Software, if any	Per year	5			-
	O-4: O&M for Non Core components as mentioned in (I-3)					
	Operation & Maintenance Cost	Per year	5			0
	Manpower Charges for O&M of all modules	Per year	5			
	O-5: Survey (I-4)					
\$	Operation & Maintenance Cost	Per year	5			0
	O-6: Base Map Updation					
	Base Map Updation	Per year	5			0
@	Image procurement Cost	Per year	12			0
	O-7: Back Up solution					
	Back Up solution	Lumpsum	1			0
	Total Project Cost (INR)					

Notes:

*	a. The 600 number of licenses indicated in BOQ are approximate number of licenses required. The approximate number of licenses have been identified from number of employees who are expected to perform one or multiple functions on core ERP system. It is the responsibility of SI to evaluate total number of licenses that would be actually required during
---	---

	<p>BPR/SRS/FRS/Implementation phase. It is understood that optimization will happen through Business Process Reengineering and work Flow</p> <p>b. SI is not expected to deliver all the quantity of licenses at the start of project. SI has to provide the licenses as per the demands raised by PCSCL/PCMC. The payments will be made as per the consumption. SI shall have to deliver licenses as follows:</p> <ul style="list-style-type: none"> <input type="radio"/> 50 : Test Environment <input type="radio"/> 100: During development phase <input type="radio"/> 450: For Go Live <p>c. SI shall note that the number of licenses may vary as per the assessment carried out during BPR and implementation phase. If any additional licenses need to be procured, it will be based on the unit price discovered during the bidding process. Such unit price discovered during the bidding process shall be valid up to Go-Live.</p> <p>d. It is understood that optimization will happen through Business Process Reengineering which would be undertaken by SI. The SI shall endeavor to minimize the number of licenses required and optimize the cost for the same through these processes.</p>
**	<p>a. SI has choice to provide COST or BESPOKE solution provided that the functional requirements of PCMC/PCSCL are achieved. The approximate number of employees have been identified who are expected to perform one or multiple functions on Work Flow and document Management System.</p> <p>b. It is the responsibility of SI to evaluate total number of licenses that would be actually required during BPR/SRS/FRS/Implementation phase. It is understood that optimization will happen through Business Process Reengineering.</p> <p>c. SI is not expected to deliver all the quantity of licenses at the start of project. SI has to provide the licenses as per the demands raised by PCSCL/PCMC. The payments will be made as per the consumption.</p> <p>d. It is understood that optimization will happen through Business Process Reengineering which would be undertaken by SI. The SI shall endeavor to minimize the number of licenses required and optimize the cost for the same through these processes.</p> <p>e. There should be no capping on external users such as citizens who will fill various application forms online</p>
***	<p>a. The approximate number of employees have been identified who may need digital signature to authorize any document.</p> <p>b. It is the responsibility of SI to evaluate total number of digital signatures that would be actually required during BPR/SRS/FRS/Implementation phase. It is understood that optimization will happen through Business Process Reengineering.</p> <p>c. The payment of the digital signatures will be made as per consumption.</p> <p>d. It is understood that optimization will happen through Business Process Reengineering which would be undertaken by SI. The SI shall endeavor to minimize the digital signatures required and optimize the cost for the same through these processes.</p>
****	Active-Active Configuration
#	<p>The System Integrator is expected to cover complete PCMC limit. The survey need to be performed by LiDAR or equivalent technology</p> <p>Deliverables may include following items but not limited to</p> <ol style="list-style-type: none"> 1. Data delivery along with viewing executable (viewer software) 2. Mapping of PCMC area and visual data on base application software for data review

	<p>3. Conduct feature extraction and integrate it visual data on web based application</p> <p>4. CAD drawing/ compatible format generation</p> <p>5. Tagging of properties</p>
##	The approximate areas of PCMC has been provided. However, System Integrator is expected to cover complete PCMC limit. The current of area of PCMC is approx. 184 sq.km. which may increase to 250 sq.km in coming future.
\$	Survey cost for any incremental growth of areas. The current of area of PCMC is approx. 184 sq.km. which may increase to 250 sq.km in coming future.
@	Satellite Image need to be procured after every 6 Months (2 Images per year X 6 Years) for change detection from 2 nd year of implementation to project end.

12 Annexure 5 – Performance Bank Guarantee

Ref: _____

Date _____

Bank Guarantee No. _____

<Name>
<Designation>
<Address>
<Phone Nos.>
<Fax Nos.>
<Email id>

Whereas, <<name of the supplier and address>> (hereinafter called “the System Integrator”) has undertaken, in pursuance of contract no. <Insert Contract No.> dated <Date> to provide Implementation services for <<name of the assignment>> to PCSCL (hereinafter called “the Purchaser”)

And whereas it has been stipulated by in the said contract that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract;

And whereas we, <Name of Bank> a banking company incorporated and having its head/registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of Rs.<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of Rs. <Insert Value> (Rupees <Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between

you and the System Integrator shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until <>Insert Date>>

Notwithstanding anything contained herein:

- I. Our liability under this bank guarantee shall not exceed Rs. <Insert Value> (Rupees <Insert Value in Words> only).
- II. This bank guarantee shall be valid up to <Insert Expiry Date>
- III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this bank guarantee that we receive a valid written claim or demand for payment under this bank guarantee on or before <Insert Expiry Date>) failing which our liability under the guarantee shall automatically cease.

Date _____

Place _____ Signature _____

Witness _____ Printed name _____

(Bank's common seal)

13 Annexure 6 - Consortium Agreement

DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBERS OF THE CONSORTIUM

[On Non-judicial stamp paper of INR 500 duly attested by notary public]

This Memorandum of Understanding (MoU) entered into this day of [Date] [Month] 2018 at [Place] among _____ (hereinafter referred to as "____") and having office at [Address], India, as Party of the First Part and _____ (hereinafter referred as "____") and having office at [Address], as Party of the Second Part and _____ (hereinafter referred as "____") and having office at [Address], as Party of the Third Part.

The parties are individually referred to as Party and collectively as Parties.

WHEREAS Pimpri Chinchwad Smart City Limited (PCSCL), PURCHASER, has issued a **Request for Proposal for Selection of System Integrator for GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Bench-marking and creation of Unique Smart Address for Pimpri Chinchwad Municipal Corporation under Smart City Initiative dated [Date] (RFP)** from the interested Bidders:

AND WHEREAS the Parties have had discussions for formation of a Consortium for bidding for the said Project and have reached an understanding on the following points with respect to the Parties' rights and obligations towards each other and their working relationship.

AS MUTUAL UNDERSTANDING OF THE PARTIES, IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:

4. The purpose of this Agreement is to define the principles of collaboration among the Parties to:
 - a. Submit a response jointly to Bid for the "**Request for Proposal for Selection of System Integrator for GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Bench-marking and creation of Unique Smart Address for Pimpri Chinchwad Municipal Corporation under Smart City Initiative dated [Date] (RFP)**" as a Consortium.
 - b. Sign Contract in case of award
 - c. Provide and perform the supplies and services which would be ordered by the Purchaser pursuant to the Contract.

- This Agreement shall not be construed as establishing or giving effect to any legal entity such as, but not limited to, a company, a partnership, etc. It shall relate solely towards the Purchaser for

“Selection of System Integrator for GIS Enabled ERP solution, Online Establishment Licensing Solution, Service Level Bench-marking and creation of Unique Smart Address for Pimpri Chinchwad city under Smart City Initiative ” dated [Date] (RFP)” for and related execution works to be performed pursuant to the Contract and shall not extend to any other activities.

- The Lead bidder shall be severally responsible and bound towards the Purchaser for the performance of the works in totality and in accordance with the terms and conditions of the BID document and Contract.
- ----- (Name of Party) shall act as Lead Partner of the Consortium. As such, it shall act as the coordinator of the Party’s combined activities and shall carry out the following functions:

1. To ensure the technical, commercial and administrative co-ordination of the work package
2. To lead the contract negotiations of the work package with the Purchaser.
3. The Lead partner is authorized to receive instructions and incur liabilities for and on behalf of all Parties.
4. In case of an award, act as channel of communication between the Purchaser and the Parties to execute the Contract
 - That the Parties shall carry out all responsibilities as Developer in terms of the Project Agreement.
 - That the broad roles and the responsibilities of each Party at each stage of the Bidding shall be as below:

Party A: _____

Party B: _____

Party C: _____

- That the Parties affirm that they shall implement the Project in good faith and shall take all necessary steps to see the Project through expeditiously.
- That this MoU shall be governed in accordance with the laws of India and courts in Maharashtra shall have exclusive jurisdiction to adjudicate disputes arising from the terms herein.

In witness whereof the Parties affirm that the information provided is accurate and true and have caused this MoU duly executed on the date and year above mentioned.

(Party of the first part) (Party of the second part) (Party of the third part)

Witness:

- i. _____
- ii. _____

14 Annexure 7 - Format for Power of Attorney to Authorize Signatory

POWER OF ATTORNEY

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney.]

We, M/s. _____ (name of the firm or company with address of the registered office) hereby constitute, appoint and authorise Mr. or Ms. _____ (Name and residential address) who is presently employed with us and holding the position of _____, as our Attorney to do in our name and our behalf all or any of the acts, deeds or things necessary or incidental to our RFP for the Project _____ (name of the Project), including signing and submission of the RFP response, participating in the meetings, responding to queries, submission of information or documents and generally to represent us in all the dealings with Client or any other Government Agency or any person, in connection with the works until culmination of the process of bidding till the Project Agreement is entered into with _____ (Client) and thereafter till the expiry of the Project Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us.

Dated this _____ day of _____ 2018

(Signature and Name of authorized signatory)

(Signature and Name in block letters of all the remaining partners of the firm Signatory for the Company)

Seal of firm Company

Witness 1:

Witness 2:

Notes:

- a. *To be executed by all the members individually.*
- b. *The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.*

15 Annexure 8 - Format for Power of Attorney for Lead bidder of Consortium

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

Whereas _____ has invited RFP response for _____ (Name of the Project)

Whereas, the Members of the Consortium comprising of M/s._____, M/s._____, M/s._____ and M/s._____ (the respective names and addresses of the registered offices to be given) are interested in bidding for the Project and implementing the same in accordance with the terms and conditions contained in the RFP Documents.

Whereas, it is necessary for the members of the Consortium to designate one of them as the lead member with all necessary power and authority to do, for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's RFP response for the Project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT

We, M/s._____ and M/s _____ and M/s _____ hereby designate M/s. _____ being one of the members of the Consortium, as the lead member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deeds or things necessary or incidental to the Consortium's RFP response for the Project, including submission of the RFP response, participating in meetings, responding to queries, submission of information or documents and generally to represent the Consortium in all its dealings with Client or any other Government Agency or any person, in connection with the Project until culmination of the process of bidding till the Project Agreement is entered into with Client and thereafter till the expiry of the Project Agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid Attorney shall and shall always be deemed to have been done by us or Consortium.

Dated this _____ day of _____ 2018

(Signature)

(Name in Block Letter of Executant) *[Seal of Company]*

Witness 1

Witness 2

Notes:

To be executed by all the members individually, in case of a Consortium.

The Mode of execution of the power of attorney should be in accordance with the procedure, if any laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure

16 Annexure 9 – Bank Guarantee for Earnest Money Deposit

To,

<Name>

<Designation>

<Address>

Whereas <> (hereinafter called 'the System Integrator') has submitted the Bid for Submission of RFP <> dated <> for <> (hereinafter called "the Bid") to <>.

Know all Men by these presents that we <> having our office at <> (hereinafter called "the Bank") are bound unto the <> (hereinafter called "the Purchaser") in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this <>.

The conditions of this obligation are:

1. If the Bidder having its Bid withdrawn during the period of Bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of validity of Bid
 - Withdraws his participation from the Bid during the period of validity of Bid document; or
 - Fails or refuses to participate in the subsequent Tender process after having been short listed;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to <> and including <> from the last date of submission and any demand in respect thereof should reach the Bank not later than the above date.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN:

I. Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures>> (Rupees <<Amount in words>> only)

II. This Bank Guarantee shall be valid up to <<insert date>>)

III. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date>>) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:

17 Annexure 10 – Undertaking for Compliance to ERP Definition

(To be provided on OEM Letter Head)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking for Compliance to ERP Definition

Respected Sir,

I/We do hereby undertake that we satisfy the following definition provided in RFP
COTS ERP is defined as the Commercial off the- shelf or commercially available off-the-shelf (COTS) packaged Enterprise Resource Planning (ERP) software where OEM holds the intellectual property rights for the same. The following are the eligibility criteria that needs to be satisfied by COTS ERP:

Serial No	Criteria	Documentary Evidence	Compliance (Yes/No), evidence document pg no.
1.	COTS software should have been implemented in government and public sector agency within India & must have gone live for more than five years.	Required	
2.	COTS software should be enterprise wide integrated application	Not Required	
3.	COTS software should support localization features for India taxes and provides the legal changes for these taxes as a support package from time to time	Required	
4.	The proposed COTS OEM should have support centers across the globe, including support centers in India	Required	
5.	The proposed COTS OEM should offer 24X7 support	Required	
6.	The proposed COTS OEM should have at least five partners who can implement the proposed product.	Required	
7.	The proposed COTS OEM should have development center in India.	Required	

Serial No	Criteria	Documentary Evidence	Compliance (Yes/No), evidence document pg no.
8.	The product is successfully implemented in at least 2 organizations in last 5 years in India/Globally.	Required	

However, if noncompliance to the above definition is found, PCSCL may take appropriate penal action on the bidder as it deems fit.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

18 Annexure 11 – Undertaking for Compliance to Definition for Other Commercial off the Shelf Products (GIS, Work Flow and Document Management, BI etc.)

(To be provided on OEM Letter Head)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking for Compliance to Definition for Other Commercial off the Shelf Products (GIS, Work Flow and Document Management, BI etc.)

Respected Sir,

I/We do hereby undertake that we satisfy the following definition provided in RFP

Serial No	Criteria	Documentary Evidence	Compliance (Yes/No), evidence document pg no.
1.	The solution should be available Commercially Off-The-Shelf (COTS). The software/application should be readily deployable with or without configuration to suit the customer's specific process requirements and does not involve developing the whole application from scratch. COTS software shall be implementable or deployable and maintainable by any other competent agency other than the manufacturer/OEM or agency which has developed the COTS software.	Required	
2.	The product is successfully implemented in at least 2 organizations in last 5 years in India/Globally.	Required	

However, if noncompliance to the above definition is found, PCSCL may take appropriate penal action on the bidder as it deems fit.

Yours faithfully,
(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

19 Annexure 12 – Undertaking for Compliance to OGC

(To be provided on OEM Letter Head)

To, Date
The CEO,
Pimpri Chinchwad Smart City Limited (PCSCL),
PCMC Main Building, Mumbai-Pune Road, Pimpri, Pune, Maharashtra – 411018

Sub: Undertaking for Compliance to OGC

Respected Sir,

I/We do hereby undertake that our product/Platform is Open Geospatial Consortium (OGC) compliant. **The documentary evidence is attached on page on_____** However, if noncompliance is found, PCSCL may take appropriate penal action on the bidder as it deems fit.

Yours faithfully,

(Signature of the Authorized signatory of the Bidding Organization)

Name:

Designation:

Date:

Time:

Seal:

Business Address:

Volume-II: Scope of Work

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1 Introduction

1.1 Geographical Scope

The total area covered by PCMC is 184 sq. km approximately. PCMC is divided into 8 Zones, which are further divided into 32 Wards as mentioned below. The geographical scope of the implementation of this RFP shall be limited to PCMC limits.

Serial No	Zone	Wards
1.	A	Ward no: 10, 14, 15 & 19
2.	B	Ward no: 16, 17, 18 & 22
3.	C	Ward no: 2, 6, 8 & 9
4.	D	Ward no: 25, 26, 28 & 29
5.	E	Ward no: 3, 4, 5 & 7
6.	F	Ward no: 1, 11, 12, & 13
7.	G	Ward no: 21, 22, 24 & 27
8.	H	Ward no: 20, 30, 31 & 32

1.2 Reference Statistics

#	Items	No of Items
1	Number of Employees in PCMC	~ 7,000
2	Number of Pensioners in PCMC	~ 4,200
3	Number of ERP Users in PCMC	~ 1000
4	Number of Workflow System Users in PCMC	~ 2000
5	Concurrency to be considered	25%
6	Peak time concurrency ¹	50%
7	Number of department involved in GIS handling	~ 15
8	Number of users performing geo spatial analysis	~ 200
9	GIS Mobile app users for survey and monitoring	~ 700
10	Average daily number of visitors on PCMC Website	~ 3,325
11	Maximum number of visitors on PCMC Website on any day in a month	~ 4,752
12	PCMC Total Area (km ²)	~ 184
13	Timelines considered	2 year implementation + 5 Years Maintenance
14	Number of Properties in PCMC	~ 500,000

Note: Actual number of users and provided statistic may change during implementation. System Integrator is expected to perform pre-requisites.

¹ Concurrency during office open and close time such as 10:00 AM in morning and 5:30 PM in evening

Class	Number of Employees
Class-1 Employees	80
Class-2 Employees	218
Class-3 Employees	2893
Class-4 Employees	3790
Grand Total	6981

1.3 Existing GIS Infrastructure in PCMC

#	Description	Quantity
1.	Intergraph Geospatial Server- Professional Server, including ERDSA Apollo, GeoMedia Web map, Geospatial portal(Inclusive of one test/failsafe/backup server license with each license) and mobile Mapworks	01
2.	GeoMedia professional Desktop software- GeoMedia 3D, Transportation Manager	02
3.	Imagine Professional- With imagine expansion pack	01

#	Existing GIS Server Specification	Quantity
1.	Chassis Configuration: Chassis with up to 24, 2.5" Hard Drives and 2, 2.5" Flex Bay Hard Drives	1
2.	Processor: Intel Xeon E5-2699 v4 2.2GHz 55M Cache 9.60GT/s QPI Turbo HT 22C/44T (145W) Max Mem 2400MHz, 18 Core	1
3.	Additional Processor: Intel Xeon E5-2699 v4 2.2GHz 55M Cache 9.60GT/s QPI Turbo HT 22C/44T (145W) Max Mem 2400MHz, 18 Core	1
4.	Processor Thermal Configuration: 2 CPU Standard	1
5.	Memory Configuration Type: Performance Optimized	1
6.	Memory DIMM Type and Speed: 2400MT/s RDIMMs	1
7.	Memory Capacity: 32GB RDIMM, 2400MT/s, Dual Rank, x4 Data Width	4
8.	Operating System: Windows Server 2012, Standard Edition, Factory Installed, No Media, 2 Socket, 2 VMs	1
9.	Database Software: Microsoft SQL Server 2014 STD, 5 User CALs	1
10.	OS Media Kits: Windows Server 2008 R2 SP1, Enterprise Edition, Downgrade Media for WS2012, English	1
11.	RAID Configuration: C6 - RAID 10 for H330/H730/H730P (4-24 HDDs or SSDs in pairs)	1
12.	RAID Controller: PERC H730P RAID Controller, 2GB NV Cache	1

#	Existing GIS Server Specification	Quantity
13.	Hard Drives: 1.8TB 10K RPM SAS 12Gbps 512e 2.5in Hot-plug Hard Drive	8
14.	Hard Drives (PCIe SSD/Flex Bay): 200GB Solid State Drive SATA Mix Use MLC 6Gbps 512n 2.5in Flex Bay Drive	2
15.	Power Management BIOS Settings: Performance BIOS Setting	1
16.	Advanced System Configurations: UEFI BIOS Setting	1
17.	Power Supply: Dual, Hot-plug, Redundant Power Supply (1+1), 750W	1
18.	Power Cords: Rack Power Cord 2M (C13/C14 10A)	2
19.	PCIe Riser: Risers with up to 4, x8 PCIe Slots + 2, x16 PCIe Slots	1
20.	TPM Module: PowerEdge Server FIPS TPM 2.0	1
21.	Embedded Systems Management: Server Management System	1
22.	Network Daughter Card: QLogic 57800 2x10Gb BT + 2x1Gb BT Network Daughter Card	1
23.	Bezel: Quick Sync Bezel	1
24.	Rack Rails: ReadyRails™ Sliding Rails With Cable Management Arm	1
25.	Server Accessories: 8X DVD-ROM, USB, External	1
26.	Additional Shipping Box Labels: Order Configuration Shipbox Label (PO Number, Ship Date, Model, Processor Speed, HDD Size, RAM)	1
27.	Service: 3Yr Basic Warranty - Next Business Day - Minimum Warranty	1
28.	Extended Service: 3Yr Pro Support Plus and 4hr Mission Critical	1

2 Scope of work

The proposed GIS Enabled ERP solution implementation and post-implementation support at PCMC is a comprehensive solution for modernization of the corporation and envisages end-to-end computerization of the corporation functioning. It is envisaged to undertake Enterprise Wide Resource Planning approach, enabling PCMC to use various spatial and geo spatial data in most optimal way and provide services to citizens in efficient and effective manner.

The Scope of Work can be primarily divided into four main components:

1. Development and implementation of Web GIS enabled platform and applications
2. Development and implementation of ERP solution and other citizen centric, expenditure and revenue based applications
3. Development and implementation of work flow management system
4. Integration, Operation and Maintenance of the above mentioned GIS enabled ERP system with work flow management for 5 years after Go-Live

The key features of the scope under each of these components is as under:

1. Development and implementation of Web GIS enabled platform and applications
 - a) Procurement of Satellite imagery
 - b) Preparation of Base map to create foundation for GIS.
 - c) Survey to be carried out to obtain information related to land use, land cover, deviations of properties, PCMC assets, road features etc. for updating attributes of GIS objects
2. Development and implementation of ERP solution and other citizen centric, expenditure and revenue based applications
 - a) Implementation of various core ERP Modules (Only **COTS ERP from OEM products**)
 - b) Implementation of various non-core ERP Modules including expenditure applications (Can be Bespoke or COTS products)
 - c) Implementation of various citizen centric modules (Can be Bespoke or COTS products)
 - d) Implementation of various revenue based applications (Can be Bespoke or COTS products)
3. Development and implementation of work flow management system
 - a) Development of applications/software to be implemented by PCMC for various services and integration with the new ERP platform
4. Integration, Operation and Maintenance of the above mentioned GIS enabled ERP system with work flow management for 5 years
 - a) Migration of all data from identified existing IT applications

- b) Integration of Online Establishment Licensing, Municipal Service Level Benchmarking and Unique Smart Addressing System and other applications as per the list (refer section 2.13) with the GIS enabled ERP platform
- c) Deployment and supervision of personnel required for the maintenance of the project
- d) Capacity building and training of selected municipal officials

Definition:

COTS ERP:

COTS ERP is defined as the Commercial off the- shelf or commercially available off-the-shelf (COTS) packaged Enterprise Resource Planning (ERP) software where OEM holds the intellectual property rights for the same. The following are the eligibility criteria that needs to be satisfied by COTS ERP:

1. COTS software should have been implemented in government and public sector agency within India & must have gone live for more than five years.
2. COTS software should be enterprise wide integrated application
3. COTS software should support localization features for India taxes and provides the legal changes for these taxes as a support package from time to time
4. The proposed COTS OEM should have support centers across the globe, including support centers in India
5. The proposed COTS OEM should offer 24X7 support
6. The proposed COTS OEM should have at least five partners who can implement the proposed product.
7. The proposed COTS OEM should have development center in India.

Other Commercial off the Shelf Products (GIS, Work Flow and Document Management, BI etc.):

The solution should be available Commercially Off-The-Shelf (COTS). The software/application should be readily deployable with or without configuration to suit the customer's specific process requirements and does not involve developing the whole application from scratch. COTS software shall be implementable or deployable and maintainable by any other competent agency other than the manufacturer/ OEM or agency which has developed the COTS software.

Note: The SI and OEM shall ensure that the proposed solution (ERP, GIS and WFM+DMS products of OEM) should have been successfully implemented in at least 2 organizations in last 5 years in India/Globally. SI and OEM shall substantiate such claims by submitting relevant proofs. SI and OEM shall note that the untested products/ IT applications or application which need to be built from scratch will not be accepted.

2.1 Compliance to eGov Standards

2.1.1 Single Sign On

The application should enable single-sign-on so that any user once authenticated and authorized by system is not required to be re-authorized for completing any of the services in the same session. For employees of the department concerned, the browser based application accessed on the intranet, through single-sign-on mechanism, will provide access to all the services of the

departments concerned (based on their roles and responsibilities), Help module, basic and advanced reporting etc. Similarly, for external users (citizens, etc), based on their profile and registration, the system shall enable single sign on facility to apply for various services, make payments, submit queries /complaints and check status of their applications.

2.1.2 Support for PKI based Authentication and Authorization

The solution shall support PKI based Authentication and Authorization, in accordance with IT Act 2000, using the Digital Certificates issued by the Certifying Authorities (CA). In particular, 3 factor authentication (login id & password, biometric and digital signature) shall be implemented by the selected Bidder for officials/employees involved in processing citizen services as per the Functional requirement specification of the services.

2.1.3 Interoperability Standards

Keeping in view the evolving needs of interoperability, especially the possibility that the solution shall become the focal point of delivery of services, and may also involve cross functionality with the e-Government projects of other departments / businesses in future. The SI shall ensure that the application developed is easily integrated with the existing applications.

2.1.4 Scalability

One of the fundamental requirements of the proposed application is its scalability. The architecture should be proven to be scalable (cater to increasing load of internal and external users and their transactions) and capable of delivering high performance for at least five years from the date of deployment. In this context, it is required that the application and deployment architecture should provide for Scale-Up and Scale out on the Application and Web Servers, Database Servers and all other solution components. For pilot states, the scalability is very important and this aspect should be thoroughly tested before state wide roll out.

2.1.5 Security

The systems implemented for project should be highly secure, considering that it is intended to handle sensitive data relating to the citizens of the PCMC. The overarching security considerations are described below.

1. The security services used to protect the solution shall include:
Identification, Authentication, Access Control, Administration and Audit and support for industry standard protocols.
2. The solution shall support advanced user authentication mechanisms including digital certificates and biometric authentication.
3. Security design should provide for a well-designed identity management system, security of physical and digital assets, data and network security, backup and recovery and disaster recovery system.
4. The solution should provide for maintaining an audit trail of all the transactions and should also ensure the non-repudiation of audit trail without impacting the overall performance of the system.

5. The overarching requirement is the need to comply with ISO 27001 standards of security.

2.1.5.1 List of Information security requirements

S.No.	Security Areas	Specification
1.	Physical Security	<ul style="list-style-type: none"> Client premises, should be physically secured by the SI.
2.	Network Security	<ul style="list-style-type: none"> Appropriate firewalls, IPS, SSL devices etc. should be used to ensure Network security The solution should support SSL encryption mechanism for transferring data across network and between client and server
3.	System Security	<ul style="list-style-type: none"> Adequate access control procedures should be defined to secure the entire IT system, physically and logically. The access controls procedures should cover all stages in the life-cycle of user access, from the initial registration of new users to the final de- registration of users who no longer require access to information systems and services. The system should have 2 factor authentication mechanism either through One Time Password (OTP) or soft tokens based technologies for access control and user authentication.
4.	Application Security	<ul style="list-style-type: none"> The solution should have appropriate authentication mechanisms Application user authentication & authorization related transactions should be encrypted. Operating system should be hardened on which the application is installed. A web application firewall shall be deployed to secure the web-layer.
5.	Audit Trails & Logs	<ul style="list-style-type: none"> Event logging should create an accurate record of user activity such as which users accessed which system, and for how long. The solution should log all types of events especially those related to security

S.No.	Security Areas	Specification
6.	Data Protection	<ul style="list-style-type: none"> The solution should support SSL encryption mechanism for transferring data across network. Provision should be made to ensure that data in any form should not be copied on to any external media without authorization. The data transferred across network should be encrypted using Public Key (PKI) Infrastructure. Complete end point data protection should be provided at client site such that any type of data pilferage using unauthorized copying, storing and emailing could be prohibited. Access to all system resources including data files, devices, processes and audit files should be provided to the intended users only. All mobile applications should be designed and developed in a way that it ensures security of the application and data on the device. Ensure to protect documents by assigning security parameters and criteria in order to provide more effective protection for an electronic document in order to maintain Confidentiality, Authorization, Accountability, Integrity, Authenticity and Non-repudiation.
7.	Session Management	<ul style="list-style-type: none"> The system should limit to only one session per user or process ID. The system should put a limit on the maximum time length of an idle session, which should ensure that automatic session termination takes place after expiry of the specific time length.
		<ul style="list-style-type: none"> Mandatory password change after predefined time period

S.No.	Security Areas	Specification
8.	Data Warehouse Security	<ul style="list-style-type: none"> Users must not have access to the data warehouse prompt of the application. Access to the data warehouse prompt must be restricted only to the database administrator. “Super user” rights for the data warehouse must only be given to the administrator and activities of these accounts must be properly logged.
9.	Application Deployment	<ul style="list-style-type: none"> All unused ports should be blocked at server machines. The application server should be segregated from internet zone through firewall or other filtering mechanism.
10.	Information Security Governance	<ul style="list-style-type: none"> The employees working on the project should be made aware of his or her responsibilities with respect to Information Privacy and Information Security. Employees working on the project shall undergo security awareness training during training.
11.	Compliance to Security Standards	<ul style="list-style-type: none"> Software/Hardware system should be in compliance with <ISO/IEC 27001:2015>.
12.	Security Information and Event Management System (SIEM)	<ul style="list-style-type: none"> SI should install SIEM for Real-time analysis of security alerts generated by applications and infrastructure.
13.	Database Activity Monitoring (DAM)	<ul style="list-style-type: none"> SI should install DAM to monitor all database

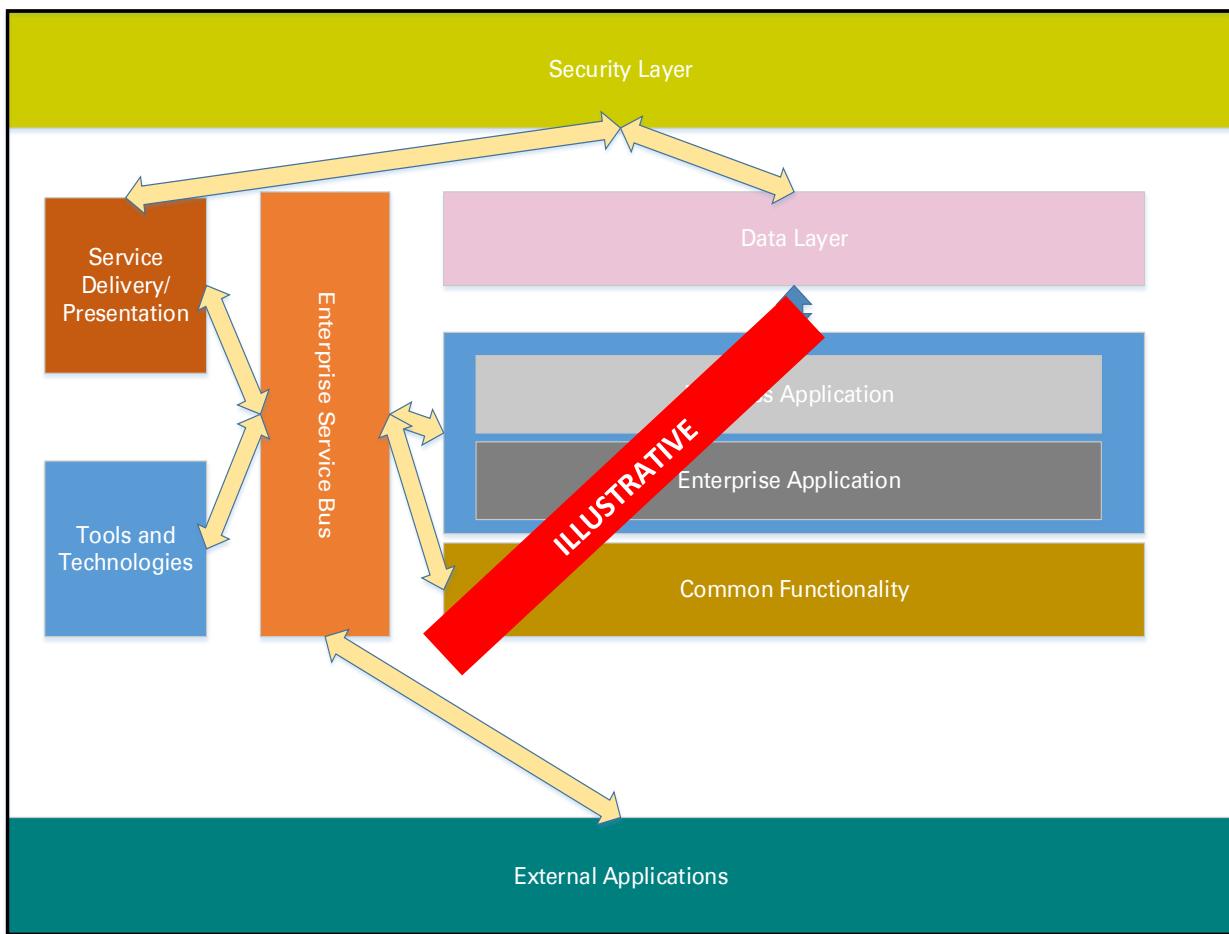
2.2 Application Architecture

It has been proposed that the applications designed and developed for the departments concerned must follow some best practice and industry standards. In order to achieve the high level of stability and robustness of the application, the system development life cycle must be carried out using the industry standard best practices and adopting the security constraints for access and control rights. The various modules / application should have a common Exception Manager to handle any kind of exception arising due to internal/external factors.

Similarly the modules of the application are to be supported by the Session and Transaction Manager for the completeness of the request and response of the client request. The system should have a module exclusively to record the activities/ create the log of activities happening within the system / application to avoid any kind of irregularities within the system by any User / Application.

2.2.1 High Level Design (HLD)

Once the SRS are approved, the SI shall complete the High Level Designing and all HLD documents of all the functionalities, integration with existing application and external application. The SI shall prepare the HLD and have it reviewed and approved by PCMC. Following diagram provides the indicative High Level Design



2.2.2 Detailed Design/ Low Level Design (LLD)

The LLD shall interpret the approved HLD to help application development and shall include detailed service descriptions and specifications, application logic (including “pseudo code”) and UI design (screen design and navigation). The preparation of test cases will also be completed

during this stage. The SI shall prepare the HLD and have it reviewed and approved by PCMC. Following diagram provides the indicative Low Level Design

System Landscape

Refer page No-338

2.3 Brief scope of tasks

#	Category	Description
1.	Plans and Schedules	<ul style="list-style-type: none"> • Prepare a project-plan with detailed activity schedule and a time-bound action plan for the implementation of the integrated system and associated software
2.	Business Process & Analysis	<ul style="list-style-type: none"> • The SI shall study the existing functionalities of all the business processes in detail and submit the document detailing the functionalities, problem areas and expectations of the PCMC • Identify the customization/parameterization/workarounds to be done in the GIS Enabled ERP solution • Identify the process/procedure that needs to be modified/introduced to meet the needs of the proposed system • SI should also submit the plan for the satellite image procurement and base map creation • SI should also submit the plan for various surveys
3.	Supply, Configuration and Installation of the Software	<ul style="list-style-type: none"> • Implement the system • Configuration of the proposed solution to meet the process requirements • As required by PCMC, the SI shall integrated the stand-alone applications during this stage itself • Design and prepare test data, quality control, and trial run and arrange acceptance testing of all modules, including a full load and stress test • Testing of the configured solution
4.	Data Migration	<ul style="list-style-type: none"> • Identification of data migration requirements • Collection and migration of user and master data from legacy and manual systems
5.	Change Management and Training	<ul style="list-style-type: none"> • Training for all stakeholders of PCMC including core team, end users, etc. • Documentation, training, simulation. Conduct onsite workshops for process stakeholders and highlight the benefits of this new environment.
6.	Go-Live and Stabilization	<ul style="list-style-type: none"> • Go-Live of all modules of the solution as envisaged with real-time data at all locations • Stabilization of the system after Go-Live • ISO 27001 certification • Backup solution
7.	Post Implementation Support	<ul style="list-style-type: none"> • Annual technical and maintenance support for 5 years • O&M support for various surveys

2.4 Requirements for Envisaged Solution

The System Integrator shall configure and deploy the application for delivering all the services and management functions of Pimpri Chinchwad Municipal Corporation as identified above and detailed in the RFP. This system shall be a homogeneous, integrated Enterprise Wide Software solution, comprising of COTS solution or custom (BESPOKE) solution or both, as required minimally in order to achieve functional requirements.

The SI would be required to implement all the functional requirements specified. ERP is a terminology used to specify that the requirements have to be implemented through use of system of integrated applications, to effectively manage complete operations by use of resources (spatial data, geo spatial data, various modules, manpower) in most optimal manner. Hence, for the purpose of simplicity, entire solution for PCMC is being referred as “GIS Enabled ERP Solution”.

The System Integrator is expected to have back to back support arrangements with OEM in case of COTS Solution or own support in case of BESPOKE solution to provide technical support, as well as IT Infrastructure components (Servers, Storage, Networking etc. provided by SI as a part of solution). In case of COTS solution, the format of the certification (MAF) to be submitted by OEM (in the technical envelope) as per Annexure 8.11 of Volume-1

Below are few key elements of the application:

1. The complete system shall be hosted at the Data Centre of Pimpri Chinchwad Municipal Corporation, whereas servers will be provided to the bidder
2. In future, the system shall be able to integrate with Command and Control Software Solution, Water SCADA System Automatic Building Plan and Drawing Approval System, Grievance Redressal, SARATHI App, Payment Gateway, e-classroom etc.
3. The system must support integration with Biometrics like Fingerprint, Face and Retina (for Attendance of Employees and Verification of Pensioners)
4. The application must support Digital Certificates and Digital Signing of Documents.

2.5 Detailed scope of work

The following sections detail out the scope of work to be performed by the selected vendor. It may be noted that while this RFP has attempted to provide extensive guidelines, it shall be the responsibility of the selected vendor to provide for any additional software, hardware, human resources or processes that may be required to extend the agreed upon services as per the service level agreement between both parties. In case of a consortium being selected, the following items of the scope of work have to be performed by team of the particular Consortium Member whose projects are being considered in Pre-Qualification and Technical-Qualification criteria

- a. Business Process Reengineering
- b. System requirement study
- c. Design of System
- d. Development of System
- e. Implementation of System
- f. Support for O&M

Above arrangement would also form part of consortium agreement.

2.5.1 Project Planning and Monitoring

Within 21 calendar days of the effective date of the contract, selected vendor will be required to:

1. Finalize the project charter in order to determine and agree on the project expectations, ground rules, work plan, communication matrix, timelines, quality plan, configuration management plan etc.
2. Selected vendor's project manager should prepare a detailed project plan (as part of the project charter) clearly specifying the tasks, the dependency among the tasks, the duration to perform the tasks, the resources allocated to perform the tasks, the scheduled start and finish dates for the task. This project plan should also clearly mention the various project milestones and project deliverable schedules. The project manager should also prepare a detailed register of project related risks with details such as probability of occurrence of the risk factor, severity of the risk factor, risk rating, risk mitigation plan, etc.
3. The detailed project plan should be internally reviewed for completeness and correctness by selected vendor and subsequently delivered to PCMC/PCSCL for its review and acceptance. The mutually agreed project plan will form the basis for regular project monitoring.
4. Selected vendor should revise the project plan to incorporate changes due to requirement changes, delay in approvals, etc., if any, and submit the revised project plan to PCMC/PCSCL
5. Selected vendor should hold fortnightly review meetings with PCMC/PCSCL providing detailed report on the progress of the project (Project Progress Report) clearly highlighting the activities completed in the reporting period, activities planned for the next reporting period, deviations from the planned dates, issues/concerns affecting the project progress, impact on the overall project timelines, project related risks with their mitigation plans.
6. Selected vendor should monitor the quality of the solution being developed in line with the project quality plan. Selected vendor's project manager should periodically review the performance of the project against defined quality goals and take necessary actions for any deviations.

2.5.2 System Requirement and Design Study

1. The selected vendor shall perform the detailed assessment of the functional requirements for the services described in the RFP.
2. The selected vendor will refer Maharashtra Municipal Corporations Act, National Municipal Accounting Manual, PCMC Resolutions and Orders, Government Resolutions etc.
3. Selected vendor should understand the processes and other related documents and seek clarifications from PCMC/PCSCL, if any.
4. Selected vendor shall interact with PCMC/PCSCL to gather requirements. It is expected that selected vendor gathers requirements through structured questionnaires, focused interviews with user groups.
5. On gathering the requirements, selected vendor shall analyze these requirements to ensure the requirements are complete, accurate, consistent and unambiguous.
6. The selected vendor shall finalize the System Requirement Specifications (SRS) in consultation with PCMC/PCSCL and its representatives based on process definitions & Functional Requirement Specifications (FRS), Technical Requirements Specifications provided therein, and also based on its own individual assessment, and/or in consultation with PCMC/PCSCL and its representatives.
7. SRS shall contain the objectives and scope of the system, overview, various levels of business requirements, architectural requirements, usability requirements, reliability requirements, design constraints, sizing considerations, applicable standards, Reports and templates, interfaces etc. User Role wise mapping to the various business functions with details regarding their access rights (insert/update/delete/view etc.) shall also be included in this document. Acceptance Criteria shall also be included explicitly promoting clear understanding with the end user about what the end user considers acceptable for the proposed solution.
8. The selected vendor as part of development of SRS shall develop a system prototype to capture and demonstrate the end user requirements in the form of screens and outputs. The prototype shall be enhanced continuously during the development of SRS.
9. The SRS shall be prepared by the selected vendor and a formal sign-off obtained from PCMC/PCSCL before proceeding with the development/customization/installation of the application.
10. Selected vendor is also expected to visit the different ward locations to understand the requirements of users at those locations.

2.5.3 Design

1. The selected vendor shall design the integrated solution architecture and specifications for meeting the SRS finalized by the selected vendor and approved by PCMC/PCSCL. The solution designed should have seamless integration of all the components comprising the integrated solution being designed, including some of the existing applications. The solution design shall include, but shall not be limited to, the design of the application architecture, user interface, database structures, security architecture, IT Infrastructure sizing, Storage Architecture, network architecture etc. The principles of Enterprise Architecture shall be followed while designing the systems.
2. The selected vendor is required to submit network bandwidth requirement for each of the office locations, as well as bandwidth required on per-user bases.
3. The IT Infrastructure design proposed and implemented must ensure that there is no Single-point-of-Failure.
4. The selected vendor is expected to implement the GIS Enabled ERP system and customize based on the requirement gathering and mutual discussion with PCMC/PCSCL. The selected vendor is required to meet all the requirements of this RFP including the activities listed, timelines and deliverables mentioned in this RFP, functional, performance, service level related and any other requirements stated this RFP.
5. The selected vendor should submit the solution design document to PCMC/PCSCL and should obtain the sign off on the design document before commencing the development /customization/installation of the solution. However, selected vendor shall be responsible for ensuring the compliance of the end product to the requirements specified by PCMC/PCSCL in this RFP.
6. Selected vendor should document the high level design consisting of project standards, the functional design and the database design, logical and process view of the proposed system, deployment design, coding standards, architectural requirements such as number of users and load, size and performance, backup and archival policy, etc.

2.5.4 Implementation and Customization of GIS and ERP Product

1. Based on the identified functional requirements and processes, the selected vendor will undertake the system configuration and customization.
2. PCMC/PCSCL intends to adopt the leading practices available in the offered solution. Selected vendor is required to undertake customization that may be needed in line with the changed, improved or specific business processes requirement prepared during requirement gathering/study phase of the project.
3. Selected vendor shall make the required system design modifications and implement the changes in order to achieve the desired functionality. However the same must be tested, accepted and approved by the PCMC/PCSCL users.

4. After completion of configuration/customization to the product, selected vendor along with PCMC/PCSCL will evaluate the overall configuration and customization. If the need arises and the result is not up to the expectations of PCMC/PCSCL management, further reconfiguration will be done by the System Integrator in order to close any gap left in meeting the desired objective. Finally approved/accepted solution will be delivered as "System Configuration" document and the same should be implemented at locations that are identified within the scope of this project.

2.5.5 Testing

1. The selected vendor shall design the Testing strategy including traceability matrix, test cases and conduct testing of various components of the software developed/customized for the project.
2. The software testing shall include Unit Testing, System Testing, Performance Testing, Integration Testing, etc.
3. The selected vendor shall submit to PCMC/PCSCL the testing approach and plan and make necessary amendments, if requested by PCMC/PCSCL. The selected vendor shall perform the testing of the solution based on the above test plan, document the results and shall fix the bugs found during the testing.
4. Though PCMC/PCSCL is required to review the test plan, it is the ultimate responsibility of selected vendor to ensure that the end product delivered by the selected vendor meets all the requirements (including functional and technical requirements) of the project as specified in the RFP.
5. The basic responsibility of testing the system lies with the selected vendor.
6. The selected vendor shall after development and customization/configuration of the integrated solution, conduct tests to demonstrate that the system meets all the requirements (functional and technical) specifications as brought out in this RFP.
7. **System Testing:** On the basis of these tests, a report would be submitted by the selected vendor for review and approval by PCMC/PCSCL. The test results and response times should be demonstrated by the selected vendor during the testing phases (System, Integration and Stress & Load Testing) at various locations and environment/infrastructure as mutually agreed upon by PCMC/PCSCL and the selected vendor.
8. **Integrating Testing:** Integration testing shall be carried out by the selected vendor to ensure cross function modules are integrated and transaction data is flowing across the modules accurately. Selected vendor is required to plan and execute integration and ensure satisfactory results are obtained.
9. **Load and Stress Testing:** Load, scalability and Stress Testing would be conducted prior to 'Go-Live', once the System Integration Testing of the configured and customized solution has been conducted successfully. Selected vendor should use suitable simulation tools in

accordance with the agreed test procedures keeping in view PCMC's projected future load of transactional users as proposed by the selected vendor and agreed by PCMC/PCSCL.

10. Providing UAT Plan and Test Cases: Selected vendor must create UAT plans and use cases and share with V PCMC/PCSCL.

2.5.6 Deployment of the Integrated Solution

The selected vendor shall deploy the application software and other software required for successful implementation of integrated system at data center and data recovery center as agreed with PCMC/PCSCL.

2.5.7 System Acceptance

1. The selected vendor shall develop acceptance test procedures and the same will need to be approved by PCMC/PCSCL. The purpose of this acceptance is to ensure conformance by the PCMC/PCSCL users to the required process operations, response time, and integrity of the software after installation, and to eliminate any operational bugs. This will include:
 2. Fine tuning of the software, ensuring all required related component software are installed and any debugging required.
 3. At the satisfactory conclusion of these Acceptance Tests to the satisfaction of PCMC/PCSCL, the commissioning/implementation of the software shall be considered to be ready.
 4. Selected vendor shall provide all the necessary support to the PCMC/PCSCL in conducting the user acceptance testing.

2.5.8 Documentation

1. The selected vendor shall prepare/update the documents including that of FRS, SRS, Detailed Design, Test Cases & Results, User Manuals, Operations Manual, Maintenance Manual, Administrator Manual, Security Policy, Licensing etc. as per notified standards. The selected vendor shall obtain the sign-off from PCMC/PCSCL for all the documents submitted for this Project and shall make necessary changes as recommended by PCMC/PCSCL before submitting the final version of the documents.
2. Key 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, screen formats etc.
 - Program flow and description.
 - Any other documentation required for usage of implemented solution at each location.
 - System operational procedure manuals.

- On-line help
 - The selected vendor shall provide minimum three hard copies and two soft copies on (two different CDs) of the above mentioned manuals.
3. All administrative passwords related to entire software stack including but not limited to operating system, RDBS, middleware(s), ERP software, etc. should be properly documented and handed over to Department of IT, PCMC or the nominated authority on continuous basis. The ownership of all passwords, hardware base locking system (if any developed by the bidder), and keys will be solemnly of PCMC/PCSCL. The bidder will not have any right, in any form, on it.
 4. Selected vendor shall prepare and submit all the documentation before provisional 'Go-Live' and also ensure that a periodic revision of the documents to reflect any changes in the system and/or processes are also done and submitted to PCMC/PCSCL.
 5. Selected vendor need to design user manuals (documents/flash video/video) etc. covering end-to-end transactions relevant to the PCMC/PCSCL for various modules implemented to assist users in English and Marathi.
 6. Whenever changes are suggested by PCSCL/PCMC in functionalities of any IT application, the changes need to be documented properly. The record of such changes should be maintained by SI and copies of such documents should be submitted to PCSCL/PCMC in hard copy and soft copy as well.

2.5.9 Ownership and Licenses

The ownership of all software developed/customized/configured/procured and related documentation for the project would always lie with the PCMC/PCSCL. All licenses procured related to project have to be in the name of PCMC/PCSCL. All the licenses should be perpetual. After the completion of O&M phase, PCMC/PCSCL doesn't have to procure any licenses to run the system effectively. All members of SI will unconditionally hand over all the licenses, hardware, software, mobile applications etc. required to run this project to PCSCL/PCMC

2.5.10 Intellectual Property Rights

1. PCMC/PCSCL shall own and have a right in perpetuity to use all newly created Intellectual Property Rights which have been developed solely during execution of this Contract, including but not limited to all processes, products, customizations, specifications, reports, drawings and other documents which have been newly created and developed by the SI solely during the performance of services and for the purposes of inter-alia use or sub-license of such services under this Contract. All documentation and configuration items such as scripts, code, queries etc. developed by the SI shall be property of PCMC/PCSCL. The SI should create a repository of such resources and provide access to the PCMC/PCSCL. The SI undertakes to disclose all such Intellectual Property Rights arising in performance of the services to the PCMC/PCSCL and execute all such agreements/

documents and file all relevant applications, effect transfers and obtain all permits and approvals that may be necessary in this regard to effectively transfer and conserve the Intellectual Property Rights of the PCMC/PCSCL.

2. If PCMC/PCSCL desires, the SI shall be obliged to ensure that all approvals, registrations, licenses, permits and rights etc., which are inter-alia necessary for use of the goods supplied/installed by the SI, is acquired in the name of PCMC/PCSCL, prior to termination of this Contract and which may be assigned by the PCMC/PCSCL to the SI for the purpose of execution of any of its obligations under the terms of the Bid, Tender or this Contract. However, subsequent to the term of this Contract, such approvals, registrations, licenses, permits and rights etc. shall endure to the exclusive benefit of the PCMC/PCSCL.
3. The selected vendor's team shall ensure that while it uses any software, hardware, processes, document or material in the course of performing the services, it does not infringe the Intellectual Property Rights of any person and the selected vendor shall keep the PCMC/PCSCL indemnified against all costs, expenses and liabilities howsoever, arising out of any illegal or unauthorized use (piracy) or in connection with any claim or proceedings relating to any breach or violation of any permission/license terms or infringement of any Intellectual Property Rights by the selected vendor's Team during the course of performance of the services. In case of any infringement by the selected vendor's team, the selected vendor shall have sole control of the defense and all related settlement negotiations.

[**2.5.11 Integration of Applications/Software/Modules Envisaged by PCMC/PCSCL**](#)

1. The selected vendor is expected to propose a new solution in line with the functional requirements as specified in this document. But, there are certain Applications/modules; (independently developed by other developers) which will have to be integrated with the proposed solution to be developed by the selected vendor. Basic details of the existing applications are provided in section 2.13. Selected vendor may officially request PCMC/PCSCL officials to inquire any further details about the existing applications.
2. The selected vendor is required to study the requirement of the modules and propose an approach on the type and level of integration of the existing module with the proposed solution. All the efforts required for integration of existing modules with the proposed solution will have to be taken in to consideration by the selected vendor during the effort calculation and the same will have to be part of the commercial bid submitted by the selected vendor.
3. PCMC/PCSCL will not allow any deviation in this regards in the Commercial Bid submitted by the selected vendor and any such request by the selected vendor will eventually lead to its disqualification.

4. Some of illustrative interaction diagrams are provided. However final to be processes will be discussed in detail during implementation phase which vendor has to get approved from PCMC/PCSCL.

2.5.11.1 Illustrative process for obtaining Sky Sign license

Refer Page No-334

2.5.11.2 Illustrative process for obtaining New Water Connection

Refer Page No- 335 and 336

2.5.11.3 Illustrative process for Monitoring construction of new roads

Refer page No-337

2.6 Scope for Business Process Re-engineering (BPR)

The PCSCL wishes to embark upon a process reengineering for PCMC, which will streamline the business processes and ensure consistent and speedy citizen services. The Scope of the System Integrator under Business Process Re-engineering would include, but not limited to:

1. To study the current processes of PCMC for all departments and offices
2. To devise changes in processes like Administration, Accounting, Asset Management, Project management etc.
3. To devise strategies for enhanced citizen services and citizen experience.
4. Review of role of each operating unit to arrive at an optimum balance between services and operations activities.
5. Increasing Digital Transactions. Strategies for optimum utilization of self-service kiosks.
6. Strategies for improving digital work flow. Review and redesign work flows and document flows at all offices. Digital/ Automated generation of Reports.
7. Build a robust tracking and monitoring mechanism of all transactions including complaint, applications, grievances etc.
8. Define Service Levels for all activities

The scope of BPR is limited to the activities getting covered under this project.

2.7 Scope for GIS

2.7.1 Geospatial Database Management

- 1) The Successful Bidder shall propose and develop a comprehensive GIS data model and normalize it as per the proposed system requirements.
- 2) The Successful Bidder shall be responsible to design a detailed structured questionnaire to capture required attributes / data. Based on the approval received from PCMC/PCSCL, the Successful Bidder shall initiate the data creation/ update process.
- 3) The Successful Bidder shall suggest on ways to improve PCMC/PCSCL operations to populate the GIS data base easier and more accurate.
- 4) The new GIS data model should be designed considering the requirements of entire organization to support database and application integration with Building Plan Approval System, Solid Waste Management System & Vehicle tracking System, SCADA, Tree Census etc. The integrated modules should seamlessly update the GIS Database in real time and vice-versa.

2.7.2 Preparation of GIS Base Map (2D and 3D)

The selected bidder is expected to provide technical and management support during the planning, design and implementation phases of GIS base map preparation activity as described below but not limited to, for satisfactory performance of the services within the Contractual framework. Create 2D and 3D [Digital Elevation Model (DEM), Digital Terrain Model (DTM) with

city profile] GIS based map of the city from High resolution Satellite Image and typical GIS survey Methodology and integrate that with the various ERP modules.

One of the objectives of the project is to develop a detailed a large scale (1:2000) GIS Base map for the Pimpri Chinchwad Municipal Corporation that is interpretation and digitization of all physical features from high resolution geo-referenced satellite imagery. The digitization process shall include vectorisation, symbolization, layering, edge matching, topological integrity. The preliminary interpreted map should be ground verified and the final map is to be prepared by incorporating the ground truth data.

2.7.3 Procurement of Satellite Imagery:

During first year of implementation, PCMC/PCSCL will provide satellite image to the successful bidder, however, the SI has to geo-reference the images as per the criteria mentioned in section 2.7.4 and 2.7.5. The Successful Bidder shall provide technical support to PCMC/PCSCL in subsequent Procurement and Processing of the latest high resolution images for PCMC/PCSCL as per the configuration suitable for PCMC's/PCSCL's use. The latest available image should be procured after every 6 Months (i.e. twice in a year) and the cost should be borne by SI. The image should be latest cloud free ortho rectified stereo pre-processed with resolution (suitable for PCMC's/PCSCL's use) on WGS-1984 UTM projection with Multispectral Band, PAN Sharpened. (The current area of PCMC is approx. 184 sq.km. which may increase to 250 sq.km in coming future.)

2.7.4 DGPS Survey & Geo Referencing

Geo-referencing of satellite imagery using sufficient number of Ground Control Points (GCPs) collected through Differential Global Positioning System (DGPS) survey; Geo Referencing and Geo-coding of data should be on WGS-84 with projection on UTM. GCPs should be selected at well-defined sharp points both on the ground and on imagery. The Successful Bidder/SI Should is responsible to conduct DGPS Survey when required for Image Geo Referencing within Project

2.7.5 Ground Control Points (GCPs) Standards

- I. Survey method used for GCPs should be Differential GPS Survey (DGPS)
- II. At least one GCP for every 1 sq. km (evenly distributed over the PCMC area)
- III. GCP available should be overlap of images.
- IV. GCPs must be clearly visible
- V. The position of GCPs should be on the non-variable features.
- VI. Base point should be captured for at least 8 hours while other DGPS points should be captured for the duration of at least 2 hours.

2.7.6 Digitization and Map Preparation

- a) The Successful Bidder/SI shall Design of proper grid and projection (UTM-WGS 84) for the PCMC limit. The Successful Bidder/SI shall prepare a Grid of 1Km x 1Km for positioning Pimpri Chinchwad Municipal Corporation with respect to its Geographic Location. These

grids then further shall be divided into 250m x 250m scenes for future usage like Map Book creations, Smart Asset ID creation etc. and future analysis. All the grids and scenes shall have unique IDs.

- b) The Bidder/SI shall prepare an up-to-date large-scale base map (Scale 1:2000) of entire PCMC using high resolution satellite imageries. The Bidder/SI shall then prepare a new GIS Database as unified Geo-spatial Data with infrastructure details.
- c) The Successful Bidder /SI shall conceptualize, design and develop Standardized PCMC Data Model based on national and global standards for storing the spatial & non-spatial data. The Successful Bidder/SI shall modify the data model and update the same with the help of detailed round of discussion with each concerned department officials.
 - Standardization of Regional Coordinate System and Datum
 - Should support horizontal and vertical projections
 - Designed Data Model should be based on global best practices where all different types of Spatial & Non-Spatial Feature Datasets & layers, Annotations, Relationships, Rules, Cartography etc. can to be organized.
 - Data Model should provide expandable schema to integrate available MIS parameters from various data sources like Civil Department, Education, Health, Water Supply, Drainage & Sewerage etc.
 - Designed Data Model should promote Standardization of Cartography and should provide provision to store Rules, Relationships, and Tables etc.
 - Data Model should support and store different types of data formats like Vectors, Rasters, Time Series, Static documents and dynamic datasets.
- d) The Successful Bidder/SI shall use proper tools to create the data model. The final data model shall be approved by the PCSCL and before proceeding further the data model needs to be finalized.
- e) All features like Buildings, Roads, Road Centerline, Bridges, Culvert, Tunnel, Flyovers, foot Bridge, Railway, Parks, Gardens, Divider, Sports, Traffic Squares, Water body (River, Lake, Pond, Drainage, Canal etc.), Land use, etc. should be extracted from imagery through on screen / Heads on digitization technique. All the above digitized features is to be preparation and updation of base map through field survey. Preparation of field survey form for each of the layers to be generated as defined in the annexure I.
- f) All features should be collected along with the necessary attributes. In the case of digitization, the data is checked for dimensional accuracy, completeness, displacement, edge matching, symbology, and layering.
- g) The Successful Bidder/SI shall while doing the digitization, a special care of data Correctness to be taken like undershoots/overshoots; dangling vertices shall get removed in the process.

- h) Once the data model is finalized, the Successful Bidder/SI shall give the details of the data model diagram (Entity-Relationship Diagram) to PCSCL for future references or for any modifications in future
 - i) The Successful Bidder/SI shall take care of the changes in the Data Model as per the requirements from the PCSCL/PCMC and shall maintain the changes history for the entire period, the Successful Bidder/SI is working with PCSCL under the contract.
 - j) The Successful Bidder/SI shall then prepare a new database using the existing Database available with the departments, as unified Geo-spatial Data with infrastructure details.
 - k) The Successful Bidder shall be responsible for collecting required data from the respective departments and authorities. PCMC shall provide administrative support as and when required.
 - l) The Successful Bidder shall perform all related tasks to make sure that legacy data is successfully migrated to standardized data models. The successful bidder must perform the analysis of the data that needs to be converted / migrated, prepare and submit a plan for the conversion/migration, and also deliver utilities and programs to achieve the conversion/migration. These tasks shall include;
 - i. Data scrubbing: Flag & notify PCMC of any errors detected in legacy data, assist with corrective actions as required, add any necessary information in the attribute fields not found in legacy data
 - ii. Data conversion: Convert data to the standard format to be used in the new data model
 - iii. Data migration: Migrate data to the new data model
 - iv. Data operability: Ensure migrated data is bug free and fully operable
 - v. Meta data: Assist PCMC with formulating a comprehensive and consistent metadata standard which complies with industry standards. Most features do not have existing metadata. Identify and flag gaps and inconsistencies within metadata and assist the PCMC with completing the data.
 - m) The Successful Bidder/SI shall also integrate information of utilities features such as street lighting, water supply line, sewerage network, wastewater, telecom, electricity, gas and storm water drain as layers with base map based on availability of data with the concerned departments.
 - n) The Successful Bidder/SI shall also be responsible to integrate all details of town planning schemes in terms of spatial data viz. Survey Map, Original Plot, Final Plot, etc. and non-spatial data like F- form, B-form etc. with the proposed system based on availability of data with the concerned departments.
 - o) The digital map data shall be GIS compatible. Each map object shall be defined uniquely by its feature code and symbology (point, line, and polygon) and should be approved by PCSCL/PCMC, concern department and the authorized agencies of PCMC/PCSCL.

- p) The Successful Bidder/SI shall prepare a final base map incorporating the data collected, processed and digitized. Hard copy base maps are to be prepared at 1:2000 as and when required during the project
- q) The Successful Bidder/SI should be responsible for updation of GIS Data and analysis as per change detection technique within contract period. The change detection reports should be sent to concerned departments.
- r) The System Integrator will be responsible for continuous updation of base map during the project.
- s) The Successful Bidder/SI shall also be responsible to publish web map Using Scale Visibility based on zoom level and tiled map technique with Proper Symbology.

2.7.7 Data Quality Assurance and Quality Checking

- a. Process collected Data, undertake necessary Quality Assurance (QA) and Quality Checking (QC) activities and remove errors
- b. Prepare Comprehensive Database including spatial and associated attribute data and based on geographic coverage, richness and accuracy
- c. Post QA and QC, prepare and submit shape files and DWG of all created database features.
- d. Post QA and QC, handover the complete set of base map data in GIS Enterprise database Format
- e. The agency would be responsible for the quality digitization conferring to the best standard prevailing in the industry, finalization of data layers and submission of digital files to PCMC.

2.7.8 Outputs and Deliverables

The bidder should be responsible for all output and deliverables. It is very important to note clearly and in detail the exact outputs required and what they should contain. The desired outputs & deliverables are shown below.

- **Satellite Data**
 - 1) Rectified and mosaiced & Tile wise satellite data along with GCP file.
 - 2) Soft copies of images (mosaicked) in Geotiff and JPEG formats.
- **DGPS Survey**
 - 1) The processed data of the DGPS survey with a photograph of each GCP with monument
 - 2) A neat sketch of each DGPS point showing the location on A4 size drawing
 - 3) Complete DGPS survey report
 - 4) The Point Location should be shape file and drawing/CAD format.
- **Base Map**
 - 1) Digital base map of all the layers with attributes, it should be compatible with GIS software.
 - 2) Digital data of base map in shape file and DXF/DWG file
 - 3) GEO PDFs of the suitable scale base maps depicting all the layers

4) Bidder must submit all the reference data (Hardcopies) used during the base map

- **Other Deliverables**

- 1) Surveyed Data in a excel/spread sheet format
- 2) Any other files prepared for integration into GIS

2.7.9 Design, Develop and Implement GIS Portal

2.7.9.1 GIS Portal for Internal User

The successful bidder would require to design and customize the Geospatial mapping engine with different functionalities that would be required by PCMC.

1. The Enterprise Web GIS application shall be accessed by PCMC staff within the PCMC
2. Layer and data security – Each PCMC user shall have a personal username and password to control access to data and layers.
3. The Successful Bidder shall assess the integration requirements during the functionality requirement study and design a scalable architecture to provide multiple user interfaces (UI) for multiple instances or multiple users.
4. Recommend and implement a system for Global Unique Identifiers (GUID) for all spatial features.
5. The applications designed on the map engine should be compatible and accessible from any device, any operating system and any browser.
6. To enable interoperability MSI to ensure that the Map Engine is compatible to publish OGC certified services.
7. It shall have User Management component for defining user roles to control the access of tools and database as per PCMC's requirement.
8. It shall have multi-lingual (including English & Marathi) interface
9. It shall have provision to generate custom reports. The total number of reports and types shall be finalized during System Requirement study phase.
10. It shall have a provision to store audit trail of user activities performed on the application.
11. Shall be compatible for accessibility from any device (i.e. Mobile, Tablet and Laptop)
12. Independent of Operating Systems and Internet Browsers.
13. Shall support One-Web functionality
14. System should be flexible to accommodate new/additional pages/integrations and should allow for changing the interface template as and when required by the PCMC.

2.7.9.1.1 Internal users of the Proposed GIS Application

Details of the approximate usage of the proposed GIS application:

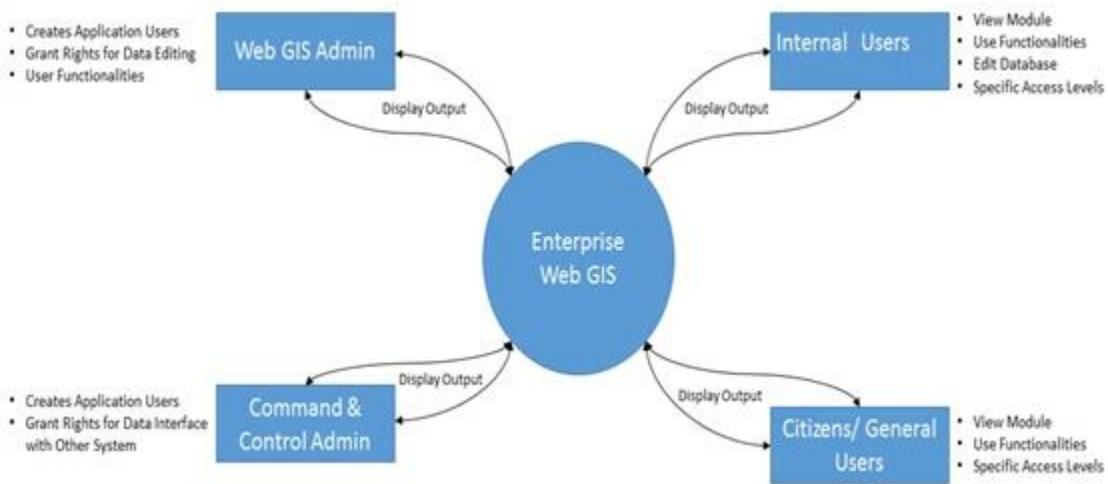
- Minimum No. of users on intranet viewing spatial data through PCMC web portal – 1000
- Minimum No. of users on intranet simultaneously viewing spatial data through PCMC web portal – 25%
- Minimum No. of users on Intranet simultaneously involved in editing spatial/ non-spatial data-10
- Minimum No. of users on Intranet involved in Geo Spatial Data Analysis(Spatial/Non-spatial) –200

- Minimum No. of users on Intranet simultaneously involved in Data Analysis etc. – 25%
- Minimum No. of users using mobile application for survey, project monitoring etc. –700
- Minimum No. of users using mobile application simultaneously for survey, project monitoring etc. –25%

2.7.9.1.2 Design Overview

The Enterprise Web GIS system envisioned as a confederated system of data provider and users with a centralized coordination function supplied by an administrative body (PCSCL/PCMC). The proposed Enterprise Web GIS should be hosted on hardware in premises.

The Enterprise Web GIS application will play a key role in system integration and ensuring standardization of spatial and non-spatial data.



2.7.9.1.3 Design Elements

This following section provides demarcation of functionalities required for Web GIS.:

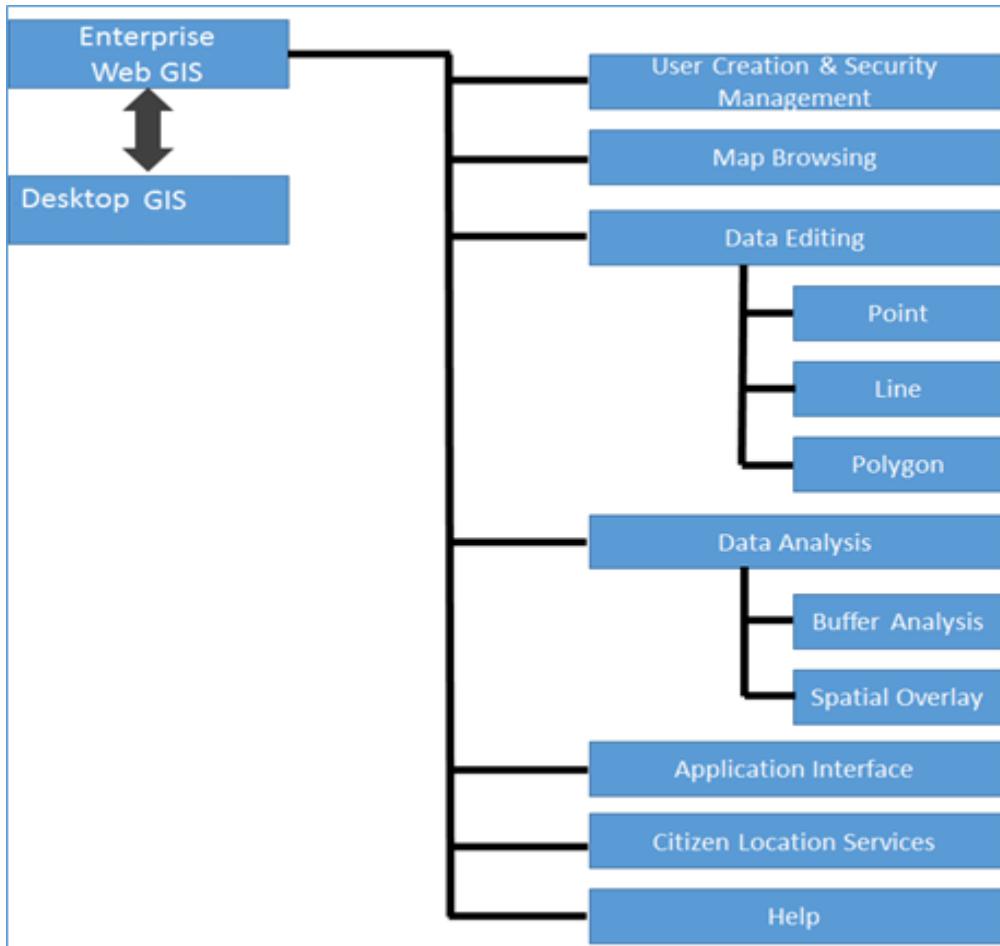
1. Web GIS Application Module
2. 3D GIS module
3. System Integration Module
4. Online Mapping Gallery

2.7.9.1.4 Functional Requirements of Web-GIS Application

The Enterprise Web GIS applications mainly covers the core and basic functionalities:

- I. User Creation and Security Management
- II. Map Browsing Module
- III. Data Editing Module –GIS Cell
 - a. Point
 - b. Line
 - c. Polygon
- IV. Data Analysis Module
 - a. Buffer

- b. Spatial Overlay
- c. Network
- V. Application Interface
- VI. Citizen Location Services
- VII. Generating Reports
- VIII. Help File Creation



2.7.9.1.4.1 User Creation and Security Management

This is an on premises hosted module that will facilitate to create, delete & modify different Enterprise GIS Users within PCMC. This module defines requirements for the administration, configuration, and operation of the Enterprise Map Engine. This module will be accessible only to System Administrator while all other modules/sub modules should be accessible to individual users based on the access rights provided to them by System Admin. The application should have following functionalities:

- a) Create Application Interface
- b) Create admin right and grant suitable viewing/data editing rights
- c) Monitor access rights to user departments

- d) Maintains Application Security
- e) Maintain Interface with PCMC Internal Departments to resolve technical issues
- f) Should allow Active Directory, LDAP, or other security source
- g) The solution must have LDAP user level Area of Interest based restrictions as per role, administrative boundaries etc. Administrative boundaries must be dynamically derived from Layers available in database as Zone Layer, Ward Layer etc.
- h) Users defined in LDAP should be able to perform only actions assigned to them. Users will editing right should be able to edit data while users with Approval rights must be able to validate the data
- i) Should allow administrator to configure security to map service, layer and attribute levels
- j) Should allow group-based security policies
- k) Should not require opening of any special protocols for connecting the user client to the web/application server used by the package. All communication should be on HTTP or HTTPS.
- l) Any changes to data should be recorded in a separate table and should be stamped with the identity of the user/program and the date / time of the creation/change.
- m) Should be possible to audit users at the form level, user level, application module level and at the organizational role level.
- n) Should provide reports on user activity based on the role and the application that was used.
- o) The system should support configurable password policies including;
 - Password expiry
 - Password complexity
 - Password history and reuse policy
 - Forced password change on first log on
 - Capability of self-service reset of passwords in case of forgotten passwords or locked accounts.
- p) Should support security system with a full-fledged Role Based Access Control (RBAC) model

2.7.9.1.4.2 Map Browsing

This module should mainly comprise of the basic map navigation tools and the most essential tools for identification of features and attributes. Following are some of the map browsing functionalities

1. The portal (2D and 3D) and Desktop must operate on a common database and must allow authentication against LDAP users.
2. **Zoom in:** The user will be able to select a particular portion of the map by drawing a rectangle on the map specifying the extent into which the map will be zoomed in to see the features more closely and in more detail.
3. **Zoom out:** The user will be able to select a particular portion of the map by drawing a rectangle or just clicking on the map to see the map at a smaller scale.
4. **Full view (Full Extent):** The user can view the map in full extent after zooming in or zooming out at different scales
5. **Pan:** The user will be given an option to pan the map, which will be possible if the entire map is not fitting into the screen, i.e., after the user has zoomed in to the map at a certain extent.
6. **Identify:** The user will be able to view attribute information of the feature of interest.
7. **Find:** User can key in the desired area and the application will highlight the area on the map.
8. **Zoom to Previous extents (Back)** - The user will be able to go to previous zoom level (least 10 previous extents)
9. **Zoom to Next extents (Forward)** - The user will be able to go to Forward zoom level (least 10 forward extents)
10. **Zoom to Selected Features-** The user will be able to zoom a particular selected feature
11. **Measure distance/area:** Two options will be provided to the user. The user will be able to measure the area and to measure the distance
12. **Refresh Map:** All the selected features of the active map layer will be cleared of the selection, by using this tool.
13. **Select Feature:** User will be able to select the features of active map layer
14. **Clear selection:** User will be able to clear selection that is there on map
15. **Activity indicator:** Display notification while map/ data is being processed
16. **Scale input box:** allow user to enter representative fraction scale for dynamic services - For cached services, scale box should contain dropdown menu of available cache scales (levels of detail)
17. **Show/ hide co-ordinates :** Show/hide mouse coordinates
18. **Print:** The map can be printed in its current extent as viewed in the map window. The user would be presented with a layout for printing
19. **Descriptive Map Information Tool:** When the mouse cursor hovers over each map feature, information should be shown based on the feature's attributes. Functionality should be available for all feature classes; should be able to display a combination of attributes and should not limit the number of features that can be included with the map tool. It should allow user to turn ON and OFF as needed.

20. Legend : User will be able to view all Layer List (index) with proper symbology
21. Layer On / Off : User will be able to select on/off Layer

2.7.9.1.4.3 Data Editing and Auto Data Conversion Module

This module will provide the data editing capabilities including new data addition and existing data updation for geographical features and its attributes. This module will provide user to edit GIS Features. The users shall have online editing facility. There shall be mechanism where the edited data can be quality checked and updated in the GIS database.

Following are the steps for editing any features through Web GIS-

1. **Add Features:** This module will provide user to add point, line, and polygon along with its attributes. New features added will by default take Unique ID besides certain other attributes like State, City, PIN.
For Ex: Adding a new building polygon feature along with attributes whenever a new building or construction takes place at selected location.
2. **Delete Features:** This module will provide user to delete features.
For Ex: Deleting the feature along with its attributes for a building polygon feature.
3. **Move Features:** This module will allow user to move features.
For Ex: Moving a building polygon feature along with its attributes to a new location.
4. **Modify Features:** This module will provide user to reshape and modify features and associated attributes.
For Ex: Modifying the shape as well as altering the attributes of a building polygon feature.
5. **Select Feature to Edit:** This will provide user to select features for editing as well as for viewing. It could be done by the following steps,
 6. Feature Locate by Manual Browsing
 7. Feature Locate by Entering Lat and Long
 8. Feature Location by search criteria.
9. **Identify Feature to Edit:** This will provide user with a tool to view data of a feature to be edited on clicking or selecting it.
10. **Save Feature Data:** This will provide user to save geographic feature data and attribute editing done.
11. **Audit Trails:** This module should allow multiple editors to alter the same data in an enterprise or workgroup database without applying locks or duplicating data. This will help different departments or users to edit the data without disturbing the default version. Users will be able to view the changes after reconciling and posting them to an ancestor version.

2.7.9.1.4.4 Search Module

Should allow users to search features by both pre-configured and dynamic based on unique values as follows;

1. Following search option should be available
 - Search by Ward/Zone
 - Search by area
 - Search by Plot/ CTS Number
 - Search by Building Number
 - Search by Sector
 - Search by Parcel ID etc.
2. Should allow user to run the custom queries on-the-fly and save those queries for shared future use
3. Should allow user to run spatial query on multiple layers with spatial operators
4. Should also allow for a buffer to be applied to the search criteria allowing for features within a certain distance of the query feature to be selected.
5. Should have a tool allowing users to search and zoom to a location based on GPS coordinates
6. Should have facility to run combination of attribute & spatial query
7. Should have facility to auto-complete text boxes based on either feature attributes or linked records

2.7.9.1.4.5 Distance and Area Measurements

1. Should have distance measurements tool to allow user to measure the length of irregular shaped lines
2. Should have area measurements tool to allow user to measure irregular shaped polygons
3. Measurements should be shown using the metric and the imperial system. The ability to snap to the edge or nodes of the feature being measured is desirable.

2.7.9.1.4.6 Analysis Module

This module comprise of analytical tools such as spatial overlay, Network and buffer analysis to generate results. This module will also provide geo-processing functions that will be finalized at the time of SRS stage

2.7.9.1.4.7 Routing

This module will be capable of generating the route on providing from - To and Intermediate nodes. It should also be able to provide information about the route and node location. Creating a route can mean finding the quickest or shortest route with node locations, depending on the impedance chosen. If the impedance is time, then the best route is the quickest route. Hence, the best route can be defined as the route that has the lowest impedance, or least cost, where

the impedance is chosen by the user. Any cost attribute can be used as the impedance when determining the best route.

The system will conduct a network analysis of linear features in finding the best route through a series of nodes. This module will generate geometric network based on the linear feature data. The module will develop functionality that can conduct an online QA/QC of the network features and attribute data collected through survey and data conversion/ migration

2.7.9.1.4.8 Thematic Mapping

Should allow user to generate various thematic maps based on the attribute information available in native databases or through join table feature

2.7.9.1.4.9 Visualization of Temporal Data

1. Should have facility to visualize time aware layers
2. Should allow user to add temporal data layer on-the-fly

2.7.9.1.4.10 View of Images

1. Shall have ability to visualize the Buildings, Properties, slum hutments, road features etc. data.
2. Shall have a provision to resize the map window size for better visualization as when required
3. Shall allow user to measure the dimensions of Buildings, Properties, slum hutments, road features etc. with user defined measurement units

2.7.9.1.4.11 Printing

4. Should have ability to print maps to a printer/plotter with the selection of paper size (A4, A3, A2, A1, A0, Letter, Tabloid, custom size etc.) and page orientation (landscape or portrait)
5. Should have print preview option
6. Should be able to handle and process any redlining / markups of the map.
7. Should have ability to export the map to a standard image format (BMP, TIF, JPEG and PDF file)
8. Variety of templates must be available which allow the user to add a custom map title and to decide which map elements (north arrow, scale bar, overview map, legend, etc.) will be visible.
9. Print date and time should be automatically added to output at application runtime
10. Legend should be automatically adjusted based layers displayed in print area

2.7.9.1.4.12 Add Map Layers

1. Should allow user to add GIS map layers
2. Added new map layer should be overlaid on the existing map

2.7.9.1.4.13 Hyperlinks

1. Should have ability to hyperlink to document, images, avi files and PDF files with the feature's attribute

2.7.9.1.4.14 Emailing

1. Should allow user to Email map as an attachment

2.7.9.1.4.15 Reporting

1. Should provide predefined report templates
2. Should allow user to create custom reports using SQL query interface and save those reports for shared future use
3. Should allow user to generate reports on selected features
4. Should be able track the history of reports a user has performed.
5. Should be able to export reports into PDF and MS Excel
6. Should allow use to select different date ranges to view report information
7. Should allow user to print reports
8. Should allow user to create custom reports using attribute & spatial query

2.7.9.1.4.16 Web-Editing

1. Support role based multi-user editing access and editing work flows.
2. Should allow authenticated user to validate spatial feature
3. create/delete/edit/upload through Web-GIS application
4. Should allow administrator to Accept/Reject the changes made and a log should be created for the same.
5. Should have easy-to-use map editing tools
6. Should allow user to divide the polygon or polyline
7. Should allow user to amalgamate the two or multiple polygons or polylines
8. Should allow administrator to configure the edit/view security at the level of feature attribute

2.7.9.1.4.17 Select Feature

1. Should be able to select features by clicking on or by drawing a polygon around the feature
2. Should allow user to generate URL for current view extents, visible layers, and active selection
3. Should allow user to email the generated URL
4. Should allow user to export data into KML/KMZ and Shapefile

2.7.9.1.4.18 Bookmarks

1. User should be able to save a map view and be able to return to that exact view at a later date.
2. Should have ability to email the current view extents, visible layers, and active selection in the form of image

2.7.9.1.4.19 Application Error Reporting

1. Should allow user to report errors, with a screen capture, back to the GIS Coordinator and helpdesk support center

2.7.9.1.4.20 Performance Dashboard

1. Should provide easy-to-understand, easy-to-use reports that use appropriate infographics (Charts) to present key indicators from the GIS database, to provide overall performance information to the PCMC senior officials and decision makers.
2. Should have a GIS-enabled real-time dashboard to display dynamic charts & graphs
3. Should have easy to use, interactive facility for management to generate ad-hoc reports.

2.7.9.1.4.21 Mobility/In-Field Usage

1. Should allow remote access on Mobile & Tablet devices
2. Should allow offline viewing and data updating capabilities and should allow data to be synced with the database once the device is online.
3. Should have ability to configure security to assure that only authorized persons are allowed to sign in
4. Should have redlining capability. Capability to Capture the boundary of the surveyed location with the co-ordinates
5. Should allow capturing the Geo-Tagged and time stamped pictures
6. Should support One-Web functionality

The results of the mobile/ in-field service should be integrated with the workflow of the Enterprise Web GIS System.

2.7.9.1.4.22 Application Builder

Should allow users to easily build applications on the web as per users need. Should include powerful tools to configure fully featured HTML apps. Should provide extensible framework for developers to create custom widgets and themes.

The Application builder should have following key features:

1. Create HTML/JavaScript apps that work on desktop browsers, tablets, and smartphones.
2. Ability to integrate with the GIS application Online and GIS Portal platforms.
3. Build the apps using ready-to-use widgets, such as query, geo-processing, print, and more.
4. Create custom app templates.

Extensible framework for developers to create widgets and themes.

2.7.9.1.4.23 Bigdata

1. Enterprise GIS application should have ability to filter and organize big data so it can be analyzed and visualized from a geographic perspective. Big data connectors to enterprise GIS engine should be able to handle not only massive volumes of data but also data of disparate types.
2. Should have connectors that pair with many familiar big data platforms from recognized technology leaders like IBM, Microsoft, SAP etc.

2.7.9.1.4.24360° Panoramic View

- a. Shall have ability to visualize the Property/Building/ Electrical Pole, Signals, Road Features etc. data in 360° view.
- b. Shall have a provision to resize the map window size for better visualization as when required
- c. Shall allow user to measure the dimensions of Property/Building/ Electrical pole, Signals, Road Features etc. with user defined measurement units

2.7.9.2 GIS Portal for Citizens

a) Navigation Tool Bar

- Pan View
- Refresh Map
- Zoom to full extents
- Zoom In
- Zoom Out
- Zoom to Previous extents (Back)
- Zoom to Next extents (Forward)
- Zoom to Selected Features
- Move up/down/left/right;
- Show/hide mouse coordinates
- Activity indicator - display notification while map/data is being processed

b) Shall allow user to visualize with following group of layers;

- Administration Boundaries
- Water Feature
- Transportation
- Location Based Information (Education, Community Services, Culture, Health/Family, Sports and Recreation, Emergency, Govt. offices, Health Services etc.)

c) Bookmarks

- Shall be able save a map view and be able to return to that exact view at a later date.
- Shall have ability to email the current view extents, visible layers, and active selection in the form of image

d) Distance and Area Measurements

- Shall have distance measurements tool to allow user to measure the length of irregular shaped lines
- Shall have area measurements tool to allow user to measure irregular shaped polygons
- Measurements shall be shown using the metric and the imperial system. The ability to snap to the edge or nodes of the feature being measured is desirable

e) Printing

- Shall have print preview option
- Shall be able to handle and process any redlining / markups of the map.
- Shall have ability to export the map to a standard image format (BMP, TIF, JPEG and PDF file)
- Shall have a variety of templates must be available which allow the user to add a custom map title and to decide which map elements (north arrow, scale bar, overview map, legend, etc.) will be visible.
- Print date and time shall be automatically added to output at application runtime
- Legend Shall be automatically adjusted based layers displayed in print area

f) Shall have provision for public announcement using RSS and web based announcement

2.7.9.3 Integration Requirements

- a. Shall have provision to seamless integration, which should not require any conversions of data and services available through various National / International Sources like ISRO, Bhuvan, NASA, NOAA, USGS etc.
- b. Shall have provision to publish and access Open Standard based OGC compliant services.
- c. The proposed system shall be capable to being integrate through APIs(Base maps, Various Query, POI Search) with any other system that may be introduced in future.
- d. The APIs should be able to integrate with both Web and Mobile App applications as and when required with prior approval of PCSCL
- e. Successful Bidder / SI shall also be responsible to integrate the proposed GIS system with state line department applications as and when required.
- f. Successful Bidder/SI shall conduct analysis of integration points and provide a detailed report and get approval from PCSCL before integration. PCSCL shall help Successful Bidder/SI to get the details from each line department and facilitate to get the required information on time.

2.7.9.4 Online Help

Should have online help files and user manual with use cases for the end user

2.7.9.5 Mapping Gallery

1. Shall support to build mapping collaboration and data exploration platform with different thematic interest within PCSCL and other stakeholders.
2. The Successful Bidder/SI shall help to manage Meta data and links to static documents and databases based on National Data Sharing and Accessibility Policy (NDSAP) dated 17 March 2012, India's open Government data platform.
3. The mapping gallery shall provide options for creating desired maps, charts with advanced data analytic function, support device independent infographics and interactive 2D and 3D maps with customized reports

4. Provide smart informatics from the real time sensor platform to manage and aggregate real time data from infrastructure, virtual sensors from data published from the web, and social network feeds.
5. The Mapping gallery hosted on the enterprise Web GIS shall offer modular components viz. Content Management System, Data Management System, Sensor Data analytics, Community/Events Management System supporting Semantic Web standards using Resource Description Framework(RDF)
6. Standardization and Interoperability – The Enterprise Web GIS shall be OGC (Open Geospatial Consortium) and SWE (sensor Web Enablement) compliant. The system shall harmonize the sensor data measurement and fusion process in real-time and publish them on the fly via standardized OGC web service interface such as web feature service (WFS) and web Mapping service (WMS).
7. Landing site for hosting raw data using Big Data services, analyze data contents using mashups and provision for application interface to access time series data from world wide data sites.

2.7.10 Development, customization and Integration Service

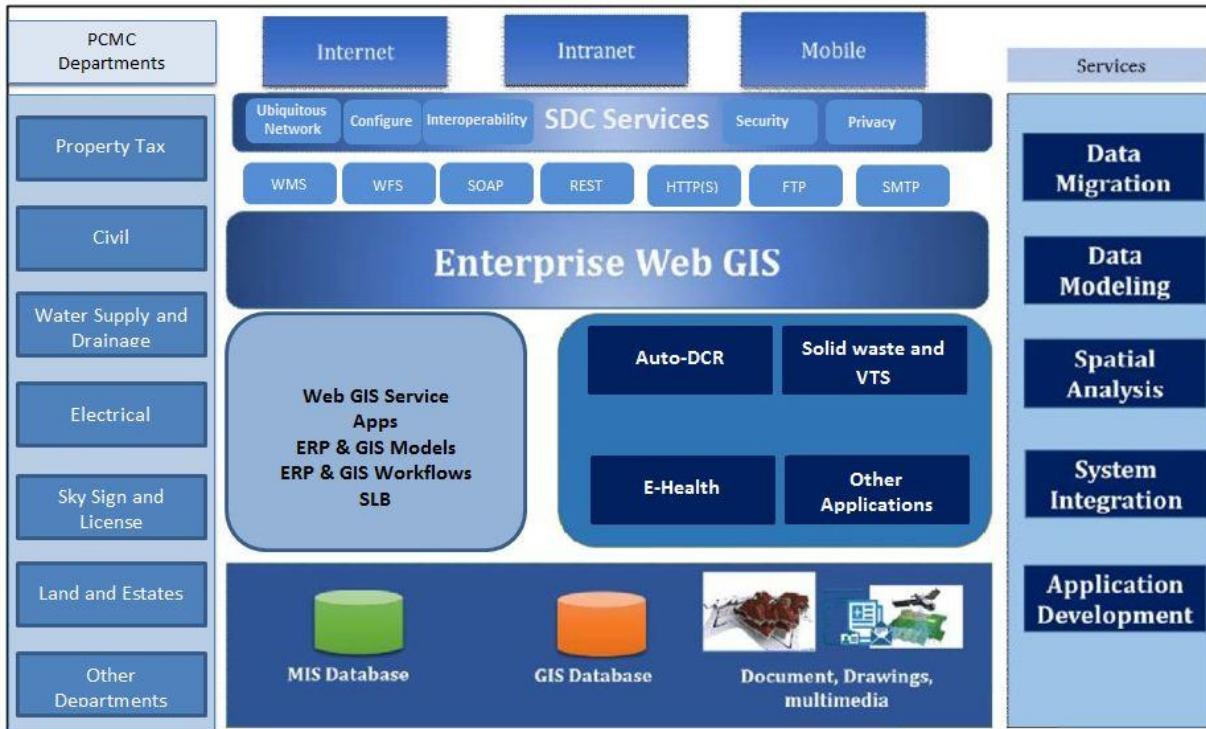
1. The bidder should make provision for development, customization and integration service within the Enterprise Web GIS Map Engine.
2. Direct integration will be sole responsibility of bidder, creating an integration approach through integration service bus for message delivery, services based on standards such as SOAP, HTTP and WCS. The integration service bus should be designed to promote high throughput, compatibility, flexibility and scalability. Specific functionalities need to be configured for data retrieval from Web-GIS. Data sent from external applications should leverage integration framework and direct database calls.
3. Should provide a simple and easy to manage integration architecture for all external applications.
4. System should be able to toggle between Web-GIS and external applications. A common dashboard page should help to navigate between GIS and external applications.
5. A user should be able to view the maps and attribute data (in limited form) from external applications as well as from the Web GIS window and perform basic functionalities of external applications through the web-GIS window and vice-versa
6. The Other applications integration with Enterprise Web GIS application with Building Plan Approval System, Solid Waste Management System & Vehicle tracking System, SCADA etc. The integration module should seamlessly update the GIS Database in real time and vice-versa.

2.7.11 Coding & Integration

1. The design shall be decomposed to responsive HTML's which will be compatible with the latest version of browser & all smart devices
2. The applications should be browser independent
3. The application is expected to realign and fit to the smart mobile devices (iPad, iPhone, Android etc.).
4. The Solution should be compatible with various open standards and technologies and should not restrict PCMC/PCSCL in using the Solution data for any other applications.

2.7.12 Overview of Enterprise Web GIS Solution Architecture

The illustrative and logical representation of the architecture for PCMC's Enterprise Web GIS solution is displayed in Figure. The bidder should propose their architecture in line to the requirements mentioned below. The proposed architecture should adhere to the latest industry standards in implementation, security, and data privacy. The proposed overall architecture should support Service Oriented Architecture (SOA) and RESTful web services that should be horizontally and vertically scalable on the centralized platform. The solution shall integrate future Web GIS solutions and various survey, 3D GIS, Mobile GIS initiatives within PCMC. The solution designed by the bidder should be responsible of managing a centralized repository of all spatial information comprising of transactional and static metadata. The system will be designed to extend the Web GIS services within PCMC Departments and other statutory agencies for sharing the spatial information and data within PCMC. The solution will manage user registration details, privileges, access and authentication information, preferences and usability trends. Since the Spatial Information and Data is extremely sensitive, the solution has to ensure proper data security and maintain each user's (PCMC Department users, Statutory Agencies) data privacy. The Enterprise wide Web GIS solution should ensure that the user information and data cannot be disseminated, sold or utilized unlawfully by the bidder outside PCMC.



***The above image is just for representation. The SI is expected to prepare his own architecture suitable to solution*

Implementation of the Enterprise wide web GIS Solution will comprise of the following components:

2.7.12.1 Customized Application Stack

The customized application should:

1. Manage all the attribute, spatial data and collaterals including documents, drawings, manuals, etc. for each feature on the map.
2. Should provide a full proof Document version control, integrated workflow, security of collaterals and audit trails
3. Should have an intuitive Graphic user interface
4. Should allow solution in creation of functionality considering the current and future requirements. The mapping functionalities will be flexible to accommodate user needs and requirements.
5. Should have a globally accepted interfaces for Mobile, Email gateway, SMS gateway and payment gateway. The solution should be configured to leading gateway interfaces.
6. Should provide a Metadata management services that will predominantly cover the data-modeling and cataloging services. The customized metadata service shall also help in devising data management policies for transactional as well as static data for PCMC.
7. Should provide a flexible, versatile reporting tools for PCMC that should develop reports showing KPIs, metrics, trends and other statistics. The report tool shall provide status of

solution maintenance activities in various formats to support solution performance tracking, accountability and audit.

8. Should define each transaction and identify the data entry the application has created. Through a combination of discovery, query, locking, and transaction operations, users have access to the source data in a manner that allows them to interrogate, style, edit (create, update, and delete), and download individual instance.
9. Should provide online training in the form of help menu and ready reference to functionality functionalities at each module/page of the solution.
10. The customized Web GIS application instance shall be configured to each Departments of PCMC. The customization activity conducted by the solution provider for the Department instance should be horizontally replicable and scalable to accommodate new functionality or system integration.

2.7.12.2 Application Rights and Licenses

- 1) The Successful Bidder/ SI shall depute System administrator to monitor and provide access to Departments of PCMC and external stakeholders such as technical consultants, turn-key project contractors, research agencies, etc. who would be undertaking projects on behalf of Departments PCMC.
- 2) The Successful Bidder/ SI by way of provisioning of the solution, grants users access for Departments of PCMC as well as external registered users with unrestricted access to all the features of the complete solution including any offline / pre-activity / ostactivity features
- 3) The bidder should facilitate to all internal as well as external users of PCMC, including, but not limited to the following;
 - a. Comprehensive unrestricted access to all features of entire Web GIS solution
 - b. Unlimited iterations to drawings, maps and plans
 - c. No restrictions to store and access data from external, disparate data sources.
 - d. User Training for both internal & external users
 - e. Handholding of all users, in the form of Helpdesk Support, up-gradation of application and facility for inclusion of new functionality, etc
- 4) The Successful Bidder/ SI if proposes Such license if any to access, use the Software shall be:
 - a. Non-exclusive
 - b. Perpetual, fully paid up and irrevocable
 - c. Valid throughout India
 - d. Technical Support for a period of implementation phase and Operations & Maintenance for 5 years.
- 5) PCMC/PCSCL shall get absolute Intellectual Property Rights (IPR) for the customized portion of the solution. Apart from the solution Licenses, the bidder has to provision for

all licenses (perpetual) required for hosting and maintaining the software solution for the entire period of the contract including, but not limited to Operating System, System Software, Database, Application Software etc.

2.7.12.3 Core Web GIS Application

The Core solution should:

1. Manage all the digital content (Spatial Data, maps, drawings, attribute data, etc.) that flows in and out of the Web GIS solution through front end interfaces – internal and external users, and applications such as Building Permission Approval System, ERP, SCADA, Document Management etc.
2. Undertake one time migration of Desktop GIS data and CAD to Web GIS Map engine. The vendor should develop ETL tool to eventually process the CAD drawings and automatically upload the spatial and attribute data in Web GIS Map Engine. The ETL dashboard shall notify the user about the successful uploading process or generate alerts depending upon the non-compliance of data. The ETL tool/ rule engine will also upload the processed CAD drawing to Document Management System to be stored in versioned format.
3. Create a verification checklist and compliance report applicable for CAD-ETL tool/ rule engine for automatic conversion of CAD to GIS format.
4. Help in monitoring and channelizing the map content through Map Content service. It will process spatial and attribute data gathered from various SPAs, ULBs and from statutory agencies and generate dynamic MIS reports.
5. Define and standardize the workflows for data editing, redlining, online approvals, uploading data, etc through Enterprise Web GIS solution.
6. The Mapping gallery to assess the trend of development through satellite imageries, maps, attribute data within PCMC. The map engine should provide business intelligence tools for effective decision making process and link with urban development initiative of PCMC
7. Process the data gathered from various SPA projects and from ULBs and Statutory agencies, analyze the MIS database patterns and its corresponding layers using MIS/Reporting tool. This Web GIS functions also shall play a vital role in database integration with other systems (Building Plan Approval System, Solid Waste Management System & Vehicle tracking System, SCADA etc) and generate customized reports as required by PCMC and specified in the SRS (System Requirement Specification).
8. Ensure adherence with the thematic cartography, templates for maps and the Web GIS shall cover an enterprise Mapping and OGC data interoperability compliance framework. This framework generally consists standards and procedures, Governance (oversight), enforcement, monitoring (testing) and corrective actions reporting.

9. Configure the work flow, database, system management, incident management, authentication and security management. The configuration management shall help in diagnosing the application problem and scaling out Web GIS build solution
10. Automatically process alerts and generate notifications depending upon the data received through the solution
11. The hardware and software components configured for the computing and data processing systems must support latest computing standards for security, multicore architecture, parallel processing, distributed computing, and fast real-time processing
12. It should intelligently make quick decisions and take appropriate action in a time bound manner

2.7.12.4 Metadata Management and Shared Information

The Metadata Management and Processing System should:

1. Serve as a central platform for data sharing between PCMC and Statutory agencies. The static data shall be shared for analysis and effective decision making.
2. Serve as a central platform for all data related activities including data management, aggregation, normalization, and abstraction
3. Ensure high availability of all databases
4. Be able to provide customized data templates with data placeholders that will help application to tackle the current and future data requirements
5. To create Auto-detect database problems and auto fine tune them to ensure high performance
6. Optimize performance by identifying resource intensive procedures, generate alerts and take necessary action
7. Monitor key operational activities to identify and report any anomalous behavior
8. Monitor and frequently generate reports for industry standard KPIs (throughput, CPU utilization, availability of database, daily workload, service fulfillment time)
9. Aggregate and store stakeholder information and data of all the SPAs and statutory agencies
10. Normalize data by creating data placeholders in the data modeling framework
11. Abstract the data in a way that it can be leveraged simultaneously by multiple software integration components
12. Be able handle large volumes of data without resulting in undue delay
13. Be able to perform fact based and detailed analysis of various data elements based on historical trends
14. Be able to generate dynamic reports based on preset queries and also be able to generate dynamic reports based on various user defined query parameters. PCMC project team must have the capability to pick and choose reporting parameters, and get dynamic dashboard views based on the selected parameters

15. Should have a highly customizable Configuration management tool, powerful reporting engine to create batches for large reports
16. Should have a defined standard operating procedures for data retrieval, data configuration and security of data.
17. Should be responsible for the extraction of data from several sources, its cleansing, customization, reformatting, integration, and insertion into a data warehouse using the Extract, Transform and Load (ETL) tool
Adhere to latest industry standards related to data privacy and maintain confidentiality of PCMC data.

2.7.12.5 Network Security Layer

1. This layer is the physical network security layer consisting of LAN, Ethernet, Wi-Fi, fiber networks
2. The network security should be configured to support industry leading communication and open data standards
3. Should conform to latest industry standards for design, implementation, and connectivity
4. The network configuration platform should be modular and scalable to allow multiple types of networks and topologies to be implemented on the same platform
5. Should be scalable to accommodate future/advanced technological integration
6. Should have self-healing and self-diagnostic capabilities

2.7.12.6 System Security Layer

1. Should provide strong and reliable security for the entire solution
2. This layer must be monitored from the administrative user and shall provide a facility to isolate the solution in case of the breach. Should conform to the latest security standards
3. Should seamlessly integrate with, and be able to embed functionalities of external applications with the solution.
4. Should be capable of detecting denial of service (DDoS) and remediation
5. Should have sophisticated firewall, antivirus, content filtering, tracking, lockdown, and malware detection and prevention capabilities
6. Should provide additional security mechanisms like encrypted communication channels, virtual tunneling, etc.
7. Should have self-healing and self-diagnostic capabilities
8. Should be capable of recognizing network vulnerabilities and immediately send alerts to the admin user or dynamically fix them and send intimations to the admin user
9. Should detect an attempt to gain unauthorized access to the network, lockdown the infected areas, and immediately send alerts to the helpdesk/ admin user
Should detect data duplication and store more data in less space. The data should be restore without compromising its fidelity or integrity.

2.7.12.7 Presentation Layer

The presentation layer should:

1. Design a Geo portal with personalized, secure, customizable needs with flexible user interface and external collaboration functionality
2. Provide a user profile management for internal and external users
3. Manage all the digital content that flows in and out of the Web GIS solution and provide interfaces to external third party web integration
4. Build a mobile interface to undertake site survey, location tracking. In the subsequent phase the mobile interface should be able to notify alerts, status tracking and update.
5. Build an Integration Interface
 - a. The integration interface will be the logical umbrella layer that will virtually integrate and process information from ERP and other applications such as Building Plan Approval System, Solid Waste Management System & Vehicle tracking System, SCADA etc.
 - b. The Integration interface will be open platform to enable plug and play of software integration components like connectors, APIs, SDKs and adapters for communicating with external solutions, applications, and external interfaces (gateways, plug-ins, APIs) like third party shared services
 - c. Be a vendor agnostic, modular, scalable, flexible and adhere to open platform and leading industry standards. It shall comply to open communication standards, and data abstraction standards
 - d. The integrated open platform must be the overall management layer that logically facilitates communication between the physical networking layer, core computing layer, applications, external shared services, and the Client Presentation layer
 - e. Data from the various applications, devices, sub-systems, and external interfaces for each spatial feature will be normalized and abstracted in a way that it can be utilized by the integration interface to enable real-time communication.
 - f. This interface will also integrate data from solution wide functions like compliance, Governance, data Policy and SLA Management
 - g. The Integration Interface should consist of a Centralized Application Manager, which should integrate and manage all interfaces of related software applications and operate collectively and make informed decisions
 - h. Should have simple installation, configuration, updation, and maintenance capabilities
 - i. Should be able to monitor and manage single or multiple user with all groups mutually exclusive to each other in terms of access and view
 - j. Should be able to correlate two or more instances from multiple users of Web GIS solution and take appropriate actions

- k. Should be able to set customizable thresholds (lower and upper) for all system parameters, compare performance with threshold, and send notifications if the system parameters either exceed the upper limit or fall below the lower limit of the threshold
- l. Should integrate third party applications and external shared services without source code changes using software connectors like gateways, APIs, connectors, and Adapters
- m. Should be able to integrate with communication gateways i.e. mobile, email or SMS, to provide information or updates to intended audience
- n. Should be able to integrate with Payment gateways for conducting internet banking for paying online fees
- o. Should have the ability to perform root cause analysis and deep diagnostics in case of application failures and non-response from application
- p. Should provide real-time Incident management services to facilitate management of responses received
- q. The Integration interface should consist of an Application Utility Manager, which
- r. Should monitor, control, manage and analyze all functionalities within Web GIS solution
- s. Should have ability to set customizable solution performance thresholds
- t. Should monitor Web GIS solution and Data uploading and editing workflow and processes for detecting issues, bugs, abnormal trends, threshold breaches and respond as per user defined SOPs and provide early warning to reduce or mitigate the impact
- u. Should monitor integrated solution performance and capacity management
- v. Should monitor end-to-end transaction and performance of resource heavy use cases, failed transactions, application locks, database un-availability etc., and automatically generate corresponding reports
- w. Should have customizable dashboards to monitor and manage solution performance parameters
- x. Should have an inbuilt customizable reporting capability to dynamically generate solution performance reports based on user defined parameters

2.7.13 On Ground Survey

1. PCMC intends to engage competent agency to undertake GIS enabled Door-to-Door field survey of Properties spread across the PCMC. The Successful Bidder(s) shall be responsible to develop Mobile based survey application along with a Web application for monitoring and data analysis.
2. Survey PCMC area with terrestrial LiDAR (Ground) or equivalent to LiDAR technology to generate reference data for measurement. The SI shall capture sufficient pictures of each Property / structure available in Street/Lane through Panoramic Imaging equipment to provide 360 degree immersive visual image data to provide direct view of vertical faces to identify property type and uses (Commercial, Residential, mixed etc.) or any other method that can be selected by the Successful Bidder(s) for better result. These captured images shall be geo-tagged with the location of the Property to provide 3D representation view of the Property. Refer Annexure-8 for Specifications of LiDAR or equivalent to LiDAR technology. If SI is proposing survey through drone, then obtaining all necessary approvals will be complete responsibility of SI. **The SI shall make sure that all the approvals are obtained on time so that project timeline would not be hampered. If SI fails to obtain approvals, then survey shall be completed through LiDAR technology as mentioned in RFP as per quoted price in financial bid. PCSCL/PCMC will not be responsible for providing permission for operating drones during entire project duration.**
3. Ground Survey must also result into complete field data capture of all over the ground assets as mentioned in annexure-6 along with attribute data creation. The output must clearly provide details with actual measurement of road features such as pavement's length, electric/signal pole's height etc. and attributes such as road construction material (concrete, soil etc.) etc.
4. Carrying out topographic survey of PCMC wards for ground truthing of mapped features through satellite/Arial imagery. (Annexure-3 and Annexure-6)
5. Conduct field survey to capture buildings/property details and mark building footprints on GIS map. (Annexure-3)
6. Integrate PCMC MIS data, base map data, Field survey data and visual image data.
7. If it is found that the ground survey and any other survey has some barriers on clear visibility, objects not clearly visible, uncovered area etc., for such locations and object, the survey need to be conducted once again without any additional charges.
8. If during survey any objectionable, obscene, improper etc. images are captured, SI shall have to delete such images and recapture the data. If SI fails to do so and gets involved in legal litigations, SI shall have to deal with it on its own.

2.7.13.1 Property Reconciliation Survey

The Property survey comprises of following activities:

- a) Identifying the properties on GIS location and linking it with PCMC MIS data. If any deviations are found, update the information in GIS map as per ground realty conditions (Missed properties, additional properties, combined properties etc.)
- b) Geo-tagging of the tax payers for municipal Corporation
- c) Geographically understand the performance of the each ward towards tax collection and potential.
- d) Field surveys to capture attribute data of the properties. Hoarding, Telecom tower and road datasets are to be surveyed alike building property data. (Annexure-3 and Annexure-6)
- e) The absolute accuracy of measured entity should be better than 5-15 cm
- f) Tagging of property attribute information extracted from property tax MIS records of PCMC in soft copy, field survey attributes and property deviation remarks (updated and stored in observation table) against the properties identified and interpreted over panoramic images and updated base map.
- g) Update the captured information on GIS map for all Properties/Road features/wards/property tax zones/electoral zones etc. of PCMC

2.7.14 Deliverables of Surveys

1. The SI is free to choose any appropriate technology as long as functionalities mentioned in tender are satisfied. However, SI shall have to complete all activities related to survey in given timelines.
2. All captured data should be as raw as well as OGC compliant format
3. The system Integrator should update all the details captured through various surveys on GIS Map.
4. Digital photos and images mosaic files
5. Survey narrative report and QA/QC files
6. Geospatial metadata files

2.8 Design, Develop and Implement Mobile Application

1. The Successful Bidder/SI shall design and develop a Mobile application for geo-tagging of work wise evidences, in the form of photographs, video, its latitude & longitude and department specific attributes.
2. Shall allow user to capture spatial data in Point, Polyline and Polygon
3. Shall show the location accuracy before capturing the coordinates
4. The mobile application with a generic and shall have ability to define user specific attributes on need basis.
5. Shall be developed on Android, iOS Platform etc.
6. Shall have user management module
7. Shall have ability to configure security to assure that only authorized persons are allowed to sign in.

8. The Successful Bidder shall ensure that few functionalities of this application shall also be available in the mobile app for official to perform field verification of the surveyed data. Detailed requirement shall be finalized during System Requirement study phase.
9. Shall be able to work in both with or without internet connectivity and shall be able to sync its data to Data Center (DC) storage when the internet is made available to the mobile. The data so captured shall be stored in the standard format in the DC and in secured environment. DC storage shall be able to sync concurrent data from the field as per field requirement.
10. Should have access to World level free Online 2D, 3D, Street, base map, imagery Services for location reference.
11. Mobile GIS application is expected to integrate with GIS Enabled ERP System, Service Level Benchmarking module, etc., which shall be the common GIS platform
 1. Shall work on online and offline mode
 2. Shall allow to view assets on base maps
12. User details will be captured from the database so that users do not have register again and again for mobile application.
13. Citizens may register with the help of their mobile number and OTP mechanism. The login credentials for mobile application should be same as that of web portal.
14. The mobile application should also have following functionality:
 - Integrated one Mobile application for all the utilities of PCMC
 - All the above mentioned modules have to be accessible on mobile
 - It should have facility to capture the geo location of device
 - Project Monitoring: Facility to take pictures of ongoing civil work along with server upload functionality to get geo locations
 - Citizens shall be able to submit Application forms through mobile
 - Payment of Taxes like Property tax, water bills, Slum Billing, Hawker's charges etc.
 - Marriage certificates, Sky Sign and Business Licenses, Fire NOCs etc.
 - Building plan permission
 - Grievance registration
 - Auditorium/Sport's venue booking
 - Online Tenders of PCMC
 - Recruitment Details
 - Feedback of Citizen
 - Complaint Details of Citizen
 - Contact Details of PCMC etc.
 - Different types of MIS Reports and Graphical Dashboards for PCMC Authorities and higher management.
 - Officials should be able to provide approvals to files through mobile
 - Other minor services/functions to be finalized at SRS stage.

2.9 Scope for ERP

2.9.1 Functional and Technical Requirements

It has been envisioned that 12 modules will be implemented to serve the purpose of GIS Enabled ERP system. The Complete GIS Enabled ERP System can be divided into three sets:

1. Set-1: GIS
2. Set-2: Core Modules
3. Set-3: Non-core Modules

#	Set-1: GIS
1.	Satellite imagery and base map creation, Surveys etc.

#	Set-2: Core Modules
1.	Financial Management System
2.	Human Resources Management System
3.	Asset Management System
4.	Procurement Management System
5.	Inventory Management System
6.	Program/ Project Management System
7.	Digital Workflow Management System

#	Set-3: Non-core Modules
1.	Property Tax Management System
2.	Water Billing and collection management system
3.	Citizen Services
4.	Internal Administration
5.	Business Intelligence

The following table gives description of the various modules envisioned to be implemented under GIS Enabled ERP Project

#	Modules	Description of Modules
1	Financial Management System	Financial Management System along with Auditing functionalities for Audit Department
2	Human Resources Management System	Human Resource Management System along payroll and Employee Portal
3	Asset Management System	Management of PCMC Assets, Land, Real estates etc. with their valuation

#	Modules	Description of Modules
4	Procurement Management System	Procurement of products and services for PCMC with work flow management for internal approvals and preparation of tenders documents till the point of publication of tender
5	Inventory Management System	Inventory management for PCMC which may include furniture, medicines, stationery, electrical stuff etc.
6	Program/ Project Management System	Project Management System for monitoring of various Engineering and other projects of PCMC
7	Digital Workflow Management System	Workflow management or e-office system where employees can insert notings on files
8	Property Tax Management System	Property Tax Management System including property assessment, billing and collection
9	Water Billing and collection management system	Billing of water consumed, generation of bills, collection etc.
10	Citizen Portal	Through this module PCMC will be involved in providing various services to citizens and vendors. The Citizen Service modules includes following sub-modules: 1. Citizen's Facilitation Center: Module for accepting application forms and providing Corporation's services to citizens 2. Fire Brigade Module for providing various NOC along with Fire Brigade work management module 3. Grievance Monitoring Acceptance of Grievances through various channels and

#	Modules	Description of Modules
		<p>monitoring of grievance redressal</p> <p>4. Hawker Management System Module for management of hawkers and their billing</p> <p>5. Marriage Registration Issuance of Marriage Registration certificate</p> <p>6. PCMC Services Portal Service portal for citizens to raise requests, grievances and to interact with PCMC</p> <p>7. Public Auditorium Management Booking of Auditorium of PCMC for selected duration and function</p> <p>8. RTI Online System Module for Acceptance and monitoring of RTIs and their redressal</p> <p>9. Sky Sign & Industrial Licenses Issuance of Hoardings and industrial licenses</p> <p>10. Slum Billing Management Similar to property tax management module where small amount in the form of tax collection</p> <p>11. Sports Portal Online Booking of Sport facilities of PCMC</p> <p>12. Town Planning Management Issuance of DP Opinion, part plan etc.</p> <p>13. Road Excavation NOC/Permissions Provides NOCs to various organization/vendors for road etc. excavation</p>

#	Modules	Description of Modules
11	Internal Administration	<p>This module will facilitate the internal administration process. Following sub modules are included:</p> <ul style="list-style-type: none"> 1. PCMC Electric Bill Payment Management Billing management of 3200 electric meters installed at various location of PCMC 2. Legal Case management module Management of legal cases of PCMC 3. Municipal Secretariat Management Important meetings such as standing committee, board meeting etc. management. Capturing of Agendas, Minutes of Meetings etc. 4. Security Management Management of security of PCMC building and other assets, visitors management system, vehicle key management system for vehicles etc. 5. BSUP (Nagarvasti) Monitoring of various schemes of PCMC such as scholarships to students, education to widows etc. 6. Vehicle workshop Management 7. School Management 8. Library Management 9. Veterinary Management 10. News Rotation Management
12	Dashboards and Business Intelligence	Digital Dashboard with business Intelligence

2.9.2 Indicative Functional Requirements

Following are the indicative functional requirements for various modules. The requirements will be finalized during the As-Is and To-Be phase. Bidder is required to provide his response as per following table for proposed solution. After onboarding of successful bidder/ System Integrator, SI is expected to study the existing IT infrastructure of PCMC including software and hardware, network components, back up mechanisms, SRS documents of existing application etc.

2.9.2.1 Common Functionalities

These functionalities will be common among all the applications (Wherever required). The follow table provides common functionalities:

Sr	Functionalities
1.	Single Sign on to access all the applications getting deployed under GIS Enabled ERP project
2.	Public Date entry module for citizens to enter information in application forms and upload documents
3.	Integration with payment gateways wherever applicable. The banks and payment gateway may change during project duration
4.	Ideally there may not be any physical file movements. All noting activities on files will be performed through Workflow management system
5.	Notifications to be sent to citizens when required (WhatsApp, SMS, Emails, social media etc.)
6.	Notifications to the concerned authorities when required (WhatsApp, SMS, Emails, social media etc.)
7.	The applications will be developed to handle and operate in Marathi (Unicode Compatible) and English
8.	NOCs, Licenses etc. should be provided in electronic format with digital signature
9.	Centralized database for all applications
10.	Paperless working environment
11.	SLA will be defined for all activities
12.	Role based Dashboard for citizens and administration
13.	Audit Trails of all activities and Archivals (As per policy, and duration of maintenance of trails and data) would be maintained
14.	Roles of users should be categorized according to zone/village/ward/PTax zone/gat
15.	All the applications will have dashboards as per user's requirements

Sr	Functionalities
16.	The applications should be Browser Independent
17.	Knowledge bank for each department containing circulars, notices, GR,MC Acts etc.
18.	Push alerts on mobile app/email/WhatsApp
19.	Feedback mechanism for all applications
20.	All reports should be generated in bilingual (English and Marathi) on A4 only. However there will be facility to change the printing options on other page sizes.
21.	The reports should be in proper format. If they contain any logo, logo should be taken from master database. So that, if logos are changed in database, the reports and formatting should change accordingly.
22.	Application should have facility of Dynamic Reporting
23.	Citizen centric applications should be designed as per disability act to facilitate disabled
24.	Application should have facility of English to Marathi translation and Transliteration
25.	Facility should be provided to map all the assets/information which can be marked on GIS
26.	Data analytics and Artificial Intelligence tools/features should be provided for all the modules
27.	Master list of citizens along with details should be generate through ERP System
28.	Data should be clean up and migrated from existing applications to GIS Enabled ERP system.
29.	Data conversion should be performed for existing Water Tax Management System and Property Tax Management System (English to Marathi Vice a versa)
30.	Applications should be integrated with State and Central government portals/systems such as GST portal, grievance portal, digilocker etc.
31.	Existing scanned documents should be attached to respective module as necessary
32.	All the module should be compatible to mobile devices
33.	Integrated Mobile application should be developed for the modules wherever applicable
34.	The complete solution should have a master data and the sub-master database for each IT applications. Once some of the fields in master database are updated, it should get reflected in all the applications and service portal. E.g. If a person gets promoted, same should be updated in all the applications and Service Portal
35.	No hard coding in source codes

Sr	Functionalities
36.	Changes made in source codes as per the requirements of PCSCL/PCMC should be documented properly and sign off need to be taken from concerned stakeholder. Notifications need to be sent to concerned authorities on changing the source code.
37.	Every bill, receipts, NOC, certificates etc. should have QR code
38.	The year ending processes for the concerned IT applications should be completed through that application. E.g. generation of property bills
39.	While using logos, icons etc., SI shall take utmost care of any copyright issues with any entity. If any legal issues arises due to use of copyrighted logos, icons etc., SI will be responsible for it.
40.	SI shall help PCSCL/PCMC to prepare presentation, documentation related to this project to showcase at various programs/events

2.9.2.2 Financial Management System

#	Sub Modules	Activities
1	Department Expectations	<p>The system should be designed in such a manner that, it can be easily customized with changes in Norms and regulations</p> <p>All the reports should be National Municipal Accounting Manual (NMAM) complied</p> <p>The budget need to be prepare with the help of system and this will be the core for all the transaction in following year</p> <p>The system should send the alerts for the maturity of Fixed Deposits</p> <p>Facility should be provided where vendors can check the status of their payments</p> <p>User should be able to generate query based reports (Vendor wise, date wise, department wise etc.)</p> <p>All funds may it be from State government, Central government schemes and own fund, need to be included in system</p> <p>Live dashboard should be available to track the income expenses status</p> <p>Dashboard should be available to track the balances of various bank accounts of PCMC. It should provide the details of total cash collected in PCMC and deposited in bank accounts for all the wards, offices, departments etc.</p>

#	Sub Modules	Activities
1		Alerts and validation need to be setup for budgets. E.g. If a department tries to use more than allotted fund, an alert will be sent to the concerned person
		Unfinished work and associated budget can be carried forward. In order to manage this an option shall be provided to department about closing of work or to carry forward the work for next financial year
		The system should be designed taking into considerations double entry National Municipal Accounting Manual (NMAM)
		All the reports of Accounts and Audit should be NMAM compliant
		For complete operation of PCMC, default printing page need to set to A4 page size
		All mode of transactions need to be included in receipts (Online and Offline)
		Weekly report of receipt and expenses to be obtained from accounting and to be audited by Audit department which can be submitted to various committees
		Streamlining of budget heads for all the departments is required. NMAM wise budget heads to be developed
		Single system should be available to perform all the activities and check records
		The receipt formats should be uniform.
		The provision should be provided to assist Audit as per projects, bills etc.
2	Master	Account Head Definition
		Account Grouping and Sub-Grouping
		Bank Account Details
		Vendor Details
3	Departmental Process	Budget Preparation, Distribution and Management System - Budget Classification - Department-wise estimated provision, revision for income and expenditure - Budget Appropriation between different budget heads through approval process - Administrative approval / dis-approval of works linked to budget availability

#	Sub Modules	Activities
		Receipts through Internet / KIOSKs - Counter-wise Collection Detailed and Summary Reports - Revenue Stamp Management - Cheque/ Cash Deposit Slips into Bank - Capture of Cheque dishonour cases, Remittance entry
		Payment Management - Bill / Liability Entry - Payment Authorization - Payment Voucher (Full or Partial Amount) - Maintaining Cheques details, Cheques Printing - Recording of Cheques Issuance Details - Recording of Cheques Cancellation details
		Security Deposit / Earnest Money Deposit Management / Bank Guarantee Register
		Zone/Ward/CCC wise Bank Collections
		Loans Management - Maintenance of Loan Details - Alerts for Loan Instalment Payments - Loan Instalment Payments - Generate Bill and Carry out payment - Interest Calculation
		Grants Management - Maintenance of Grant Details - Timing of Grant (Regular/Irregular) - Utilization Details - Interest Calculation - Utilization Certificates - Generate alerts for Grant Received or not.
		Debt Management
		Accrued Payment Management/Fund Management
		Investment Management - Maintenance of Investment Register - Alerts on due dates - Comparison of different options for Investments - Interest Calculation - FD Register - Generate Voucher/Challan

#	Sub Modules	Activities
		Advance Management Bank Reconciliation TDS/ VAT register, Online Payment of Tax Maintenance of Bank Account wise balances Integration of Ledger A/c with ECS Payment Demand details for various departments and approved values in budget for different departments should be viewed by account official. Demand Notice Generation Print ECG Receipt
4	Reports	Dynamic Dashboard synced with the role of the personnel viewing Financial statements at the various defined levels of the organization Generation of internal reports and transactional reports for each of the organizational units Print/Publish reports and save them in viewable file formats in PDF, TXT, MS-Excel, and XML formats. Support customizations of any exiting report or new reports All report on net movement by account, showing opening balance at start of month, net transactions value (or detailed transactions) and closing balance. Generate financial statements at different levels like across units, across plants, across cost centers etc. Cash flow report: Listing period and year to date various cash flows against budget and last year, subtotalled at various levels Provide for all TDS(Tax Deducted at Source) related reporting Vendor Listing along with other vendor details as may be required Cash Requirements Report Cheque Reconciliation Report Account Receivable Invoice Register Provide Adjustment of Advance payment Bank balance analysis (bank balances by amount slabs) Generate a comprehensive asset register (as per standard accounting practice) Asset register report available in summary form (with only financial details) and details form (with all asset master details) Drilldown report (Budget head to voucher) GST/taxes related reports

#	Sub Modules	Activities
		Report project status for Capital projects along with capital expense posted
		Use of GIS for Audit Trail assessment

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.3 Human Resource Management System

Sl. No.	Sub Modules	Activities
1	Department Expectations	<p>History of training for PCMC employees should be maintained through Kamgar Kalyan Department which shall be linked to Employee Portal where employees can see their trainings completed</p> <p>Training module need to be developed. It will provide the capacity building report. Employees should be able to fill training needs for Training need analysis (TNA) which can be verified by concerned department</p> <p>Facility should be given to enter union demands</p> <p>System should be able to track all the facilities and PCMC assets (Laptop, mobiles etc.) provided to employee. If any employee is leaving the organization, system should be able to provide no dues/NOCs after verification by Administration Department. Employee Portal shall contain the list of facilities provided to user.</p> <p>Employee should be able to declare their assets/properties (Asset Declaration Form) in Employee Portal</p> <p>Seniority list shall be generated as per the criteria defined by user</p> <p>Form 16 and 24 Q generations through system. Admin should be able to adjust Tax slabs as per the current budget</p> <p>Payroll linked to biometric system</p> <p>PT cash module for department (Advance cash management for each department)</p> <p>Last payment certificate should be available immediately and through all department</p> <p>Complete payroll management system for (New joiner, promotion, retirement, suspend, expire, VRS etc.)</p> <p>Proper logic should be there to generate employee code</p> <p>Locations of employee address to be mapped on GIS, biometric locations etc.</p> <p>Recruitment and Reservation (100 Points)</p> <p>Payments for all committee members shall be managed through system. Annual Income certification to be issued from system to these members</p> <p>salary of Temporary employee to be managed by system</p> <p>Smart cards for corporation use</p> <p>System should be able to manage records of employees as per shifts also</p>

Sl. No.	Sub Modules	Activities
		<p>Loan management/sanction process should be managed through system</p> <p>Employees should be able to download Form 16 and other necessary from Employee portal</p> <p>One should be able to see the employment history (Positions and departments served)</p> <p>If employees are transferred, their access rights will be revised accordingly and in continuation with previous work. The pending work will be assigned to the new employee who has taken that position</p> <p>Employees should be able to upload service book records</p> <p>Employee should be able to declare their assets/properties (Asset Declaration Form)</p> <p>Employee should be able to submit Confidentiality Report through system</p> <p>Employee should be able to submit Nomination form</p> <p>Notices/letter/Notifications should be available on portal</p> <p>Service request for Passport NOC/Foreign Travel permission/Affidavits etc. can be raised through portal and can be obtained digitally</p> <p>Job notification/Circulars/Schemes need to be available on portal</p> <p>One should be able to submit nomination for the sports competition, cultural day etc. The calendar should be updated in similar manner</p>
2	Organization Management	<p>Supports multiple companies' definition</p> <p>Web portal communication to all people in the organization</p> <p>Employee searches by: Employee Number, Last Name & First Name, Organizational Level, Department, Location, Status, Reporting officer etc.</p> <p>An on-line organization chart with hierarchies.</p> <p>Adds / changes organization entities and easily transfers associates within and / or across entities (including companies).</p> <p>Manages organization restructuring including position control.</p> <p>Maintain complete organization structure bifurcated into maintenance of Organization unit, department unit, positions, grades, relations, and hierarchy</p>

Sl. No.	Sub Modules	Activities
		<p>Any change in organization structure to be approved based on defined workflows</p> <p>Organization unit wise policy/ rule engine, changed based on defined approval workflows</p> <p>Ability to maintain organization wise unit wise approved position list and current status.</p>
3	Recruitment Process	Facility for online recruitment of employees
		Facility to collect online resumes against the vacancy
		On-line screening & short listing of applications received on-line
		Allow for on-line short listing of applications for recruitment process like written test or interview
		Able to generate Call Letters for Interviews to shortlisted candidates
		Generate the joining forms on-line for the new employee to fill up on her/his own
		Convert the Applicant data into Employee data on hiring / joining
		Generate Organogram with vacant position mark (Diagrammatically)
		Define the specifications of the vacancy in terms of qualifications, work experience, location considerations, skills/competencies required, additional certifications / professional qualifications, etc.
		Online recruitment to be integrated with PCMC website
4	Personnel Management	Common employee database with personal, educational, professional information like Personnel details, address, family, working hours, work schedule rules, pay grades, tax data, pension data
		Maintain as on date employment history starting from joining the organization like promotions, achievement, awards, punishment, etc.
		Capture relevant copy of documents in digital format and linked with the employee data integrated with document management system
		Maintain the information along with photo of the employee and all dependent or family on the system
		Review On-line request for updating / changes. Date gets updated after proper approval using workflow.
		Maintain issuance records of asset like Mobile, Tablets etc.

Sl. No.	Sub Modules	Activities
		<p>Administrative task like transfer, special duty assignment, resignation, promotion, NOC issue, etc.</p> <p>Generating Transfer Forms / Orders for transfer of manpower from one location to another</p> <p>Issuance of Transfer Order automatically for authorization personnel (Work flow) according to internal hierarchy</p> <p>Auto update of the employee master and organization structure on actions like relocation or transfer of an employee from one department to another</p> <p>Date wise validity of each transaction to be maintained. The master data need to be time bound with defined start date and end date with time constraints defined for type of record</p> <p>Need to cater to the following task of employees:</p> <ul style="list-style-type: none"> • VRS/Retirements • Disciplinary cases • Promotions • Confirmation and transfers • Government Reservation Compliance • Roster for Reserved Categories • Employee Grievances • Leave Management • Welfare Services • Union Matters • Handling of loans, NOCs etc. • Reports & Returns / Maintenance of Rosters • Non-contributed PF • Contributed PF <p>System to keep record of legal issues and cases for each employee</p> <p>System to manage permanent as well as contract employees</p> <p>System to generate all statutory Return forms under PF, Contract Labour and other government acts and policies</p> <p>System to generate statutory forms for Pension and other settlements</p> <p>Bulk data upload/ change should be possible</p>
5	Appraisal and Promotions	<p>Employee appraisal and evaluation functionality (along with rules and policy guidelines)</p> <p>Appraisee & Appraiser fill up the forms on-line</p>

Sl. No.	Sub Modules	Activities
		<p>Appraisee & Appraiser and/or Reviewer view the form on-line at the same time to facilitate discussion / comments on the same</p> <p>Policy for Salary revision, Increments, Promotions be maintained on-line</p> <p>System to provide facility for approval for pay fixation on promotion</p> <p>System to give the status of promotion with eligibility, advice, trade test, promotion, extension of probation and reversion of promotion</p> <p>System to handle employee demotion as a disciplinary action</p>
6	Leave Management /Attendance	Define and maintain a variety of leave types and associated application rules
		Support for Manual and on-line Leave application processing
		Leave Integration with Payroll
		Leave amendments and adjustments by designated authority
		Retain all leave history (approved, rejected, adjusted) based on user defined criteria
		System to maintain leave ledger
		System to generate the monthly attendance/ absence sheet integrated with time biometric devices
		System capable of generating late coming and early going report, their adjustment as per SMC policies
		Leave quota management, leave approval, and leave encashment
		System to generate Compensatory -Off balancing and their adjustment as per the SMC policies
7	Payroll	Payroll computation based on leave, tax computation, deductions, adjustments etc.
		Accommodate adjustment for the previous period's attendance
		System to calculate statutory deduction for each employee based on deduction rules
		Both earning and deductions can be of both types i.e. forever and within period (From To dates). There should not be restriction on number of earnings and deductions
		Integrate with different types of loan account for deducting EMI / Installment automatic
		EMI / Installment deduction stop automatically after end of the loan period

Sl. No.	Sub Modules	Activities
		<p>Arrears of salary to be paid for the adjustment of salary for the previous period by giving range of months/ Period</p> <p>System to allocate an employee's salary across multiple cost centers by fixed % or specific assignment or manual distribution</p> <p>Automatic update payroll calculation rules whenever an employee's grade changes</p> <p>Handle multiple pay commission guidelines e.g. 6th pay and 7th pay commission for different set of employees</p> <p>All standard and statutory payroll related reports</p> <p>Capture employee's bank account number and bank details</p> <p>Allows to define different salary or wage classes and scales</p> <p>Auto calculation of payroll based on attendance records with possibility of transfer of attendance records to payroll system in batch mode or manually for employees not using ERP for time and attendance.</p> <p>System should be able to categorize the deductions like Tax, deductions on uniform, deduction on advance taken, loans from company or external</p> <p>Organization, payments for any other purposes to external org. like LIC premiums</p> <p>Provision of supporting loan details/advances taken like amount taken, tenure, amount of each instalment</p> <p>Provision to set loan and advances repayment schedule with an option to modify the same and payroll calculation accordingly</p> <p>Provision to levy deduction (for a user defined period) on items issued to employee e.g. uniform, deduction of loan or advance</p> <p>Audit Payroll fixation</p> <p>Payroll processing for Anganwadi employees (fix pay), Committee members, Temporary staff etc.</p> <p>Process & generate the Salary certificate, Due Settlement Certificate for an employee / ex-employee</p> <p>Daily wage employees payroll management</p>
8	Taxation	Ability to Define tax rules to determine employees tax liability as per changes by the Central Govt./ local statutory legislation for actual tax liability of employee

Sl. No.	Sub Modules	Activities
		<p>Facility to provide investment declaration form in electronic format. The employee will be required to fill and submit the form electronically so as to update salary record and tax calculation automatically by the system.</p> <p>The system should ensure support for major statutory reports / Forms and certificates of taxes.</p> <p>The system should Record employees' perquisites and other information relevant in computing their tax liability as tax components.</p> <p>The system should Complete calculation and deduction of tax automatically / user defined</p> <p>The system should Project the tax liability of each employee for the period within a tax calendar based on the employee declaration of savings etc. and providing tax planners to the employee.</p> <p>Provision to Manually adjust taxable earnings (in case of income from other sources, investments etc.)</p> <p>The system should handle Exemptions and Rebates as per the Income Tax Rules</p> <p>Professional tax deductions with exemptions, arrears and generation of related reports and challans</p>
9	Retirement Benefit System/ Other Benefit System	<p>System to take care for various Reimbursement system</p> <p>Travel & Expense: Employees to fill details of expenses carried out during a travel, upload of receipts, computation of travel allowances and approvals. Integration with corporate card if issued in future, needs to be done.</p> <p>System to provide provision and checks for the employees to be granted LTA / LTC as per company rules</p> <p>System to allow payments (Both Advance and Final) towards LTA / LTC either outside or with Payroll and paid as taxable/ nontaxable as per Tax rules</p> <p>System to provide facility of making payments of other benefits Like Telephone bills reimbursement either outside or with Payroll</p> <p>Health card and medical allowances</p> <p>Pensioner Management</p> <p>Entire Provident Fund and Gratuity Accounting Module as part of Payroll system</p>
10		Feature of training calendar

Sl. No.	Sub Modules	Activities
Talent Management, Training & Development, Enterprise Knowledge Portal		Information of employees called & attended training
		Career path/ skill-wise training schedule for employees and initiation of schedule after transfer or promotion to new position
		System to provide a standard methodology for Training Need Identification
		System to provide provision for the employees/Head of division to give a request/ nomination for training
		Provide facility for online evaluation / feedback on Trainings by the employees
		Send training alerts to employees
		Maintain minimum required training to employees with alert for any repetition of the same or maximum training attended
		A knowledge portal to empower employees taking up new responsibilities with rich knowledge base and anytime accessibility will be provided.
		Provide provision to know the number of days/hours spent by individual & up to group for training
		System to provide provision to know the amount spent on various training activities.
11	Employee Self Service & Manager Self Service	<p>Employee should be able to access own records, perform necessary functions and raise requests for above-mentioned phases using self-service portal:</p> <ul style="list-style-type: none"> • Apply Leaves • Viewing salary slips • View leave balance and status • Viewing Form 16 • Entering travel claims • Confidential Report Triggering and updation • Searching employee directory • Employee time and attendance entry • Employee directory • Benefits enrollment • View Service Book • Standard Application of Rules • Benefits Management • Online Learning

Sl. No.	Sub Modules	Activities
		<ul style="list-style-type: none"> • Skill Position Matching • Talent Profile & Feedback on Performance • Loan Status • PF slips etc.
		System to generate service book for employees, downloaded as pdf on request to view in Marathi and English with all necessary updates
		<p>Reporting Manager should be able to raise request on employee behalf and approve requests raised by employees online over mobile and web. These will empower manager as envisaged by the Government of Maharashtra under:</p> <ul style="list-style-type: none"> • Number of Employees Present or Absent • Filled in Position Distribution in Subordinate Offices • Online Communication to Pre-Designated Mailing List • Pending Administrative Processes –PAR, TA/DA, DPC, 50-55 Review • Pending Work Process Monitoring –Loan/Advances, GPF, Interest • Human Resource Budgeting • Talent Management -Skill / Competency Assessment, Training
		Employees able to access own records online and raise requests for name change, NOC, address change, leaves with necessary workflow approvals.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.4 Asset Management System

Asset Management

#	Sub Modules	Activities
1	Department Expectations	<p>The asset management system will clearly differentiate between depreciating assets and appreciating assets</p> <p>The Asset management system will be linked to inventory management system.</p> <p>The asset management should be capable of providing valuation of assets. The asset classes can be roads, buildings, manholes, vehicles etc.</p> <p>Assets of PCMC shall be marked on GIS and respective MIS data shall be available to users</p>
2	Classification of Assets	<p>Manage Immovable Assets (Using GIS-based Interface)</p> <ul style="list-style-type: none"> - Land - Building - Roads, Footpaths - Bridges, Culverts, Flyovers, Subways & causeways - Drains including underground drains - Water Works Distribution - Public Lighting System / Streetlights - Lakes and Ponds - Capital Work-in Progress <p>Etc.</p> <p>Manage/Monitor Movable Assets</p> <ul style="list-style-type: none"> - Plant and Machinery – including machinery of Water Works & Drainage - Vehicles - Furniture & Fixtures - Office Equipment - Other Equipment - Live Stock <p>Etc.</p> <p>Investments</p> <p>Capture details of Assets like:</p> <ul style="list-style-type: none"> - Ownership - Cost Details (construction / Purchase / Transfer)

#	Sub Modules	Activities
3	Asset Transactions	- Depreciation Principles - Other details to arrive at Current Value
		Preparation of Opening Balance for Asset Valuation
		GIS Mapping of the data
		Purchase of New Assets Acquisition of Land Asset Sale Investment on Assets (like construction of new floors, road re-surfacing, etc.) Insurance Details Insurance Claim Related Information capture
4	Maintenance Analysis and Statistics	Analyze the equipment breakdown and repetitive breakdowns Equipment breakdown analyze and control Material planning for preventive maintenance and maintain safety stock Material consumption analysis Counter based preventive maintenance for equipment like Generators, motors & Compressors Ability to maintain operational equipment work orders and maintenance history against asset/equipment work orders. Reporting on asset/ equipment statistics like availability, utilization etc.
		Asset Register
		Revenue Report
		Outstanding Register
		Search facility for various information (like search for name of road)
		GIS Mapping of the data
5	MIS	

Land and Estate Management

#	Sub Modules	Activities
1	Department Expectations	All the PCMC properties need to be geo tagged
		Lease management module need to be implemented to properly manage lease agreements and corresponding activities
		Billing module should be the part of lease management system where access will be provided at ward level.
		There should be proper reporting mechanism which will also help to perform spatial analysis
		The system should be available to calculate rents automatically after providing required parameters
		Notification of expiry of lease contracts need to be sent to concerned people and lease
		Dashboard shall be available showing different categories of properties, expired lease agreements. Ward level revenue etc.
		Record of the properties from Building planning, civil department should be available. The provision should be made to attach photos of properties.
		Valuation of properties to be captured
2	Land Management	Employee quarters should be managed through lease management system
		Proposal for Land Acquisition with use of GIS for visualization
		Scrutiny of Land Details with use of GIS
		Valuation of Land with a view on the updated map of Pimpri Chinchwad
		TDR Process & Possession of Land using GIS
3	Estate Management	Transfer of Details to Concerned Department
		Creation of Record in the Estate Register
		- Hand-over from other agencies
		- Hand-over by Builders
		- Construction by Projects Dept.
		Issuance of Municipal Property on rent / lease
		Generation of Bills
		Acceptance of Payment
		Renewal of Rent / Lease agreement
		Allotment of House to the employee
		Maintenance of Property on Contract

#	Sub Modules	Activities
		Maintenance Inspection report
4	MIS	PCMC Land Register with properties marked on GIS
		Land Acquisition related reports using GIS
		Revenue Reports for Estate on Rent / Lease along with GIS Mapping
		Outstanding Register for Estate on Rent / Lease with GIS Mapping
		Top Defaulters List with GIS Mapping
5	Other Requirements	Data Porting/ Data Entry Suite

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.5 Procurement Management System

#	Sub Modules	Activities
1	Department Expectations	Departments should be able to prepare budgets system. So that, the process will start with budgeting and follow the following flow <ul style="list-style-type: none"> a. Budgeting b. Tendering c. Work Order Generation d. Work Monitoring e. Billing after work completion
		e-Measurement Book and bill generation facility should be there. The system should be able to generate estimation for the work Measurement Book Entry should be approved by Deputy Engineer, Executive Engineer, City Engineer etc.
		System shall allow authorized person to make adjustment to measurement book entries on case to case basis
		System should be able to generate a PDF report for measurements entered by user
		The proposed work should be mapped on GIS. The progress of work shall also be mapped on GIS after on ground verification
		SLA should be defined for each activity and need to be monitored
		Ability to configure electronic approvals and approval lists depending on the type of approval process. Approval lists should be configurable and user should be able to change approvers based on changing business need.
		The system should be designed for e-office and approvals should be provided through digital signature. The application shall be able to handle all the processes of procurement of PCMC such as approvals at various level, standing committee approvals, work order generation etc.
		The application shall be able to manage capital work as well as revenue work
		The system should have its own intelligent live dashboard showing the ongoing work. The dashboard will be role based
		The dashboard shall clearly show the information of status (On time, delayed, stagnant etc.) and stages of projects
		Documents uploaded on e-tendering system should be available in Digital Dashboard system as well. The data of such document should be maintain in digital dashboard.
		Separate mobile app need to be design for tracking of work and onsite works management.
		The progress of work should be updated on GIS
		Once the work is completed, the asset will be generated for the concerned department
		Integration with SCADA, 3 rd party sample testing etc.

#	Sub Modules	Activities
		The notification should be on pre decided intervals for the recurring works such as AMC etc.
Mobile Application		System should provide the capability to record measurements from site using a dedicated Mobile application which can be deployed on Tablet, Mobile etc. for Android and iOS
		The images work progress can be captured on ground through mobile app where locations shall be geo-tagged.
		Mobile application should work in offline as well as online mode.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.6 Inventory Management System

#	Sub Modules	Activities
1	Department Expectations	Expired stock of medical inventory will not be issued under any circumstances through system
		Notification need to be sent to concerned person for expiry of stock or expiry date
		Notification need to be sent to concerned person for expiry of quota for item/ward
		Role based access will be provided to all users as well as hospital
		Facility will be provided to bypass some fields if not applicable. E.g Surgical tools, some Ayurvedic medicines do not have expiry dates
		Standard list of all inventory to be made so that there won't be any duplication in database
		Complete movement of stock across network of PCMC to be tracked through system.
		Under emergency special cases, stock to be accepted by system without challan with appropriate approvals
		Reports and all other to be grouped such as Tablets, syrup, surgical etc.
		List of item which are not issued due to non-availability should be clearly mentioned in indent

#	Sub Modules	Activities
2	Masters	Categorization of Stores - Central Stores - Biomedical Engineering Store -General Stores (issuing stationery and non-medical materials) -Electrical Stores -Civil Stores
		Department-wise segregation for request, process, fulfilment and feedback
		Dead stock Register (for movable assets)
		Defining Various Items under each category
		Approved Vendor List of PCMC along with their details
		Price-list for the Rate Contract Items
		Maintenance of Reorder level i.e. procurement after reaching reorder level.
		Payment to Vendor
3	Disposal of Dead Stock	GIS Mapping of the data
		Department-wise submission of details
		Disposal of Dead Stock
4	MIS	GIS Mapping of the data
		List of Vendor-wise / Material-wise orders
		Material-wise, Department-wise consumption report
		Disposal of Dead Stock
		Status report to department w.r.t. their order
		Alerts if the Batch Nos. or Sr. No. is not in order
		ABC Analysis, EOQ analysis, Min order, Max. order etc.
		Work Completion Report
		Work Comparison Report
		Demand & Issuance Comparative Report
		GIS Mapping of the data

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.7 Program/Project Management System

Sl. No.	Sub Modules	Activities
6.1	Portfolio Demand Management	<p>System to have various stages of approvals for all the proposed projects. These approvals will pertain to project selection, budget approvals, vendor selection including technical and financial evaluation, administrative approvals, pilot implementation, and approval to Go-Live based on UAT approval for maintenance milestones, approval for project closure.</p> <p>System should be flexible to define approval stages and criteria for different project types.</p>
6.2	Project Management	<p>Facility to create new project / review existing project with critical information's like activity / task lists with target dates and resource.</p> <p>Ability to track and analyze Project Schedule, Costs, Materials, Equipment and Services</p> <p>Ability of handle any number of Projects simultaneously.</p> <p>Ability to record, manage and report Accounting Data for all Project-related Transactions</p> <p>Facility to record periodic Progress Information from Weekly / Monthly Project Reports</p> <p>Facility to import Project Activity Networks exported from commonly-used Project Management Packages such as Primavera, Microsoft Project, etc.</p> <p>Facility to identify project milestones and targets</p> <p>Ability to define sub-projects within a project</p> <p>Facility for multi-user concurrent access to any project, including record locking facilities to avoid concurrent updating of project details</p> <p>Ability to analyze individual projects by comparing project plans against progress and produce exception reports.</p> <p>Provision to select multiple projects based on selection criteria and display any/specify stored details</p> <p>Ability to produce GANTT and PERT charts to display the critical path and float times for all or selected activities</p> <p>Reporting facility through which users can define and develop reports related to single or multiple projects (for monitoring progress and performance)</p>

Sl. No.	Sub Modules	Activities
6.3	Project Structuring	Work Breakdown Structures (WBS) and Networks to structure projects hierarchical and/or using network techniques. Milestones and documents to mark project events appropriately.
6.4	Project Scheduling	To provide various date planning functions. Flexible scheduling techniques to be used to calculate earliest/latest dates, floats, or critical paths within projects.
6.5	Capacity and Workforce Planning	Networks to plan, analyze and level work center based capacity requirements of the project.
6.6	Material and External service planning	To assign material components to Networks to plan material requirements based on the project schedule, check the material availability, and trigger the material procurement and delivery later.
6.7	Financial Planning	To provide various techniques for planning costs and revenues in Project System depending on financial planning requirements.
6.8	Budget Management	Budget is the approved cost structure for a project. One can allocate budget to projects in Investment Management or directly in Project System.
6.9	Confirmations	In the execution phase of projects confirmations can be used to document the actual work performed and the progress of individual work packages.
6.10	Cost Integration and Billing	Costs actually incurred are posted directly to project by account assignment of documents in Financial Accounting, Controlling or Materials Management for example.
6.11	Project Reporting	Project System provides various standard reports for real-time reporting of financial and logistic project data.
6.12	Integration	Citizen engagement is required for the projects where decision of creating a bridge/ asset, budget approvals, progress report is visible to them on GIS map where citizens can know beforehand any upcoming project decisions, traffic disruptions or gives comments. This will be achieved by publishing details on web portals. The details will come from Project Management and Asset management/ maintenance module of ERP, thus integration with web portals and PMMC GIS to provide this information readily.
6.13	General	Ability to manually/auto load and selectively change project data (start/end dates, etc.).
		Ability to capture, compute and report real-time actuals (e.g. costs, effort, schedule status)

Sl. No.	Sub Modules	Activities
		<p>Ability to aggregate cost, effort, and schedule data across projects (e.g. Gantt chart data rollup)</p> <p>Ability to calculate performance ratios manually or automatically at specified points in time or at project milestones.</p> <p>Ability to provide dashboard view of status of all projects with ability to drill down.</p> <p>Ability to compute/display estimates of remaining work (hours to completion, percent of work completed, end-date forecasting, etc.)</p> <p>Ability to provide comparison of actual vs. planned progress with variance analysis, alerts, and rule - based notification.</p> <p>Ability to provide project reporting/forecasting according to government contracting requirements (e.g., earned value analysis).</p> <p>Ability to support risk monitoring and on-going multi-project risk management.</p> <p>Ability to use project status and project forecasts to update financial budget forecasts.</p> <p>Ability to capture and transmit project costs, expenses, commitments, etc., for accounting.</p> <p>Ability to support and billing (e.g., expense reporting).</p> <p>Configure status indicators at summary level of Project. These indicators should be displayed in Project Center with different colors to depict project status.</p> <p>Ability to store, populate and update exact latitude and longitude details of the project and pass the information to and from GIS system.</p>
6.14	Project Cost Monitoring	<p>Facility to record various Cost Data for a project (such as budget amount, expenditure to date, cost to completion, cost estimate of changes, etc.)</p> <p>Facility to record Project committed Cost Data from the payment requests received from various sources</p> <p>Facility to record release of funds details and maintain project release of funds history</p> <p>Facility to record project allocations, advanced payment and bank details</p> <p>Provisions to compare the payment requests against the outstanding contract value for a given project/stage/activity</p>

Sl. No.	Sub Modules	Activities
		Provisions to track payments related to external agents (consultants, contractors, vendors etc.)
6.15	Project Resource Utilization and Reporting	Provisions to track the status of a payment request through the batch upload and approvals process
		Provisions to validate payment against the release of funds and update the project release of funds balance
		Facility to mark projects for archiving once all the costs have been paid and project completed
		Facility to integrate all functions such as Procurement, Receipt and Storing procedure, Material Reservation, and Inventory Management.
		Facility to declare WIP status and completion of project.
		Facility to transfer Project Material to regular Inventory and vice versa.
7.1	File Tracking System	Facility to Map Project Item with Regular Item codification.
		Provisions to include left over Material in regular Inventory as Non-Valued /Valued Material as well as Spare or Part of specific Equipment on completion of Project.
		Provisions to track and include Installation / Commissioning / Put to use Date and warranty period and Maintenance schedule along with Details in system on completion of Project.
7.2	Document Management	Scanning & Marking the inward/outward to the respective department
		Incorporation of separate hierarchy for RTI letter movements & Commissioner Office.
7.2	Document Management	Fresh applications
		Appeals
		Tracking of the Inward/Outwards
		File Closure to be carried out as per the final decision of respective authorities.
		Document Management System
		Scanning Solutions

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.8 Digital Workflow Management System

#	Sub Modules	Activities
7.1	File Tracking System	Scanning & Marking the inward/outward to the respective department
		Incorporation of separate hierarchy for RTI letter movements & Commissioner Office.
		Fresh applications
		Appeals
		Tracking of the Inward/Outwards
		File Closure to be carried out as per the final decision of respective authorities.
7.2	Document Management	Document Management System
		Scanning Solutions

#	Sub Modules	Activities
		<p>Reports and Search</p> <ul style="list-style-type: none"> - Support saving of search queries and search results. - Support extensive Reports and audit trails and provide data points and facility to design new reports. - Should have XML based API support for data import & export and integration with third party applications.
7.3	Workflow Management	<p>Movement of Proposals/documents/noting/objects on various parameters</p> <p>Facility to mark the application to pre-defined hierarchy</p> <p>Inbox for officers (listing applications received)</p> <p>FIFO principle for taking action on application</p> <p>Creation of a Note Sheet for Scanned Documents</p> <p>Alerts for delay in action</p> <p>Information/Alert to be sent to higher authority in case of delay in action by specific employee of the department</p> <p>Pre-defined scrutiny for citizen applications</p> <p>Display of all application data during scrutiny process</p> <p>Check-list for rejection</p> <p>Facility to mark the application to other officer</p> <p>Facility to mark the application to other department for their NOC / Comments / Input</p> <p>Alerts via Email/SMS</p> <p>Every user shall have role based dashboard showing details of files pending with him/her etc.</p> <p>Final Decision by the Decision Authority</p> <p>In case the person is on leave, s/he can delegate the work to some other person. The facility of delegation of work should be provided.</p> <p>Some people have double charge. The system should be able to handle such scenarios. E.g. A person may take position of Deputy Engineer and Executive Engineer for some time.</p> <p>File, letters, RTI applications, grievances etc. moves through various touch points situated in ward offices, village offices, zonal office etc. The SI is expected to maintain such flows while designing the work flow management system</p>
7.4		The required workflow solution should comply to various open workflow standards such as BPMN (2.0), WFMC etc.

#	Sub Modules	Activities
7.5		User should be able to open/see files which may be in different formats such as DWG,PDF etc. attached to any workflow. Users do not have to open another application to view such attached files.
7.6		Workflows built using the product must also be fully functional on mobile devices at no additional cost

Note: Refer Annexure-2 for indicative specifications of Workflow Management System

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.9 Property Tax Management System

#	Sub Modules	Activities
8.1	Property Details	Ward/ Zone/ Block/Route – Administration or Geographical divisions
		Property Holder's Name – One or multiple owners
		Property Holder's Email ID / Mobile No.
		Property Holder's Address (Present Address, Permanent Address)
		Property Location details (Survey No., etc.)
		Property address
		Linkage with Building Permission Module to carry forward building details
		GIS mapping of the data
		Property ownership: MIDC/individual/PCMC/Pradhikaran/central Govn/Maharashtra govn/MHADA etc.
8.2	Details required for Property Assessment	Type and Sub Type of Property
		Usage of Property
		Construction Class / Vicinity Factor / Amenity actor/construction year
		Age of Building
		Grading of properties (A/B/C)
		GIS mapping of the data
		Any other factor required for Assessment
		Re-Assessment of the affected properties to be carried out again in case of road widening.

#	Sub Modules	Activities
8.3	Self-Assessment Module	Allow citizens to enter their property details through Web Portal
		Option to the citizens to submit their Assessment to the department for confirmation
8.4	System based calculation of Ratable Value	Room-wise / Flat-wise/ Whole Property Assessment
8.5	Tax Generation	Tax Generation as per Rate Chart
		Tax Exemptions
		Bifurcation of rates for General Tax, Fire Fighting, Water Tax, Conservancy Tax, Educational Cess, etc.
		Tax regeneration after change in ownership, use of property, increase in areas etc.
8.6	Other Relevant Property Details	Property history
		Advance property tax payment
		Property Rental details
		Date of Assessment
		Generation of Unique Address/ID for each property of PCMC so that it can be easily identified
8.7	Other Department Process	Generation of Special Notice
		Objection
		Hearing
		Property Billing
		- Individual flat-wise billing/ Property wise billing
		- Calculation of Property Tax as per prevailing Stamp Duty for different areas.
		- Interest Calculation
		- Consideration of Advance paid earlier
		Demand Notice Generation
		Issue of Warrant Notice
		Seizure of Property
		Auction of Property
		Rebate Calculations
		Automatic mailing of Bills / Notices to the E-Mail ID
		Advance / Excess Collection / Refunds
		Cheque Dishonour and Outstation Cheque charges
		Facility for online tracking of bounced checks

#	Sub Modules	Activities
8.8	Citizen Services	E-Mail / SMS to be sent to the owner upon transactions
		Change in Property Ownership
		Splitting of Property Tax Assessment
		Duplicate Bill
		Assessment Certificate
		Copy of Property Tax Assessment Extract
		No Dues Certificate
		Payment of Property Tax
		Linkage with Grievance module for Property Tax related grievances
		GIS mapping of the data
8.9	MIS	Demand / Collection Register
		Assessment Register
		Closing Register
		Ward-wise / Zone-wise Recovery reports
		Top Defaulters Report
		Occupancy wise / Flat wise report
		Escalation alert to be generated for new property assessments to zonal assessors, Deputy Municipal Commissioner and Municipal Commissioner.
		Tax-wise Recovery Details
		Tax-wise Demand Details
		Advance Payment Reports
		Objection / Hearing Details
		Inspector wise report (Assessment of property as per Building permission / Citizen request /Inspection)
		Assessment as per citizen / Assessment as per inspector
		MIS reports for self-assessment, concessions.
		Alerts from License Module upon New License / change in business
8.10	Other Requirements	Concession list, property count report (Use wise),Unauthorized property etc.
		GIS mapping of the data
		Data Porting / Data Entry Suite
		Query of Property Dues
		Scope to link up to Land Records / Registration system

#	Sub Modules	Activities
		GIS mapping of the data
8.11	Accounting	Challan generation
		Bank wise, ward wise etc. collection
		Cheques status report

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.10 Water Billing and Collection Management System

1. Group the water connections in the Project Area into sub-groups i.e. as per the Zones. Also, group the connections according to the PCMC's designated District Metering Areas (DMAs)/ water zones, then re-group the water connections as per the DMAs for allotting the process of taking water meter readings.
2. Geo code (latitude and longitude) each of the metered connection with 5-10 mtr accuracy and publish on satellite image as per the individual Zone and DMA/water zones.
3. Develop web based water supply connection, billing and collection management module and integrate with mobile application for managing all the process from providing water connection, to on spot billing, to collection, to billing audit, to reconciliation of consumer accounts and integration with GIS, ERP, Workflow management etc.
4. The indicative list of the process to be developed in the application software is indicated below.
 - Mobile App to Capture readings, meter pictures, on spot bill generation
 - Payment processing
 - Consumer's online history & bill generation
 - Online Payment System
 - SMS Alerts
 - Data Auditing
 - Dashboards for concerned roles with drill down facility
 - Integration with Inventory Management System
 - Complaint Management
 - Bill Correction
 - Integration with handheld devices for on-spot billing
 - Consumer Registration
 - Reporting of Actionable Consumers (Unauthorized, Non-Metered) with Ageing Analysis
 - Reporting & Analysis

- NRW Analysis
 - Audit trail of all transactions
 - Map based water zones with plotted consumers
 - Integration with SLB , SCADA, control room etc.
 - Zone-wise Demand/Recovery Reports
 - Zone-wise Adhoc Report management system
 - Bill distribution on emails
 - Mobile based Consumer Satisfaction surveys and develop analytics to analyse the survey.
5. For individual residential consumers the billing cycle shall be every third month (four times in a year) and for chawls, commercial and society consumers the billing cycle shall be every month (twelve times in a year). The billing cycles may be changed.
 6. Complaint Management
 - a. The software system developed by the operator shall have complete workflow from complaint registration to resolution to record for audit.
 - b. Record all consumer complaints in the web based water supply system related to water meters and water billing including but not limited to faulty recording of water meter reading, non-receipt of water bills, faulty meters and manage its complete work flow other consumer complaints and provide a proof to PCMC against such consumer complaints.
 - c. Assist the zonal water supply department in resolving issues related to water meter, billing, and collection and report its status through the web based complaint management system to all concerned.
 7. SI shall support the staff of PCMC or external agency as per the case may be who work on ground to collect readings of meters, bill distribution, Meter inventory and repairing work etc. If PCMC purchases handheld devices for capturing and printing water bills, the SI shall assist PCMC to load billing application on such devices.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11 Citizen Services Module

2.9.2.11.1 Citizen's Facilitation Center

#	Sub Modules	Activities
1	Department Expectations	The IT application shall have facility to accept all the application forms from citizen.
		Geo-locations of all CFC centers should be available on mobile map

#	Sub Modules	Activities
		Public Data Entry Module should be implemented and linked with PCMC portal
		If documents are submitted in CFC, CFC/ department staff will scan the document and it will be directed to concerned system of concerned department
		All modes recommended by central government should be enabled for payment gateway
		PAN/Aadhaar card number should be captured and linked with all the service provided by PCMC
		Citizen dashboard should be developed which will be linked to all the services provided by PCMC.
		RTIs should be directed to concerned departments directly
		Integrated dashboard for grievance UG,PG,PCMC etc.
		RTS MIS reports

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.2 Fire Brigade System

#.	Sub Modules	Activities
		Two separate systems will be developed. One will handle the emergency situation (Disaster Management) and regular fire brigade working while other system will be integrated with CFC and other systems to issue NOC for various purposes.
	Department Expectations	Whenever a citizen calls for emergency, it need to transferred to nearest fire brigade station
		All the fire stations need to be geo tagged
		Shortest route must be visible to reach to the destination in emergency situation
8.1	Citizen Help Desk	Facility to lodge New Complaints, Check Status of complain redressal
		Facility to check citizen data - Fire Brigade truck path - Book fire brigade - Share the location - Payment Status

#.	Sub Modules	Activities
		- Renewal Status - Certificates issuance
8.2	Payment Acceptance	Fire Brigade Payment
		All Departmental Services
		Tender Document Fees
		POS terminal integration
		Any other payment services
		RTI Application Management
8.4	Citizen Services (General)	Design of Forms & Database for the Fire Management System
		Rescue to road related mishaps
		Scrutiny of the Applications
		Dealing with other specific emergencies, such as flooding or terrorist attack which are set out by Statutory Order
		Details of firms along with their contact details, address details
		Education Drive for Citizen
8.5	Fire Brigade Registration Sub-Module	SMS alert to applicant upon decision
		Services Statistics
8.8	MIS	GIS Mapping of the data
		Fire Brigade Tracking system
		Customer location monitoring
		Status update of the location

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.3 Grievance Monitoring

#	Sub Modules	Activities
	Department Expectations	The grievance location need to be geo tagged If grievance is received via email, WhatsApp etc. which does not facility to geo tagging like mobile, when an operator will enter the location, it should be plotted on GIS mapping stating the location of grievance areas

#	Sub Modules	Activities
8.1	Citizen Help Desk	The provision should be made to capture image of affected location before and after redressal of grievance
		Citizen as well as department should have their own dashboard to monitor status of grievances
		Facility to lodge New Complaints, Check Status of complain redressal
		Facility to check citizen data - Bill Dues - Application Status - Payment Status - Renewal Status - Certificates issuance
		Citizen Charter
		NOCs for other govt. departments
		Each complaint's history is easily accessible and provides a completely updated status of how a complaint is progressing through the organization and what actions have been taken, if any.
		RTI Application Management
		Assign corrective actions and preventive actions at any appropriate time throughout a complaint's progress
		Provides an easy and strategic method of online recording and tracking customer concerns and complaints.
		The Grievances received from multiple channels such Mobile app, email Whatsapp etc. should be tracked in system
		Dashboard should be available to each user showing number of grievances received, total solved, total solved within time etc.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.4 Hawker Management System

#	Sub Modules	Activities
8.2	Department Expectations	Geo tagging of hawkers zone
		Database of hawkers need to be updated category wise
		The notification should be sent to hawkers for expiry of licenses

#	Sub Modules	Activities
		Reporting mechanism should be proper. The reports should be able to tell the hawkers with expired licenses so that action can be taken against them.
		Dashboard for hawker management system showing details
		Generation of I-Cards for vendors

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.5 Marriage Registration

#	Sub Modules	Activities
1	Department Expectations	The facility should be provided to capture the Aadhaar numbers of the applicant which unique for bride and groom as well as for witnesses
		Facility need to be provided for making online payments
2	Marriage Registration Sub-Module	Create Marriage Registration Application
		Re-issue Marriage Certificate
		Capture of the Photograph of the Applicants & Witnesses
		Scrutiny of the Applications
3	Registrar Module	Create Marriage Registration Application
		Issue Marriage Registration Certificate post approval
		Re-issue Certificate
4	Revenue Module	Fee Collection
5	Approval Module	Review/Modify Marriage Registration Application
		Approve/Reject Marriage Registration
		Generate & Sign Marriage Registration Certificate
		View Reports

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.6 PCMC Service Portal

#	Sub Modules	Activities
	Department Expectations	GIS map and different layers such as hospitals, cinema halls, ATMS etc. need to be made visible to citizens

#	Sub Modules	Activities
		<p>The portal should be updated in such a way that it will be a two way communication where citizens can also share opinions</p> <p>Dashboard for work going on, budget and various other parameters</p> <p>Details information of every electoral ward including GIS, geo fencing and facilities available online</p> <p>Single signing for citizens for all services (Citizen dashboard). Once citizens register on the portal, they will be able to see all the services offered by PCMC e.g. single window will provide property tax, water bill etc. services. Citizens can also raise grievances through same portal and will be able to track details.</p> <p>PCMC Katta: Platform for various groups such bikers, cycle, trekker, music lover etc. will register on portal and others can get information</p> <p>Alerts to be sent to registered members for different situations such disaster, PCMC schemes, epidemic etc.</p> <p>Event wise promotion module for PCMC's various events</p> <p>Blood donation alerts to be sent to the concerned blood group</p> <p>The portal's field will be linked to database such that once any information changes in database, it will be updated automatically on portal. This will help to immediately update information such as HOD's details, FAO's details etc.</p> <p>Simple tab will be designed to capture details of PCMC citizens along with their Aadhaar numbers so that immediate action can be taken in case of emergency</p> <p>It should be designed as per Disability act</p> <p>Information should be available in Marathi and English</p>
8.2	Application Acceptance & Delivery of Outputs	<p>Department-wise categorization</p> <p>Allow system to accept service specific inputs</p> <p>Capture of Mobile No. of Applicant</p> <p>Re-submission of rejected application after compliance</p> <p>Check-list for documents to be submitted along-with application</p> <p>Define citizen charter (list of the officers & duration for service delivery)</p> <p>Fees to be accepted</p> <p>Generate Token of Application acceptance</p> <p>Rejection Note in case of inadequate application</p> <p>Marking the application to Corresponding Department / Ward / Officer</p>

#	Sub Modules	Activities
		Delivery of the output through Internet and CFC SMS alert to applicant upon decision
8.3	Payment Acceptance	Property Tax
		Water Tax
		Licenses
		All Departmental Services
		Tender Document Fees
		All stockholders forms submitted to PCMC with integration to payment gateway must be provided along with online citizen portal
		PCMC Facilities booking (Town-hall, Swimming pool, Zoo, Parks, Planetarium, Guesthouses etc.) – As member or single instance – On first-come-first-serve basis or by draw)
		POS terminal integration
		Any other payment services
		GIS Mapping of the data
		The service portal and Citizen Facility Center System should have same UI, so that citizens as well as CFC employees can use same application to fill and accept the application forms

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.7 Public Auditorium Booking and Broadcast Management

#	Sub Modules	Activities
	Department Expectations	The objective is linking all auditoriums through a common application which would enable the reservations / bookings / scheduling of the programmes at the various municipal auditoriums as well as a possible paid broadcast facility of the live programmes at the venue.
		Details of auditorium such history, fact sheets, rate sheets etc.to be made available online
		Calendar facility should be provided to citizens/Vendor to view the current booking
		Rate master would be fed to system which will calculate the final invoice value

#	Sub Modules	Activities
		<p>Citizens/Vendor should be able to deposit and refund of deposits online</p> <p>Display of tentative amount to be displayed where citizen/vendor will get idea of how much amount will have to pay</p> <p>Cancellation policy mechanism to be included</p> <p>Application should have facilities to change policies in election period</p> <p>Damage recovery policies should be included in application</p> <p>Form should include for ticket selling license</p> <p>Facility should be given to PCMC employee who can postpone the program due to technical glitch such as power failure</p> <p>Alert to applicants via email/SMS</p> <p>Comment tab should be made where applicant can enter information about the item required during performance</p> <p>concession for Senior citizen etc. to be included</p>
		<p>Facility for Department</p> <ul style="list-style-type: none"> - Book the auditorium - View the available slots - Schedule and intimidate the prospective participants of the meeting - Cancel the auditorium booking - Have provision of waitlist

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.8 RTI Online System

Sl. No.	Sub Modules	Activities
		Appeals need to be tracked with its initial token number
		Complete appeal mechanism need to be designed where final verdict of hearing can also be captured
		Single RTI application can be sent to multiple departments
		RTI Act 2005 and related circulars should be available on portal
		SLA should be applicable to all the activities

Sl. No.	Sub Modules	Activities
		Dashboard should be available showing various RTI and centralized dashboard showing all RTI information
8.1	Citizen Help Desk	Facility to lodge New Complaints, Check Status of complain redressal
		Facility to check citizen data - Birth / Death registrations - Bill Dues - Application Status - Payment Status - Renewal Status - Certificates issuance
		Citizen Charter
		The RTIs received from multiple channels such Mobile app, email whatsapp etc. should be tracked in system
		Dashboard should be available to each user showing number of RTIs received, total solved, total solved within time etc.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.9 Sky Sign and Industrial License/ Online Establishment Licensing System

#	Sub Modules	Activities
Department Expectations		The locations of sky signs, businesses, store location etc. need to be geo tagged
		Notifications for expiry of licenses
		Dashboard of status of work
		Public Data entry module need to be implemented
		Proper MIS Report
		Automatic license certificate need to be generated once the payment is made by citizen
		Incomplete form should not be accepted without supporting document
		Linking of licenses with Aadhaar of applicant
		All the operation need to be implemented in Marathi/English
		Refund procedure for double payment
		Mobile application for all category of licenses

#	Sub Modules	Activities
		Automatic penalty calculation Auto generation of license number for all categories NOC for Ganapati, election, Firework shop etc. should be issued through system Digital Certificate with digital signature should be issued
11. 1	Citizen Services	Issue of New License Duplicate License Change in Name of Business Change in Business Transfer of License Renewal Of License Cancellation of License
11. 2	Issuance of License	Capture of License Details - License Holder's Details – One or multiple owners - Capture of Mobile No. / E-Mail ID - License holder's photograph(s) (optional) - Link to Property Number (optional) - License Details – Temporary/ Permanent License, Name of Business, Business Address, Business Details - Trade/ Business Details – License Type, Subtype - multiple levels to define types and sub types. - License type, sub-type, unit of measure wise license amount. Calculation of License Fee License Certificate Digital Signing of certificate and online delivery of certificates
11. 3	Other Departmental Process	Scrutiny of Applications Inspection Entry Generation of Show cause Notice Hearing Reminder Notice for Renewal Cancellation of License/Revoke by Force
11. 4	MIS	License Register List of Defaulters Reminder Notice for Renewal Demand / Collection Register

#	Sub Modules	Activities
11. 5		Reports showing Changes in License Types, Business Partners, Cancellation Licenses, etc.
		Facility to forecast the impact of reduction / deduction of License Fee
		Reports w.r.t. Bills / Notices generated
		E-Mail / SMS to be sent to the owner upon transactions
11. 5	Other Requirements	Data Porting/ Data Entry Suite

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.10 Slum Billing Management

Sl. No.	Sub Modules	Activities
Department Expectations		Geo locations of Slum areas and each dwelling unit covering commercial properties as well such as small shops inside of slum
		BSUP, slum billing, EWS schemes, lottery to be integrated. So that single application will be used to handles all four sub applications
		Facility should be provided to capture the photo of slum owner along with biometric
		Provision for addition of new slums should be provided
		PM AWAJ Yojana portal should be integrated

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.11 Sport Portal

Sl. No.	Sub Modules	Activities
Department Expectations		User should be able to book venue for all kinds of sport's facilities provided by PCMC (Lawn Tennis, Table Tennis, Squash, Gym, Swimming pool etc.)
		Grounds are rented for some time period. Management of that should happen through system.

Sl. No.	Sub Modules	Activities
		All the sport facilities need to be geo tagged. The layers should clearly differentiate PCMC operated and private vendor operated sport's facilities
		Sport's facilities which are provided to companies for conducting their tournaments should be visible on sport portal
		Provision should be made to provide temporary booking for Ganapati festival, fire shops etc. on PCMC grounds and places
		Provision should be made to issue passes to users (Monthly, Quarterly etc.) for the facilities such as Gym, swimming pool etc.
		Smart card should be issued for cashless payment
		The application should be developed in compliance with the PCMC's sports policy
		Competition and their details need to be tracked in system (Competition management)

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.12 Town Planning Management

#	Sub Modules	Activities
1	Department Expectations	The system need to be User friendly
		The printing of maps should be done to the scale
		Facility should be given to change the criteria as per DCR change
		GIS updation rights should be given to department so that any changes need to be done on GIS has to be done in department
		People would be able to get information about reservations, roads etc. after uploading co-ordinates
		Facility should be provided where user can perform valuation of properties
		TDR,FSI generation and utilization for building permission and town planning
3		Department-wise categorization

#	Sub Modules	Activities
	Application Acceptance & Delivery of Outputs	Allow system to accept service specific inputs Capture of Mobile No. of Applicant Re-submission of rejected application after compliance Check-list for documents to be submitted along-with application Fees to be accepted Generate Token of Application acceptance Rejection Note in case of inadequate application Marking the application to Corresponding Department / Ward / Officer Delivery of the output through Internet and CFC SMS alert to applicant upon decision
4	Grievance Monitoring	Licenses All Departmental Services Land Document Fees All stockholders forms submitted to PCMC with integration to payment gateway must be provided along with online citizen portal POS terminal integration Any other payment services
5	Citizen Services (General)	Title Documents NOCs for the required service RTI Application Management Any other services GIS Mapping of the data
6	MIS	SMS alert to applicant upon decision Services Statistics Officer-wise list of services pending beyond the stipulated time
7	Issuing License	Title Document Other relevant documents to close the process

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.11.13 Road Excavation NOC/Permission

Sl. No.	Sub Modules	Activities
1	Department Expectations	Online application form submission facility with document attachment
		Excavation work should be marked on GIS
		Notifications to concerned person of the departments to be sent
		Site inspection facility along with facility to upload site photos for geo locations
		Calculation of fees and collection
		Facility for online payments
		Notifications to local corporators about excavation
		The Module should be integrated with the Service Portal where vendor/citizen can apply for obtaining No Objection Certificate for excavation work
		The application will be processed through workflow management system
		Details of road excavation activities to be posted online for citizens according wards, institutes, years etc.

2.9.2.12 Internal Administration

2.9.2.12.1 PCMC Electric Billing Payment System

Sl. No.	Sub Modules	Activities
1	Department Expectations	Mechanism should be there to upload the bill and obtain details such as meter number, meter readings, consumption details etc.
		Bill should be segregated as per defined criteria defined such as clear, over, below etc.
		Bill details fetching from MSEDC or BU wise bill fetching
		ECS payment facility to be enabled
		Analytics on the consumptions. The system shall indicate locations where consumption is more than allocated
		Approval through Digital signature
		Once a user is superseded by another user, all the consumer details need to be shown to new user

		GIS locations of meters and other electrical assets such as transformers, street lamps, feeders etc.
		Facility shall be given to add new meter or change details of existing meters
		Reports: Meter wise consumptions(Unit, Amount etc.), zone wise etc.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.2 Legal Cases Management System

Sl. No.	Sub Modules	Activities
1	Department Expectations	All courts of India to be added in database. So that cases of filed in another courts can also be tracked in system
		Facility should be provided to enter multiple interim orders from courts. There order can be scanned and uploaded and attached to main case for future reference
		NGT and Co-operative case details should be able to update
		Criminal cases revision should be able to update
		Facility should be provided to change the advocate if it is assigned wrongly to any case
		Cases can be searched by case, advocate, appellant, dates etc.
		Facility should be provided to attach verdict copies which user will be able to download in future
		Payments to advocate to be managed should be managed through system. It should be reflected against case, advocate etc.
		Details such as advocate, payments etc. to be tracked against cases
		Cases which are transferred from one advocate to other to be updated properly
		Notifications to be sent to concerned HOD or person. Even for court dates
2	Legal	System should be able to handle all statutory regulations and maintain the details directly in the screens provided for data entry. All rules related to such acts should be preconfigured in the system.
		Vendor to provide for Legal change patch to take care of any statutory changes

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.3 Municipal Secretariat Management

Sub Modules	Activities
Department Scope	Every Department should be able to put the subjects directly along with summary in agenda
	Date should be automatically changed if any of the committee meeting gets cancelled/postponed
	From Department, agenda should be frozen after HODs digital signature
	Facility should be provided to scan document and upload the document
	Facility should be given to mark subject as for approval or just for information of the committee members
	One should be able to forward subject of one committee meeting to other committees e.g. Subject of standing committee can be forwarded to General Body Meeting
	Ad-hoc Subjects suggested by member during meetings need to be tracked
	Standard format need to be provided to capture MOMs
	Alerts/SMS/Email/Mobile push notifications to be sent to department HODs, committee members etc. Alerts/SMS/Email/Mobile app also to be sent to department's HOD if the subjects included are concerning to their departments
	Verdict of the proceeding should be captured and documented (Static wording; last line of the subject to be changed according to verdict)
Municipal Secretariat Management	Names in MOM should automatically be included from biometric attendance or Face detection
	Monitor the schedule of the meetings
	Alert system

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.4 Security Management

Sub Modules	Activities
Department Expectations	Thumb integrated Key Management system should be there. Issuance and acceptance of keys of departments, vehicles etc. should be done from system.
	The Visitors Management should be implemented like Mantralaya (Maharashtra, Mumbai). It should have facility to mark visitors as notorious etc. so that people coming for riots will be identified and appropriate action would be taken immediately.
	Flexible Duty charts for security guards to be integrated with attendance system
	Mapping of security personnel on GIS along with properties on PCMC. Confidential and internal purpose only
	Automation of Contractor billing ,Form 22
	Database of vehicles of PCMC employees to be maintained. Driver and mobile number to be mapped with vehicles. So that if any of the vehicle is parked in the area where it should not be, owner of such vehicles can be contacted immediately.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.5 BSUP

Sub Modules	Activities
Department Expectations	All the forms should be accepted online where the system will validate the eligibility of applicant. If applicant is not eligible to obtain benefit for the scheme, the system should not accept it.
	The system should be intelligent enough to identify if the applicant is taking multiple benefits
	No single person should get multiple benefits of PCMC schemes
	Alerts need to be sent to applicants at various stages and notifications about acceptance and rejection of application
	Mechanism should be there for the adjustment of benefit value where if a person is eligible for two schemes; one of PCMC and other of any external organization. E.g. if a person gets benefit of Rs 600 under central government scheme and 2000 for PCMC's scheme, the benefit of PCMC scheme will be adjusted to Rs 1,400.

Sub Modules	Activities
	Biometric database of repetitive beneficiaries which obtain benefit after producing the “हयातीचा दाखला”
	System should be able to provide reports as per scheme, caste etc.
	CFC and system should not accept forms for the lack of documents
	GIS mapping of bachat gats with analytics to identify bachat gats where benefits are provided

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.6 Vehicle Workshop Management

The workshop maintains a History Book for each vehicle which gives the summary of all the costs and work performed on the vehicle right from the time of purchase of the vehicle till it is disposed off. The History Book of each vehicle is maintained in a separate book identified by the registration number of the vehicle.

Each of the PCMC departments has certain vehicles at its disposal for official use. The vehicles need to be serviced regularly. For that they need proper repair and maintenance work from time to time. When a vehicle malfunctions, the driver of that vehicle raises a request of repair to the concerned department and gets the required approval from the department before handing over the vehicle to the workshop department along with the approval letter. Once handed over to the workshop, the Security Personnel makes an ‘IN’ entry of the vehicle in the Workshop’s log book. A Fitter then examines the vehicle’s problem as per the problem mentioned by the driver in his repair request letter and determines the nature of work that needs to be performed and records it on the ‘Job Card’. The work depending upon the type will either be performed by the Workshop Department itself or the appointed Contractor. The Fitter during the course of inspection can suggest some more work that needs to be done on the vehicle. Such suggestions if any need prior approval from the concerned department before any work can be done on the vehicle. Once the repair/maintenance work is performed, the fitter will inspect the work and if the issue is resolved, will let the concerned department know that the vehicle is ready. The driver will then take custody of the vehicle and on his way out of the workshop, the Security Personnel will make an ‘OUT’ entry into the log book. The details of the work performed, labor charges and spares consumed charges are recorded in the History Book of the vehicle.

Some specific work types are outsourced by the Workshop department to contractors. The Department calls in tenders for labor charges for specific work orders from the contractors for each vehicle type and then selects one from the submitted applications after careful assessment. The tender procedure is handled by the e-Tender System of PCMC. The Contractor uses spares

during the course of his work. PCMC makes payments for these spares at a predetermined price. The prices are determined from a specific price list released by the OEM (Original Equipment Manufacturer) or authorized vendors. The spare part prices once fixed will remain constant during the contract period. The payments for the spares are made to the Contractor on the basis of this price list. The labor charges are paid as per the rates in the tender. The Contractor has to return the worn out spares back to the workshop. In case he does not, he is fined 40% of the price of the new spare. The bill submitted by the contractor is verified and the due payment is then made to the Contractor. Also if a work order is performed twice in a period of 6 months, the work order along with any spare parts consumed for the work order will not be charged by the Contractor. A similar process is followed by when the workshop does some maintenance/repair work, except no bill is generated. The costs incurred are mentioned on the back side of the respective job card.

Sub Modules	Activities
Department Expectations	Maintain History Book of each vehicle
	Maintain Job Card of each repair & maintenance work carried out by the workshop
	Enable contractors to fill the work order and spare part details online
	Prepare Price List of spares which will be used for bill generation
	Integration with Inventory Management System for workshop
	Allow user to generate a bill for a contractor
	Provision to assign PCMC employees different roles and access rights
	Provision for PCMC Department Users to fill in the diesel consumption details of their respective departments
	e-auction facility for vehicles
	Vehicle in-out entry monitoring along with SLA for repairing work

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.7 School Management System

Sub Modules	Activities
Department Expectations	The system should be able to handle all schools, ITI schools etc. of PCMC including ITI
	The details of students name, marks etc. need to tracked in system
	Marks, Grade etc. information to be captured which will be available to Admin office (Monthly attendance, monthly sessional marks)
	Setup master data for wards, class divisions, school types, exam boards, class, religion, subjects, ward and academic year information
	Provide a mechanism of searching students, schools etc.
	View student's performance data
	Maintain attendance of all students
	Alert to be sent to student if absent for predefined duration
	Issuance of various certificates such as leaving certificate, National Trade Certificate (NTC) etc. to be tracked in system
	View school information and performance in the forms of standard reports generated by the System

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.8 Veterinary Management System

Sub Modules	Activities
Department Expectations	The System will cover OPD and it prescription
	Registered patients vaccination, licenses, certificates, service categories A,B,C,D receipts coming in through daytime OPD.
	The System will also allow Record of prescribed medicine, symptoms, diagnosis and lab and x-ray services and procedures and will continuously generate a bill in the background for all services and procedures administered.
	System will allow billing and receipt entry as well as integration of daily challans
	Challan may have facility to add other collection of department head .All collected amount challan to be sent into PCMC's Financial Accounting System.

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.9 Library Management System

Sub Modules	Activities
Department Expectations	Provide a mechanism of searching available books and magazines using title, author name, or category of the book.
	Facility for Members to log into the system and check if a particular book is issued.
	Impose fines on book receiver considering holidays, exams or special leaves. Complete Penalty management and collection
	Provide a mechanism whereby a librarian can view information of all the books and the status of each book i.e. whether the book is issued or in the library or due, the return date etc.
	The system should show the physical location of books (Issues or in shelf, shelf location etc.)
	Notification to be sent for issue of book, delay in return etc.
	GIS locations of libraries to be mapped on base map with classification of libraries such as sport library, granted non granted etc.
	Citizens should be able to register online and can pay online as well
	Books should be classified

Note: SI is expected to study the functionalities of existing IT applications. Functionalities of applications will be finalized after multiple rounds of discussion with respective department during SRS phase.

2.9.2.12.10 News Rotation Management System

Sub Modules	Activities
Department Expectations	News rotations for each of the departments shall be sent online to Public Relationship Office
	The news format shall be standardized so that estimation of cost can be made for news publishing depending on per area rate of the various news agencies
	The payments to various newspapers shall be tracked through system against the provided budget

2.9.2.13 Dashboard and Business Intelligence (BI)

Each module will have its own dashboard and Business Intelligence tool as per the user access provided. This sections has been divided into two components.

1. Dashboard and BI for GIS ,ERP and work flow management
2. Service Level Benchmarking

2.9.2.13.1 Dashboard and BI for addressing to GIS, ERP and work flow management

1. Once the user (Internal/External) logs in the system, S/he should directly see the dashboard on the screen
2. Every user will have its own dashboard showing the details of pending task application forms, files, grievances received, works etc.
3. Dashboard should show tasks, files etc. with color coding depending on the urgency and importance of that task, file etc.
4. A dashboard should be developed for respective departments and users providing information about various stages of the work like Floating tender, opening of Tender, awarding order, supply details, distribution details and payment details. It should clearly indicate the repetitive works such as tenders for maintenance work etc.
5. Notifications in form of Email and SMS shall be provided for repetitive work before pre-defined tenure
6. Integration with current E-Tendering, Works Dashboard and Accounting system.
7. The functionalities such as drilled down option, analytics, notifications etc. mentioned in section 2.10 will be applicable to all dashboards

2.9.2.13.2 Service Level benchmarking

The detail scope has been covered in section 2.10

2.9.2.14 Enterprise GIS Software Specifications

Refer Annexure-7 for detail specifications of GIS software

2.10 Service Level Benchmarking

Pimpri-Chinchwad Municipal Corporation, aims at creating an integrated and interactive analytical dashboard which would showcase various information/statistics of the municipal services of the concern departments of Pimpri-Chinchwad Municipal Corporation in real time. It is envisaged that this Dashboard would assist the Commissioner and his office in effectively monitoring the performance and progress of above municipal services such as water management, waste management etc.. The Dashboard also shall provide multiple insights on the progress and performance of departments which would help the Commissioner and departments to make policy and high level decisions.

The primary objective is to design and develop and implement a web-based application along with a comprehensive analytics based interactive solution/tool. The Dashboard would be accessible to public and they would be able to view the performance of following four sectors

1. Water supply
2. Sewage
3. Solid waste management
4. Storm water drainage

The Dashboard also aims at improving the efficiency of the departments and removing delays in Service Delivery through effective monitoring of these schemes and departments.

2.10.1 Software Characteristics

1. **All in One Home Screen** – The home screen should give a complete performance outlook of the municipal services (PCMC municipal services at a glance view). It is also recommended that all the visualizations pertaining to all departments fit in a single screen.
2. **Key Performance Indicators** – The solution will display the KPIs of various municipal services and help users monitor the performance through these KPIs.
3. **Animated Dashboard Tiles** – The solution will have tiles displayed which will contain the snippets of key data pertaining to the municipal services.
4. **Public Access** – The dashboard can be accessed by anyone through web. They would be able to see the performance of various municipal services.
5. **Data Fetching and Updating** – Data fetching process can be categorized into two parts:
 1. The solution would have facilities to fetch server data from the required databases and get automatically updated without any assistance from the user through system integration.
 2. The user login for data inputs for those datasets which are physically collected.The frequency of the data updating will vary with the departments and would be decided by the Commissioner. Dashboard data, however, should get updated on a daily basis.
6. **Drill Down View** – The solution will allow users to get the drill down views of various schemes and departments.
7. **Reports** – The solution would have customized reports which would enable the users in decision making.
8. **BI/Analytics** – The solution would have a robust BI/Analytics tool which would enable officers in making data driven decision making.
9. **Multilingual Website** – The solution should be multilingual (English and Marathi)
10. **Email, SMS/WhatsApp Integration** – In order to ensure better reach of updates and status to the users, the system should have email and SMS integration features.
11. **Customizable Public View and Departmental view** – Solution should be able to create views based on profiles like public facing or internal drill down dept. views.

2.10.2 Scope of Service Level Benchmarking

2.10.2.1 Web Designing along with Portal Development

The aim of the project is designing a flexible framework for performance monitoring and graphical or area wise display of various municipal services performance at a glance and parallel to develop a web based portal for displaying performance of various municipal services. The design of home page, data entry screens etc. should be planned and developed. It is proposed that the web site should have the following characteristics.

- a. Aesthetic Layout and Professional Design
- b. Effective Navigation
- c. Mobile Compatibility
- d. Good Performance and Speed
- e. Responsive as well as reliable
- f. Should be scalable
- g. Good Error Handling Mechanism
- h. Contrasting Color Schemes
- i. Browser consistency and compatibility
- j. Faster Load Time
- k. Well Designed and Easy to Use
- l. Optimized for search

The user experience and UI Design should also need to be planned and developed well. The solution should be compatible with Mobiles, tablets etc. for android, iOS and should be flexible enough to support viewing and usage of Dashboard on mobile as well as tablets.

2.10.2.2 Business Requirement Study and SRS

The System Integrator shall do a Business Requirements Study for the various departments of PCMC. SI needs to understand the current processes as to how the departments are monitoring the performance of various municipal services , what are the Key Performance Indicators(Both Physical and Financial Targets), what type of MIS reports are maintained and available and come up with the To-Be processes. The details of the same shall be prepared by the System Integrator and SRS should be prepared.

System Integrator shall prepare detailed System Requirement Specifications (SRS) detailing processes for all modules based on the study done. Additional requirements may be identified in consultation with the Department during the requirement study phase. The system integrator shall prepare the SRS in line with the below mentioned guidelines;

- a. Study and understand the requirements in terms of efficient handling of back end operations, effective delivery of services to its stakeholders, service levels etc.
- b. Document the requirements in the form of SRS documents, Design/Blueprint documents, mapping of proposed solution.

- c. The SRS document shall be accompanied with a detailed Use Case Document of all the processes and functions of departments pertaining to the Municipal services.
- d. The bidder shall submit all the documents in both hardcopy as well as softcopy to PCMC.
- e. The SRS shall have the following details but not limited to:
 - Screenshots, prototypes of the system to be developed
 - List of all validations/ internal controls applicable
 - List & format of MIS reports to be generated
 - List of Standards followed or to be followed
 - Detailed process flow of the entire Business Logic
 - List of all data elements and database requirements
 - Details of interfaces/ integration both external & internal, hardware & software
 - System and processes for capturing attributes of Service Level Agreement (SLA)
 - Various attributes of the application and the mechanism to manage the SLA's;
 - Details of all tools & technologies to be used
 - Integration/ interface requirement with other Departments and external agencies such as Project Management Consultancies, Contractors, Banks, etc.
 - Mechanism for clearly identifying the sources of various types of problems and their mitigation thereof for the entire Analytics Dashboard Solution project
 - Assumptions, dependencies & constraints.

SRS for other modules are also expected to be delivered in similar fashion

2.10.2.3 Integration with existing PCMC systems/MIS

The application should seamlessly integrate with all the department database. Various departments should be able to share the data from their transactional systems or screen enabling input of the requisite data on the portal on real time/ daily / monthly /annual basis (depending on the type of service / data) or as per the agreed frequency with the PCMC. These are to be displayed as reports for the respective scheme / department.

2.10.2.4 Data Cleansing and Formats

It is the responsibility of SI to ensure that the required data, is fetched/collected in the format required. The formats should be agreed with various departments and the required data cleansing must be done before using the data.

For excel/spreadsheets, the formats need to be discussed and agreed with PCMC departments managing municipal services. The users should have provisions to upload the required data through this link periodically. While uploading the data in this manner, if the formats are different from what is agreed upon, the system should throw an error/warning to the user

indicating the same. Additionally, the user should be able to see the preview of the data uploaded.

2.10.2.5 Data Preview and Validation

Whenever a user/system uploads the data, especially through document format (excel/spreadsheet etc.), the Admin user should be able to review the data before finally publishing it on dashboard. Hence, it is recommended that the system should have data preview and validation features. Only once the data are validated by Admin, it could be published in Municipal Service Dashboard.

2.10.2.6 Details of parameters to be tracked

Sl no	Sector	Department involved in data collection and management	Total parameters	Number of parameters supervised by the department
1	Water supply	Water supply department	9	7
		Property tax department		1
2	Solid waste	Health	8	3
		Environment		2
		Property tax department		2
3	Sewage	Water supply	8	1
		Environment		4
		Property tax department		2
4	Storm water Drainage	Civil department	2	2
*Customer grievance redressal is a shared parameter by all the respective department according to the type of grievance and department responsible.				

2.10.2.7 Programme Creation and Data Entry

The system should have provisions for users to login and enter the data sets. The users should be able to enter the municipal service level details, set target and frequency for KPI as well as financials, and enter the progress on a daily/monthly/yearly basis.

2.10.2.8 User set

The Site Inspector and the equivalent shall be responsible for the data entry by the stipulated date and time. The Deputy Engineer and equivalent shall be responsible for the first level review of the data and post-approval shall pass on the same to the Executive engineer for second level review. The Executive engineer shall review the same and pass on to the Commissioner for final decision and actions. The indicative number of users and data process flow has been described below. The proposed data process flow is common for all the four municipal services, only the designation shall vary as per department wise applicability.

#	Sector	Department involved in data collection and management	Designation	Role	Number
1	Water supply	Water supply department	Executive Engineer	Data validation and final approval	3
			Deputy Engineer	Data validation and approval	8
			Junior Engineer	Data collection	32
		Property tax department		Data collection	1
Total manpower involved in water supply					44
2	Solid waste	Health	Executive Engineer	Data validation and final approval	1
			Assistant Health officer	Data validation and approval	10
			Sanitary Inspector& Chief Sanitary Inspector	Data collection	52

#	Sector	Department involved in data collection and management	Designation	Role	Number	
3	Sewage	Environment	Executive Engineer	Data validation and final approval	1	
			Deputy Engineer	Data validation and approval	1	
			Site Inspector	Data collection	1	
			Property tax department		1	
		Total manpower involved into solid waste management			68	
3	Sewage	Health	Executive Engineer	Data validation and final approval	1	
			Assistant Health officer	Data validation and approval	9	
			Sanitary Inspector& Chief Sanitary Inspector	Data collection	47	
		Environment	Executive Engineer	Data validation and final approval	1	
			Deputy Engineer	Data validation and approval	1	
			Site Inspector	Data collection	7	
			Property tax department	Property tax department	1	
		Total manpower involved in sewage management			67	

#	Sector	Department involved in data collection and management	Designation	Role	Number
4	Storm water Drainage	Civil department	Executive Engineer	Data validation and final approval	8
			Deputy Engineer	Data validation and approval	16
			Junior Engineer	Data collection	32
			Total manpower involved in storm water drainage		56
			Total manpower involved from PCMC		

2.10.2.9 Approval and validation

The system should have robust mechanisms to approve/reject data etc. Also, after the approval of Executive Engineer, there should be a provision for Commissioner to review (validate) those and decide whether those should be displayed in the public dashboard or should be rejected.

2.10.2.10 Approval and validation

The dashboard shall be divided into two parts –

1. **Dashboard of PCMC:** All the data sets within dashboard shall be accessible to the concern departments of PCMC for performance evaluation and monitoring of day to day duties.
2. **Dashboard of Citizen:** Among the data sets of the dashboard certain datasets shall be accessible to the citizen, to make them aware regarding performance of the municipal services and which can be helpful in the promotion of the participatory governance in the long run ,by understanding the ground realities and can express them through grievance redressal mechanism.

2.10.3 Design & Built BI/Analytics Dashboard

The application should house a robust BI/Analytics engine. The System integrator should ensure that the BI & Analytics dashboard should have the following design characteristics.

1. Summary view of Departments and Geographic Dashboard (in case of map availability)
2. Use of various types of chart to show analytics (line, bar, pie scatter etc.)

3. Use of heat map, bubble map etc. to display the mapping
4. Various color coding representing high performing indicators and below performing as per the preset benchmark value (source define) of the municipal services.
5. Filtering and selection capabilities can be easily added to reports with common action elements such as drop-down/combination boxes, check boxes and sliders
6. Application of data manipulation tools such as ranking, calculations, formulas and display rules
7. Drill down functionality to source level data
8. Dynamic Search and to find data instantly
9. Geo-clustering and geo-querying capability to identify focus areas & areas that require improvement instantaneously
10. Optimizing for printing and exporting to a digital document format such as Word, Excel or PDF.
11. The application will be independent of Operating System, Browser and the database
12. The application will be open, interoperable, highly scalable and capable of delivering high-performance in varied field conditions.
13. Component-based architecture to enable extensibility of features and functions.
14. Framework choice is based on various factors including scalability, easy to upgrade etc.
15. Accessing the Dashboard in the BI Workspace - The BI tool workspace displays the following tabs for working with a request:
 - Criteria tab- This tab provides access to the columns selected for the request and buttons to access the most common view types.
 - Results tab - This tab allows you to work with the results of the request.
 - Prompts tab - This tab allows you to create prompts to filter the request.
 - Advanced tab - This tab allows advanced users to work with the XML and logical SQL for the request.
16. Each tab contains on-screen information and buttons to help you create, access, and manage requests. On each tab, you can pause your mouse over each button for a description of what it does.
17. Drag-and-drop Interface: Makes it easy for you to quickly create the reports & dashboards you need
18. Flexible Layout & Formatting: Design your dashboards to fit your desired page layout. Add rich formatted text, logos and icons.
19. Interactive Dashboards: Drill down on reports, apply filters, visually highlight data points and do much more.
20. Share & Embed: Easily share dashboards to colleagues or embed them in your intranet, web applications, websites or blogs.

21. Integration: Integrated with other application like SCADA system, Building permission approval system (Auto DCR), Solid Waste Management etc.
22. Export & Email: Export your dashboards in a variety of file formats including HTML. Email them as attachments or schedule them.

2.10.4 Important Components

1. Data Aggregator:-Create input for data models to combine data from different sources.
2. Data Modeler:-Model the data from various sources to be consumed by dashboard components.
3. Services: Serving the data models to dashboard components.
4. Security features: Authentication & Authorization shall include the following:
 - Authorized access to application.
 - Encryption support-Data security over network w.r.t. to communication and data readability.
5. Client Interface
 - Interface to represent user driven dashboards
6. Printing Options
 - Component print: It is possible to print a single component from page such as Chart, Graph, Map or Gauge. A button is provided for each component which opens print dialog for its current state.
 - Screen print: This option opens print dialog for entire dashboard screen containing all components
 - PDF Conversion facility

2.10.5 Functional Characteristics of BI/Analytics Solution

The BI/Analytics solution should have the following functional characteristics to ensure that it supports instant data driven decision making:

- Data Driven Decision Making – The solution should enable data driven decision making through dashboards and reports and also should provide a holistic understanding of departments.
- Drill Down Feature – The solution should have mechanisms to do filtering and drill-downs based on various parameters
- Key Issues Analysis – The solution should aggregate data from numerous internal and approved external sources to provide contextualized understanding of key issues
- Access based action tasking – The portal can be accessed by the Departmental Officials to monitor effectively & take necessary actions if needed.

- Data Update Frequency –The frequency of the data updating will vary with the departments and the data sets. Dashboard data gets updated on a daily /monthly or annual basis.
- Reports –The criteria for the reports would be decided by the Commissioner. The SI needs to model and generate reports as per that. The reports should be available for download for users in various formats (PDF/Excel).
- Filters & Customizing Reports – The Solution should have filters in the reports, which could fetch customized search results. It should also facilitate predicative analytics to enable decision making.
- Root cause Analysis – The Solution should be able to analyse cross departmental performance and identify root causes of Failure.

2.10.6 User management

SI needs to classify the users as per the rights and access to be granted. Each type of user would have different types of rights and they should be able to login only with their credentials. The user should be able to perform only those activities for which rights are granted. There should be controlled access to systems and their components and User Policy should govern the access rights of a particular user.

2.10.7 Change Management & Issue Tracker

The system should have privileges to capture and record the data changes that had taken place. It should capture data additions, changes, and deletions made through the user interface, imports, and database scripts.

2.10.8 Audit trails

The system should capture the audit trails to trace user access and behaviour. It would also help the system to ensure system integrity through verification. Audit trails shall play the role of an audit guard that can monitor; watch resources and other agents, validating those obligations that have been established are respected and/or discharged.

2.11 Unique Smart Address

1. For all the properties where the data already exists, system will create the Digital Door Numbers (DDN) which will be used for all types of communication with PCMC.
2. For the properties missing from the above step, conduct a field survey to assign DDNs. This includes the slums, unauthorized constructions and unorganized areas of the City.
3. The digital Door Number will be critical entity for all types of communication from PCMC. Whenever a citizen submits any application form, s/he has to provide DDN for properties.
4. The DDN should be integrated with other IT applications such as property tax management system, Water billing and collection system, grievance management system etc.

2.12 Scope of Pilot Implementation

The selected bidder will execute a pilot project for one wards or some random areas covering slums, tall buildings, crowded area etc. of PCMC before commencing for the project execution of the complete PCMC area. The final area for the pilot project would be identified after discussion with PCMC stakeholders. The results of the pilot project would be delivered by selected bidder to PCMC stakeholders to get the acceptance to execute the remaining wards. Expected delivery for the sample project for the pilot project:

1. Creation/ Update of base map for selected areas from /Using Satellite image
2. Conduct field survey to capture buildings/property/road feature etc. details (mentioned in the tender document)
3. Survey PCMC area with appropriate technology to capture data for measurements of features
4. Survey PCMC area with sufficient pictures of each Property / structure available in Street/Lane to provide full frontage and all other possible side and rear view images also providing direct view of vertical faces to identify property type and uses (Commercial, Residential, mixed etc.)Property or any other method that can be selected by the Successful Bidder(s) for better result.
5. Integrate PCMC MIS data, base map (CAD) data, Field survey data and visual image data.
6. Perform data analysis and categories PCMC records in different categories and create tags for the same.
7. To generate different tags for deviated properties
8. Conduct survey of navigable roads of PCMC with appropriate technology to generate RMMS card data, DSR (details Survey report) AutoCAD map of road etc.
9. Develop web based application to host and publish the integrated road data (image data, CAD map, RMMS card data).
10. SI has to submit relevant documents for pilot project such as Project Report for pilot work, shape file for base map with layers etc.

2.13 Integration with Existing Systems at PCMC

1. **Bio Matrix-Face Recognition system**

- a. Attendance of All the employee (including PCMC Regular Staff, Daily Wagers, sweepers & Contractual Persons), done through this Face Recognition machine
- b. Leave Management of employee can be get from this software and integrated with Payroll module.
- c. Ability to provide automatic calculation of deductions / earnings based on leave, bonus declaration, Home Loan, Computer loan , tax deductions, Quarter Rent - HRR (person won't be eligible for HRA), etc.
- d. Support attendance entry from various sources such as direct entry, rule-based and automatic (through biometric device /Face Recognition/ swipe card / smart card).

NOTE: To be integrated with Payroll and accounts module. Regular interval data transfer mechanism to be frozen during SRS Phase.

2. SARATHI App and Helpline

- a. Citizens can log complaint via Internet or call on Toll free number from anywhere, no needs to travel.
- b. Centralized system
- c. Auto Escalation
- d. Higher authority can view complaint online
- e. SMS forwarded to PCMC employees for quick resolution
- f. Citizens can view their complaint status online.
- g. Registration of queries/Feedback/Complaints
- h. Allocation of Complaints/Queries to the appropriate department/personnel
- i. SMS Gateway Integration
- j. Facility to Check Status
- k. MIS Generation

3. Control and Command Center

- l. City wide Revenue Dashboard on GIS, Ward wise
- m. City wide Grievance redressal/complain resolution dashboard
- n. ICT Led application such as solid waste management system, SCADA etc. getting developed under Smart City Initiative
- o. To be detailed out in SRS/Blue Print Stage

4. SCADA

- p. Asset Management and Maintenance
- q. Plotting of assets on GIS

5. Building Permission and Approval System

6. Tree Census

7. Hospital Management System

8. Some existing IT systems (Birth and Death Certificate etc.)

Note: API will be provided for any future integration. Facilitation of such API from other parties would be taken care by PCMC

2.14 Data Migration

The selected vendor shall interact and discuss with PCMC/PCSCL and its other stakeholders to finalize the migration of the data available in the databases of the existing IT applications to the new database implemented for the proposed project. The procedure for data digitization and migration activities suggested is as follows:

1. The selected vendor will ensure that the data migration task is completed before shifting to the new application.
2. The selected vendor has to design data migration and acceptance methodology and plan and get it approved from PCMC/PCSCL.
3. Develop own data migration schema etc. as well as procure any software which may be required for data migration at no additional cost to the PCMC/PCSCL.
4. The PCMC/PCSCL shall provide the available data to the supplier for migration purposes. The selected vendor will migrate the existing data and will facilitate the PCMC/PCSCL to verify the migrated data.
5. The selected vendor shall provide checklists for migrated data to PCMC/PCSCL for verification, including number of records, validations (where possible), other controls etc.
6. The selected vendor will submit a report on the quality assurance/control and the process adopted duly ensuring the accuracy in the migrated data (100 % accuracy is required).
7. For Finance and Accounts Department, audit report should be provided. Further, ISO 27001 Audit of the system shall be conducted, cost of which shall be borne by the bidder.
8. Any corrections as identified in the migrated data during Data Quality Assessment and Review shall be addressed by selected vendor at no additional cost to the PCMC/PCSCL. The selected vendor is required to ensure the high accuracy during data digitization exercise and as per the data digitization plan.

2.15 O&M of the Proposed Solution for 5 years after Go-Live

The selected vendor shall be required to provide operations and maintenance services for solution including, but not limited to, production monitoring, troubleshooting and addressing the functionality, availability and performance issues, implementing any system change requests, addressing the incidents/problems raised by the users for problems/bugs in the application, etc.

The selected vendor shall provide for single sign-on facility and keep the application software in high availability mode meeting the requirements defined by the PCMC/PCSCL from time to time based on functional, administrative or legislative priorities, perform any changes and upgrades to applications as requested by the PCMC/PCSCL and required for achieving the project objectives.

Following is the broad scope for maintenance and support functions with regard to software.

Additional Licenses

1. In case of COTS products, PCMC/PCSCL will purchase only a subset of Licenses during the implementation phase.
2. The selected vendor shall be responsible for supply of additional licenses for packaged solution modules or user expansion capacity for developed applications. The selected vendor is required to give a regular feedback to the PCMC/PCSCL on the overall usage of the application software to understand the usage of the already procured licenses/user base/load. Based on this usage statistics and as per project requirement, PCMC/PCSCL will be free to purchase additional ERP Licenses from the bidder at the same unit rate mentioned the Commercial Bid.

IT Infrastructure Management

The selected vendor would be responsible for managing all project IT Infrastructure and maintain required service level to keep IT Infrastructure up and running.

Data Management

The selected vendor would be responsible for extending all possible support to the PCMC/PCSCL staff for Data Management (like Data Entry Screens, Report Generation, Data Analysis, Data Cleansing, etc.). Data could be in English as well as in Marathi. Data should be Unicode compliant and should support Marathi Fonts.

Content Management

The selected vendor would be responsible for carrying out day to day content management as per the requirement of PCMC/PCSCL for the entire project period. Content Management scope would cover both PCMC/PCSCL's intranet and internet based web portal.

Compliance to SLA

The selected vendor shall ensure compliance to uptime and performance requirements of Project solution as indicated in the SLA in the RFP and any upgrades/major changes to the software shall be accordingly planned and implemented by the selected vendor at no additional cost for ensuring the SLA requirements.

Application Software Maintenance

1. The selected vendor shall address all the errors/bugs/gaps in the functionality offered by solution (vis-à-vis the FRS and SRS signed off for the Project) at no additional cost during the operations and maintenance period.
2. For performing any functional changes to system that are deviating from the signed-off Functional Requirements/System Requirements, a separate Change Request shall be raised by the selected vendor and the changes in the software shall be implemented

accordingly. The time period for implementation of change shall be mutually decided between the selected vendor and the PCMC/PCSCL.

3. The selected vendor has to carry out all change requests at no additional cost and no additional efforts. However, all the changes need to documented and submitted to PCMC/PCSCL for the future use.

Problem Identification and Resolution

1. Identification and resolution of application problems (e.g. system malfunctions, performance problems and data corruption etc.) shall be part of the selected vendor's responsibility.
2. The selected vendor shall also be responsible to rectify the defects pointed out by the Project Monitoring Body to be setup by the PCMC/PCSCL and carry out the enhancements suggested by such body, as a result of the feedback, during the O&M period. This shall be at no additional cost to the PCMC/PCSCL, in so far as the enhancements relate to items of work falling within the purview of the defined Scope of Work for the selected vendor.

Software Change and Version Control

1. All planned changes to application systems shall be coordinated within established Change Control processes to ensure that:
 - Appropriate communication on change required has taken place
 - Proper approvals have been received
 - Schedules have been adjusted to minimize impact on the production environment
2. The selected vendor shall define the Software Change Management & Version Control process and obtain approval for the same from the PCMC/PCSCL. For any changes to the software, the selected vendor has to prepare detailed documentation including proposed changes, impact to the system in terms of functional outcomes/additional features added to the system etc. The selected vendor is required to obtain approval from the PCMC/PCSCL for all the proposed changes before implementation of the same into production environment and such documentation is subject to review at the end of each quarter of operations and maintenance support.
3. In case of any upgrades in hardware, OS and system software, the selected vendor will have to migrate the solution on new solution. All patches and/or upgrades which are released by respective OEM for all supplied software must be carried out within 15 days, so as to keep the entire software landscape for GIS Enabled ERP solution up-to-date.
4. All software changes may be suggested by PCMC/PCSCL or due internal process change for vendor need to be strictly documented

Maintain Configuration Information

Maintain version control and configuration information for application software and any system documentation.

Maintain System Documentation

Maintain and update documentation of the software system. Ensure that:

1. Source code is documented
2. Functional specifications are documented
3. Application documentation is updated to reflect on-going maintenance and enhancements including FRS and SRS
4. User manuals and training manuals are updated to reflect on-going changes/enhancements
5. Standard practices are adopted and followed for version control and management

2.16 Deployment and Supervision of Personnel during O&M Period

1. The selected vendor shall be responsible for sourcing of the personnel and the management of all matters relating to such personnel, to carry out the responsibilities assigned to the selected vendor under the agreement with the selected vendor. In particular, these include:
 - Recruitment of the personnel possessing the qualifications prescribed in the RFP
 - Training of the personnel
 - Payment of salaries and benefits to the personnel
 - Meeting all statutory obligations/payments arising out of engaging the personnel
 - Meeting all the liabilities arising out of the acts of the personnel
2. All staff deployment by the selected vendor must be done in concurrence with PCMC/PCSCL.
3. During the course of the contract, if it becomes necessary to replace any of the key personnel due to any reason (including competence, nature, behavior, characteristic and knowledge), the selected vendor shall forthwith with due approval from PCMC/PCSCL, provide as a replacement, a person of equivalent or better qualifications and experience than the resource being replaced / or proposed in the bid.
4. The team proposed in the proposal should be on the rolls of the selected vendor(s) at the time of submission of the proposal. For any change of the resource or any resource being proposed for operations, the selected vendor should have to submit the CV of the resource, at least 2 weeks in advance for PCMC/PCSCL to decide on the replacement.

5. The selected vendor must ensure that the minimum number of personnel proposed in the RFP is available. However, the selected vendor is expected to provide information on the different levels of resources proposed for the project. The selected vendor is expected to estimate the requirements of resources considering the requirements provided in this tender and to implement it successfully. In case to expedite the implementation process or to support during deployment phase, vendor has to deploy additional resource at no cost.
6. It may also be noted that the selected vendor shall be required to deploy separate teams for Project Management, Design & Deployment and Operations & Maintenance, the details of which have to be provided by the selected vendor in the response.
7. All the concerned staff shall log attendance on a daily basis at their respective reporting location. In case of requirement of leave, the concerned staff shall seek the permission of Department of IT or the nominated authority. All concerned staff may be required to work beyond working/office hours of PCMC/PCSCL & the bidder and on holidays too, in case there is such need.
8. For all resources (i.e. employees) which are deployed on this project by the selected bidder, the salaries of such employees must be paid to their savings bank account (i.e. electronic disbursal of salary). The bidder has to submit such declaration signed by CFO (or equivalent) of the parent organization of the employee if demanded by PCMC/PCSCL
9. Bidder/SI shall bring all the required IT and Non- IT infrastructure for undertaking this activity. PCSCL shall only provide electricity, furniture and sitting space
10. The responsibilities and qualification requirements for the mandatory resource personnel are specified below and must be met by the selected vendor:

#	Role	No of manpower Support	Location during Implementation Phase
1	Project Manager	1	Onsite, Full time
2	GIS Integration Expert	1	Onsite, Full time
3	Database Administrator	1	Onsite, Full time
4	Server Administrator-ERP	1	Onsite, Full time
5	Server Administrator-GIS	1	Onsite, Full time
6	ERP Developer [#]	20	Onsite, Full time

#	Role	No of manpower Support	Location during Implementation Phase
7	GIS Developer##	5	Onsite, Full time
8	GIS Analyst###	10	Onsite, Full time
9	Mobile App Developer####	3	Onsite, Full time

- #: Min 20 ERP Developer required on-site. However, it is SI's responsibility to deploy additional manpower to achieve the milestone in time
- ##: Min 5 GIS Developer required on-site. However, it is SI's responsibility to deploy additional manpower to achieve the milestone in time
- ###: Min 10 GIS Analyst required on-site. However, it is SI's responsibility to deploy additional manpower to achieve the milestone in time
- ####: Min 3 Mobile App developer required on-site. However, it is SI's responsibility to deploy additional manpower to achieve the milestone in time

Manpower during O&M phase

#	Role	No of manpower Support	Location during O&M Phase
1	Project Manager	1	Onsite, Full time
2	GIS Integration Expert		
3	Database Administrator	1	Onsite, Full time
4	Server Administrator-ERP	1	Onsite, Full time
5	Server Administrator-GIS	1	Onsite, Full time
6	ERP Developer	15	Onsite, Full time
7	GIS Developer	3	Onsite, Full time
8	GIS Analyst	10	Onsite, Full time
9	Mobile App Developer	1	Onsite, Full time

2.17 Capacity Building and Training

1. Selected vendor should impart end user training to PCMC/PCSCL users on solutions being rolled out phase wise to allow end users to effectively and efficiently use the application system to support business processes. Selected vendor should provide solution specific training manual for the training sessions.
2. Selected vendor should impart training to different users as stipulated below on usage and implementation of the features of the proposed products. Selected vendor should provide Training Manuals covering product features specific to PCMC/PCSCL requirements.
3. Selected vendor should update the Training Manuals, Procedures Manual, Deployment/Installation Guides etc. to reflect the latest changes to the solutions implemented.
4. All training manuals shall be prepared in English and Marathi.
5. Selected vendor should ensure necessary environment setup, data creation to conduct end user training.
6. PCMC/PCSCL shall provide the necessary infrastructure such as training classrooms to conduct the end user training.
7. Based on the identified education and training needs, selected vendor should provide efficient delivery mechanisms and trainers. Selected vendor should appoint trainers and organize training sessions on a timely basis and ensure that the attendance and performance evaluations are recorded.
8. The Vendor should also facilitate training to new joinee, promoted employees, transferred employees etc.
9. Selected vendor would be required to provide training videos/Computer Based Training (CBT) material to PCMC/PCSCL which may later be used by PCMC/PCSCL to train other trainees on its own.
10. Performance of selected vendor during these trainings should be assessed based on the trainee feedback collected for each training course. Selected vendor should design the trainee feedback template in consultation with PCMC/PCSCL. Selected vendor should provide, collect and collate the trainee feedback and submit the Trainee Feedback Report to PCMC/PCSCL. Individual trainee feedback should also be submitted as part of this report.
11. The trainers imparting the training should be well versed in Marathi and English language.
12. Training shall also be provided for teaching the basic trouble shooting activities in case of problems.
13. The location of the training sessions shall be decided by PCMC/PCSCL after discussions with the selected vendor.
14. Selected vendor will design different training curriculum for different Grades of employees. The training for Grade 1 employees needs to be more business focused, training material for Grade 2 should be more functional and for Grade 3. The tentative batch sizes would be as follows:

#	Grade	No of Employees per batch
1	Grade 1 and Grade 2	25
2	Grade 3	50

15. The SI should make sure of necessary arrangements to provide trainings to users during O&M phase as well. This is necessary due to continuously transfer of manpower amongst departments.
16. The SI should arrange refreshers training of all modules at least once in a quarter for complete project duration.
17. Once users start using ERP, GIS and Workflow Management System, they may face issues while handling these system during initial days. In order to address users queries, the SI shall setup helpdesk.

2.18 Work Products/Documents/Reports

(For each Phase/Stage of the Project (wherever applicable)

Deliverables	<ul style="list-style-type: none"> • Business Process Re-engineering <ul style="list-style-type: none"> ○ As-is process mapping ○ To-Be process recommendations • Software Requirement Specifications (SRS) and Functional Requirement Specifications(FRS) meeting all the Business and Functional Requirements • System Design Document (SDD)/Process Design Report meeting all the Technical requirements of the PCMC/PCSCL incorporating all the functional specifications and standards. • Implementation <ul style="list-style-type: none"> ○ Implementation Plan including data migration, user training and rollout plan ○ User Manuals ○ Training Manuals ○ FAQ and Trouble Shooting Guide • Testing Stage <ul style="list-style-type: none"> ○ Performance Testing and Load Testing Report ○ User Acceptance Certificates of all the modules ○ Owners/Head of Department of all the associated Departments of PCMC/PCSCL. ○ Integration Test Cases with Results ○ System Test Cases with Results ○ Installation Manuals ○ API documentations • Warranty Support <ul style="list-style-type: none"> ○ Defect/Bugs Log with Resolution ○ Consolidated List of Common Errors and their Resolution
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	<ul style="list-style-type: none"> • Requirements Change Management <ul style="list-style-type: none"> ○ Change Request Log ○ Impact Analysis including changes in effort and schedule • End User Support <ul style="list-style-type: none"> ○ Defect/Bugs Log with Resolution ○ Consolidated List of Common Errors and their Resolution • Release Plan and Release Note
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2.19 User Acceptance Testing

User Acceptance stage will be deemed to be successful on the timely completion of the following User Acceptance activities:

1. Selected vendor to assist the PCMC/PCSCL to develop user acceptance test cases
2. Selected vendor shall deploy the solution in the test environment
3. Selected vendor shall resolve the defects/bugs identified during testing
4. Selected vendor shall re-test the solution to ensure closure of identified defects/bugs
5. Selected vendor shall assist the users during acceptance testing
6. After the defects are resolved, selected vendor shall deploy the solutions on the production environment. The solution will be monitored under production use for a pre-defined period of time for satisfactory performance of the solutions
7. In case of any performance issues during this period, selected vendor shall resolve the issues identified on a priority basis

2.20 Incident Management

It deals with service issues, and with all other service and user requests recorded by a support personnel. It also monitors the completion of requests by the service desk or by all other service units. Finally, Incident Management has the task of informing the service requester on the status of a service request. The selected vendor must follow ITIL/ISO 20000 incident management process for duration of the contract.

#	Processes to be followed to deliver services
1	Every incident and all required data is recorded.
2	Every incident runs through a set of standardized activities and procedures, in order to ensure effective and efficient processing.
3	Every incident is categorized and prioritized regarding its (potential) impact and urgency, in order to schedule its resolution in a business-oriented way.
4	Functional and hierarchical escalation procedures shall be in place in order to ensure that each incident is investigated by qualified members of staff, either by internal or external experts.
5	Record shall be maintained for analytics on request raised, time to solve them etc.

2.21 Change Management

A well-defined and controlled process leads to the effective handling of these changes. Change Management is triggered every time a request for change is received from stakeholders who make such requests. Each requested change is classified by determining its priority and impact, and afterwards the responsible change authority decides on the approval or dismissal of the change. Change Management coordinates the incidental tasks in the context of change building, testing and release. For this purpose, close collaboration between Change Management and Project, as well as Release Management, is critical for the success of this process. The selected vendor must follow ITIL/ISO 20000 change management process for duration of the contract.

#	Processes to be followed to deliver services
1	Every change and all required data is recorded.
2	Every change runs through a set of standardized activities and procedures in order to ensure effective and efficient processing.
3	Every change with a risk to normal service operation is carefully assessed and sufficiently tested to avoid service disruption or degradation of service quality, in particular in terms of SLA deviations.
4	All change request shall be documented and submitted to the concerned department after their approval
5	Every implemented change is documented and reviewed.

2.22 Service Request Management

The duty of providing information to the user is part of the Service Request Management controls. The most important actor in the Service Request Management is the function support personnel. The Service Desk is basically responsible for the Acceptance, Classification and also handling of request. The selected vendor must follow ITIL/ ISO 20000 service request management process for duration of the contract.

The SI shall setup the helpdesk to resolve the queries raised by users and help them to get hands on the IT applications.

2.23 Problem Management

The objective of Problem Management is to remedy incidents permanently. This objective is achieved by reactive and preventive actions:

- Reactive Problem Management analyses the issued reasons for incidents and develops proposals on avoiding those reasons.
- Preventive Problem Management supports the prevention of incidents before they occur and before they can become a major incident. This is achieved by analyzing IT services for their weak points and providing proposals to remove those weaknesses.

Moreover, Problem Management performs continuous quality improvement of IT infrastructure by preventing Incidents, locate, record, track and solve structural defects, Develop a “Knowledge Database”, Submits a Request for Change (RFC) to improve the IT infrastructure. The purpose of Problem Management is to establish standardized procedures which will analyze IT-services on their possible weaknesses in their delivery of defined SLAs and analyze incidents that might develop into major issues for the defined IT-services.

Problem Management contributes to an integrated Service Management approach by locating the root causes of problems, and consequently preventing incidents. The selected vendor must follow ITIL/ISO 20000 problem management process for duration of the contract.

2.24 Release Management

Release Management aims to provide new or to update services and change requests defined Change Management for the production environment. It also aims to assure their integrity and functionality as defined by the Service Description. Release Management is only triggered by the Change Management process. The selected vendor must follow ITIL/ISO 20000 release management process for duration of the contract.

2.25 ISO 27001 Certification

First ISO 27001 certifications should be obtained before Go-Live and every year during O&M period. The cost of ISO 27001 certification shall be as per the total charges quoted in the commercial bid. In case of repeat exercise for certification, no additional charges shall be paid to the selected bidder.

2.26 Project Timelines and payment milestones

Activity	Timeline (Weeks)	Distribution	Combined	% of Total Project cost excluding license costs
Resource Mobilization	T+4			0.00%
Preparation of BPR document	T+16	As-is process and Gap Analysis Report	2.00%	1.00%
		To-be process documentation		1.00%
FRS and SRS documents	T+28	Financial Management System	3.25%	0.25%
		Human Resources Management System		0.25%
		Asset Management System		0.25%
		Procurement Management System		0.25%
		Inventory Management System		0.25%
		Program/ Project Management System		0.25%
		Digital Workflow Management System		0.25%
		GIS Portal		0.25%
		Property Tax Management System		0.25%
		Water Billing and collection management system		0.25%
		Citizen Services		0.25%
		Internal Administration		0.25%
		Service Level Benchmarking		0.25%
Part-1: Submission of various Survey details(Door to Door, Property etc.) for one complete property tax zone Part-2: Submission of Base Map for	T+20		0.40%	0.40%

Activity	Timeline (Weeks)	Distribution	Combined	% of Total Project cost excluding license costs
one complete ward				
Part-1: Checking of submitted details of survey by Revenue Inspectors and rectification of errors if any Part-2: Verification of Base Map for one complete ward	T+24		0.60%	0.60%
IT Architecture design (Overall System Architecture, Infra. Architecture, Entity Diagrams etc.)	T+32		1.00%	1.00%
Data Migration	T+40	Core Module	2.00%	1.00%
		Non-core modules		1.00%
Development of Software Modules	T+52	Core Module	0.00%	
		Non-core modules		
		Work flow management		
		GIS Portal		
		Service Level Benchmarking		
Completion of Survey (Door to Door,LiDAR or equivalent to LiDAR) for remaining wards as per zones (0.2 % upon	T+52	Property Tax Zone-2	18.00%	1.20%
		Property Tax Zone-3		1.20%
		Property Tax Zone-4		1.20%
		Property Tax Zone-5		1.20%
		Property Tax Zone-6		1.20%
		Property Tax Zone-7		1.20%
		Property Tax Zone-8		1.20%
		Property Tax Zone-9		1.20%

Activity	Timeline (Weeks)	Distribution	Combined	% of Total Project cost excluding license costs
submission of survey details 1.0% Upon checking by Concerned Officer and rectification of errors if any for each property tax zone)		Property Tax Zone-10 Property Tax Zone-11 Property Tax Zone-12 Property Tax Zone-13 Property Tax Zone-14 Property Tax Zone-15 Property Tax Zone-16		1.20% 1.20% 1.20% 1.20% 1.20% 1.20% 1.20%
UAT	T+60	Core Module (0.2% for 6 core sub module each) Non-core modules (0.04% for 25 noncore sub modules each) Work flow management GIS Portal Service Level Benchmarking	3.20%	1.20% 1.00% 0.50% 0.20% 0.30%
Final Base Map preparation	T+56		1.25%	1.25%
Data migration and publishing on Web GIS Portal, UAT of portal	T+60		1.25%	1.25%
Integration among Software Modules (Core, Non-core, Work flow management, GIS Portal,SLB)	T+70		0.00%	0.00%
UAT of integrated modules (Core, Non-core, Work flow management, GIS Portal,SLB)	T+74		2.30%	2.30%

Activity	Timeline (Weeks)	Distribution	Combined	% of Total Project cost excluding license costs
IN-CERT Performance and Security Audit	T+78		0.30%	0.30%
End User Training	T+90	Financial Management System	2.65%	0.15%
		Human Resources Management System		0.15%
		Asset Management System		0.15%
		Procurement Management System		0.15%
		Inventory Management System		0.15%
		Program/ Project Management System		0.15%
		Digital Workflow Management System		0.15%
		GIS Portal		0.15%
		Property Tax Management System		0.15%
		Water Billing and collection management system		0.15%
		Citizen Services		0.50%
		Internal Administration		0.50%
		Service Level Benchmarking		0.15%
Go-Live	T+94	Financial Management System	17.80%	1.50%
		Human Resources Management System		1.50%
		Asset Management System		1.50%
		Procurement Management System		1.50%
		Inventory Management System		1.50%
		Program/ Project Management System		1.50%
		Digital Workflow Management System		1.50%
		GIS Portal		1.20%

Activity	Timeline (Weeks)	Distribution	Combined	% of Total Project cost excluding license costs
		Property Tax Management System		1.20%
		Water Billing and collection management system		1.10%
		Citizen Services (0.1% for each Citizen service sub module as defined in RFP)		1.30%
		Internal Administration (0.15% for each Citizen service sub module as defined in RFP)		1.50%
		Service Level Benchmarking		1.00%
Hand Holding Support	T+118		4.00%	4.00%
O&M			40.00%	40.00%

Note:

1. T= Letter of Intent or Work order date whichever is earlier
2. In case of License cost, amount will be paid as per consumption of licenses within 45 days of receipt of invoice.
3. The 4% of the total project cost will be paid in equal parts in two quarters of hand holding support
4. The Operations and Maintenance cost will be paid quarterly in equal parts over O&M period after submission of satisfactory reports showing compliant to SLAs.

2.27 Service Level Agreement (SLA)

2.27.1 Purpose

The primary intent of Service Level Agreements is to ensure that the system performs in accordance with the defined service levels. Enforcement of SLAs are not meant to be punitive or, conversely, a vehicle for additional fees. This section describes the service levels to be established for the Services offered by the Bidder to PCSCL. The Bidder shall maintain the stated service levels to provide quality service to PCMC/PCSCL.

There are primarily two types of SLAs:

1. Implementation Service Levels
2. Operation Service Levels
 - a. Infrastructure and Application Availability & Performance Service Levels

b. Handholding Support: Application Support Service Levels

2.27.2 Definitions

1. 19x7 shall mean hours between 5AM – 11 PM on all working days excluding Public Holidays or any other Holidays observed by PCMC/PCSCL.
 2. "**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 19x7 timeframe. Further, scheduled maintenance time is planned downtime with the prior permission of PCSCL.
 3. "**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 Primary Data Centre and Data Recovery Centre will be 24x7x365. The total operation time for the client site systems shall be the business hours of PCMC/PCSCL.
 4. "**System or Application downtime**" means accumulated time during which the System is totally inoperable within the Scheduled Operation Time but outside the scheduled maintenance time and measured from the time PCMC/PCSCL and/or its employees log a call with the Bidder team of the failure or the failure is known to the Bidder from the availability measurement tools to the time when the System is returned to proper operation.
 5. "**Availability**" means the time for which the services and facilities are available for conducting operations on the GIS Enabled ERP system including application and associated infrastructure.
- Availability is defined as:**
- $$\{(\text{Scheduled Operation Time} - \text{System Downtime}) / (\text{Scheduled Operation Time})\} * 100\%$$
6. "Incident" refers to any event / abnormalities in the functioning of the any of IT Equipment / Services that may lead to disruption in normal operations of the Data Centre, System or Application services.
 7. The business hours are 10:00AM to 6.00 PM on all working days. The Bidder however recognizes the fact that PCMC/PCSCL offices may require to work beyond the business hours on need basis. The business hours may change as per guidelines of state/Central government.
 8. "Non-Business Hours" shall mean hours excluding "Business Hours".

2.27.3 Applicability

The SLAs are binding to the sole bidder or each of the members of the consortium, in case of consortium

2.27.4 Penalties

A maximum level of performance penalties is established and described in the section:

Severity Level	Penalty as a percentage of Quarterly payment
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9	Event of default and termination as per RFP terms and conditions
8	5.0%
7	4.0%
6	2.0%
5	1.0%
4	0.5%
3	0.4%
2	0.3%
1	0.2%
0	No Penalty

1. Performance Penalty for not meeting a measurement parameter for any two months in consecutive quarters shall result in twice the penalty percentage of that respective measurement parameter in the third quarter for all the three months
2. Maximum Penalty applicable for any quarter shall not exceed 30% of the 'applicable fees' for the respective quarter.
3. Three consecutive quarterly deductions of 30% of the applicable fee on account of any reasons shall be deemed to be an event of default and shall be treated as per the RFP clauses.

2.27.5 Implementation Phase performance levels

#	Measurement	Definition	Target	Penalty
1	Team mobilization and Commencement of Work	SI is expected to mobilize project team for commencement of work Commencement of work would mean reporting and availability of SI's resources at the Purchaser's office for the project within defined period of 21 days and remaining	Within 21 days of issuance of Lol or Contract Agreement, whichever is earliest	Delay of 1 Week = 0.05% of the contract value Delay of 2 weeks = 0.1% of the contract value Delay beyond 3 weeks may lead to termination of the Contract at the discretion of the Purchaser
2	Absence of Resource at Onsite, without prior approval from the purchaser	Deployed resource shall be required to obtain prior written approval from the purchaser before taking leave	Prior Purchaser's approval	INR 25,000 per day per resource

#	Measurement	Definition	Target	Penalty
3	Resource Replacement	SI is expected to deploy the same resource profile or better as quoted in its technical bid at the commencement of the project. SI is expected not to replace the Key Resources during the project implementation period.	Zero Resource Replacement	<p>SI is expected to deploy the same resource profile or better as quoted in its technical bid at the commencement of the project. SI is expected not to replace the Key Resources during the project implementation period.</p> <ul style="list-style-type: none"> • For replacement purpose following manpower will be treated Key Resources <ol style="list-style-type: none"> 1. Project Manager 2. GIS Integration Expert 3. Database Administrator 4. Server Administrator-ERP 5. Server Administrator-GIS <ul style="list-style-type: none"> • Key resources can be replaced with equivalent or higher profiles with prior approval of PCSCL/PCMC only once during project implementation phase i.e. up to

#	Measurement	Definition	Target	Penalty
				<p>Go-Live without any penalty.</p> <ul style="list-style-type: none"> • Replacement of key resources beyond permissible limit would attract penalty of Rs 2,00,000 per resource replacement subject to maximum penalty of Rs 20,00,000. • Other resources can be replaced with equivalent or higher profiles with prior approval of PCSCL/PCMC
4	Project Timelines	The SI has to adhere to the project timelines specified in section 2.26	As per timelines specified in section 2.26	<p>Delay of 1 Week = 0.25% of the respective milestone</p> <p>The upper limit of penalty would be capped at 10% of the respective Payment Milestone value. In case the successful bidder reaches 10% of the respective Payment Milestone value in the form of penalty at any point of time during pre-implementation phase,</p>

#	Measurement	Definition	Target	Penalty
				PCSCL reserves the right to invoke the termination clause.

1. The service levels to be established for the Services offered by the Successful Bidder/SI to PCSCL. The Successful Bidder/SI shall monitor and maintain the stated service levels to provide quality service to PCSCL.
2. The SLAs may be reviewed on quarterly basis as PCSCL decides after taking the advice of the Successful Bidder/SI and other agencies. All changes shall be made by PCSCL in consultation with the Successful Bidder/SI.

2.27.6 Operation and Maintenance Phase

The framework for Penalties, as a result of not meeting the Service Level Agreement Targets is as follows:

1. A quarterly performance evaluation will be conducted using the Quarterly report of that period
2. The performance of the System will be measured for each of the defined service level metric against the minimum service level requirement or the target service level requirement, as the case may be and the violations will be calculated accordingly.
3. The number of violations in the reporting period for each level of severity will be totaled and used for the calculation of Penalties.
4. Penalties applicable for each of the **high severity (H) violations are one (1) % of respective Quarterly payment** to the Bidder.
5. Penalties applicable for each of the **medium severity (M) violations is half percentage (0.5%) of respective Quarterly payment** to the Bidder.
6. Penalties applicable for each of the **low severity (L) violations are Quarter percentage (0.25%) of respective Quarterly payment** to the Bidder.
7. Penalties applicable for not meeting a high (H) severity performance target in two consecutive Quarters on same criteria shall result in additional deduction of 3% of the respective Quarterly payment to the Bidder. Penalty shall be applicable separately for each such high critical activity
8. Penalties applicable for not meeting a medium (M) severity performance target in two consecutive Quarterly periods on same criteria shall result in additional deduction of 2% of the respective Quarterly payment to the Bidder. Penalty shall be applicable separately for each such medium critical activity
9. Penalties applicable for not meeting a low (L) severity performance target in two consecutive Quarterly periods on same criteria shall result in additional deduction of 1% of the respective Quarterly payment to the Bidder. Penalty shall be applicable separately for each such medium critical activity

10. It is to be noted that if the overall penalty applicable for any of the review period during the contract exceeds 25% of the quarterly payment or if the overall penalty applicable for any of the successive Quarterly periods during the contract is above 15%; then PCSCL shall have the right to en cash the Performance Bank Guarantee or terminate the contract or both.

2.27.7 Application Performance SLA

The table below gives details of the Service Levels the Bidder should maintain.

Sr. No.	Service Level Description	Severity of Violation	Measurement								
1	Average Application Response Time	Medium	<p>Average Application Response Time during peak usage hours as measured at any of the locations shall not exceed 3 seconds.</p> <p>The list of critical business functions and peak usage hours will be identified by PCSCL/PCMC during the Detail Design phase.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Average Application Response Time over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 3 sec & <= 5 sec</td><td>2</td></tr> <tr> <td>> 5 sec & <= 8 sec</td><td>4</td></tr> <tr> <td>> 8 sec</td><td>5 for every second increase or part thereof exceeding 8 seconds</td></tr> </tbody> </table> <p>In addition to the above, if the average application response time in any month in the Quarter goes beyond 8s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>	Average Application Response Time over the Quarter	No. of violations to be counted for calculation of penalty	> 3 sec & <= 5 sec	2	> 5 sec & <= 8 sec	4	> 8 sec	5 for every second increase or part thereof exceeding 8 seconds
Average Application Response Time over the Quarter	No. of violations to be counted for calculation of penalty										
> 3 sec & <= 5 sec	2										
> 5 sec & <= 8 sec	4										
> 8 sec	5 for every second increase or part thereof exceeding 8 seconds										
2	Maximum Time for Home Page opening	Low	<p>Maximum Time for Home Page opening during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Maximum Time for Home Page opening over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> </table>	Maximum Time for Home Page opening over the Quarter	No. of violations to be counted for calculation of penalty						
Maximum Time for Home Page opening over the Quarter	No. of violations to be counted for calculation of penalty										

Sr. No.	Service Level Description	Severity of Violation	Measurement										
			> 2 sec & <= 4 sec	2									
			> 4 sec & <= 6 sec	3									
			> 6 sec	4 for every second increase or part thereof exceeding 6 seconds									
			In addition to the above, if the Maximum Time for Home Page opening in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.										
3	Field Navigation – To navigate between the data entry fields in the Screen	Low	<p>Navigation time between data entry fields in the screen as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Field Navigation – To navigate between the data entry fields in the Screen</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 2 sec & <= 4 sec</td><td>2</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>3</td></tr> <tr> <td>> 6 sec</td><td>4 for every second increase or part thereof exceeding 6 seconds</td></tr> </tbody> </table>			Field Navigation – To navigate between the data entry fields in the Screen	No. of violations to be counted for calculation of penalty	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds
Field Navigation – To navigate between the data entry fields in the Screen	No. of violations to be counted for calculation of penalty												
> 2 sec & <= 4 sec	2												
> 4 sec & <= 6 sec	3												
> 6 sec	4 for every second increase or part thereof exceeding 6 seconds												
			In addition to the above, if the Field Navigation – To navigate between the data entry fields in the Screen in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.										

Sr. No.	Service Level Description	Severity of Violation	Measurement								
4	Menu Page after User Login	Low	<p>Menu Page after User Login opening during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Menu Page after User Login opening over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 2 sec & <= 4 sec</td><td>2</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>3</td></tr> <tr> <td>> 6 sec</td><td>4 for every second increase or part thereof exceeding 6 seconds</td></tr> </tbody> </table> <p>In addition to the above, if the Menu Page after User Login opening in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>	Menu Page after User Login opening over the Quarter	No. of violations to be counted for calculation of penalty	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds
Menu Page after User Login opening over the Quarter	No. of violations to be counted for calculation of penalty										
> 2 sec & <= 4 sec	2										
> 4 sec & <= 6 sec	3										
> 6 sec	4 for every second increase or part thereof exceeding 6 seconds										
5	Menu Navigation – To display the menu as per the defined user role and profile	Low	<p>Menu Navigation – To display the menu as per the defined user role and profile opening during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Menu Navigation – To display the menu as per the defined user role and profile over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 2 sec & <= 4 sec</td><td>2</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>3</td></tr> <tr> <td>> 6 sec</td><td>4 for every second increase or part thereof exceeding 6 seconds</td></tr> </tbody> </table>	Menu Navigation – To display the menu as per the defined user role and profile over the Quarter	No. of violations to be counted for calculation of penalty	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds
Menu Navigation – To display the menu as per the defined user role and profile over the Quarter	No. of violations to be counted for calculation of penalty										
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Sr. No.	Service Level Description	Severity of Violation	Measurement								
			<p>In addition to the above, if the Menu Navigation – To display the menu as per the defined user role and profile opening in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>								
6	Map Navigation- Time taken in map rendering with all visible layers (with scale dependency) on using navigation tools.	High	<p>Map Navigation – Time taken to display the map area chosen during navigation with all visible layers and in the desired scale during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <tr> <td>Map Navigation- Time taken in map rendering with all visible layers (with scale dependency) on using navigation tools.</td><td>No. of violations to be counted for calculation of penalty</td></tr> <tr> <td>> 2 sec & <= 4 sec</td><td>2</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>3</td></tr> <tr> <td>> 6 sec</td><td>4 for every second increase or part thereof exceeding 6 seconds</td></tr> </table> <p>In addition to the above, Map Navigation – to display the map area chosen during navigation with all visible layers and in the desired scale in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>	Map Navigation- Time taken in map rendering with all visible layers (with scale dependency) on using navigation tools.	No. of violations to be counted for calculation of penalty	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds
Map Navigation- Time taken in map rendering with all visible layers (with scale dependency) on using navigation tools.	No. of violations to be counted for calculation of penalty										
> 2 sec & <= 4 sec	2										
> 4 sec & <= 6 sec	3										
> 6 sec	4 for every second increase or part thereof exceeding 6 seconds										
7	Screen Navigation – Time taken to navigate from one screen (tab page) to another which does not involve processing in earlier screen during peak usage as measured at any of location shall not exceed 2 seconds.	Low	<p>Screen Navigation - Time taken to navigate from one screen (tab page) to another which does not involve processing in earlier screen during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p>								

Sr. No.	Service Level Description	Severity of Violation	Measurement									
	involve processing in earlier screen		<p>Screen Navigation – Time taken to navigate from one screen (tab page) to another which does not involve processing in earlier screen</p> <table border="1"> <tr> <td>> 2 sec & <= 4 sec</td><td>2</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>3</td></tr> <tr> <td>> 6 sec</td><td>4 for every second increase or part thereof exceeding 6 seconds</td></tr> </table>	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds			
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			In addition to the above, Screen Navigation – time taken to navigate from one screen (tab page) to another in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.									
8	<p>Response time to commit a transaction</p> <ul style="list-style-type: none"> • Simple Complexity • Medium Complexity • High Complexity <p>(Complexity of the transaction to depend on the complexity of the business logic and stored procedures committed at</p>	High	<p>Response time to commit a transaction during peak usage as measured at any of location shall not exceed 4 seconds for Simple transactions, 7 seconds for Medium complexity transactions and 10 seconds for High Complexity transactions.</p> <p>This service level will be measured on a quarterly basis.</p> <p>Penalty for Simple transaction SLA violation</p> <table border="1"> <tr> <td>Response time to commit a Simple transaction over the Quarter</td><td>No. of violations to be counted for calculation of penalty</td></tr> <tr> <td>> 4 sec & <= 6 sec</td><td>2</td></tr> <tr> <td>> 6 sec & <= 8 sec</td><td>3</td></tr> <tr> <td>> 8 sec</td><td>4 for every second increase or part thereof exceeding 8 seconds</td></tr> </table>	Response time to commit a Simple transaction over the Quarter	No. of violations to be counted for calculation of penalty	> 4 sec & <= 6 sec	2	> 6 sec & <= 8 sec	3	> 8 sec	4 for every second increase or part thereof exceeding 8 seconds	
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Sr. No.	Service Level Description	Severity of Violation	Measurement																
	the database level)		<p>In addition to the above, Response time to commit a Simple transaction in any month in the Quarter goes beyond 8s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for Medium Complexity transaction SLA violation</p> <table border="1"> <thead> <tr> <th>Response time to commit a Medium Complexity transaction over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 7 sec & <= 9 sec</td><td>2</td></tr> <tr> <td>> 9 sec & <= 11 sec</td><td>3</td></tr> <tr> <td>> 11 sec</td><td>4 for every second increase or part thereof exceeding 11 seconds</td></tr> </tbody> </table> <p>In addition to the above, Response time to commit a Medium Complexity transaction in any month in the Quarter goes beyond 11s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for High Complexity transaction SLA violation</p> <table border="1"> <thead> <tr> <th>Response time to commit a High Complexity transaction over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 10 sec & <= 12 sec</td><td>3</td></tr> <tr> <td>> 12 sec & <= 14 sec</td><td>4</td></tr> <tr> <td>> 14 sec</td><td>5 for every second increase or part thereof exceeding 14 seconds</td></tr> </tbody> </table> <p>In addition to the above, Response time to commit a High Complexity transaction in any month in the</p>	Response time to commit a Medium Complexity transaction over the Quarter	No. of violations to be counted for calculation of penalty	> 7 sec & <= 9 sec	2	> 9 sec & <= 11 sec	3	> 11 sec	4 for every second increase or part thereof exceeding 11 seconds	Response time to commit a High Complexity transaction over the Quarter	No. of violations to be counted for calculation of penalty	> 10 sec & <= 12 sec	3	> 12 sec & <= 14 sec	4	> 14 sec	5 for every second increase or part thereof exceeding 14 seconds
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Sr. No.	Service Level Description	Severity of Violation	Measurement														
			<p>Quarter goes beyond 14s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>														
9	<p>Response time for Screen with Query Retrieval</p> <ul style="list-style-type: none"> • Simple Query • Medium Complexity Query • High Complexity Query <p>(Complexity of the query will depend on the business logic, size of tables in databases being searched, indexing of database and the way procedures are written to retrieve information)</p>	High	<p>Response time for Screen with Query Retrieval during peak usage as measured at any of location shall not exceed 4 seconds for Simple Query, 7 seconds for Medium Complexity Query and 10 seconds for High Complexity Query.</p> <p>This service level will be measured on a quarterly basis.</p> <p>Penalty for Simple Query SLA violation</p> <table border="1"> <thead> <tr> <th>Response time for Screen with Query Retrieval for a Simple Query over the Quarter</th> <th>No. of violations to be counted for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>> 4 sec & <= 6 sec</td> <td>2</td> </tr> <tr> <td>> 6 sec & <= 8 sec</td> <td>3</td> </tr> <tr> <td>> 8 sec</td> <td>4 for every second increase or part thereof exceeding 8 seconds</td> </tr> </tbody> </table> <p>In addition to the above, Response time for Screen with Query Retrieval for Simple Query in any month in the Quarter goes beyond 8s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for Medium Complexity Query SLA violation</p> <table border="1"> <thead> <tr> <th>Response time for Screen with Query Retrieval for a Medium level transaction over the Quarter</th> <th>No. of violations to be counted for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>> 7 sec & <= 9 sec</td> <td>2</td> </tr> <tr> <td>> 9 sec & <= 11 sec</td> <td>3</td> </tr> </tbody> </table>	Response time for Screen with Query Retrieval for a Simple Query over the Quarter	No. of violations to be counted for calculation of penalty	> 4 sec & <= 6 sec	2	> 6 sec & <= 8 sec	3	> 8 sec	4 for every second increase or part thereof exceeding 8 seconds	Response time for Screen with Query Retrieval for a Medium level transaction over the Quarter	No. of violations to be counted for calculation of penalty	> 7 sec & <= 9 sec	2	> 9 sec & <= 11 sec	3
Response time for Screen with Query Retrieval for a Simple Query over the Quarter	No. of violations to be counted for calculation of penalty																
> 4 sec & <= 6 sec	2																
> 6 sec & <= 8 sec	3																
> 8 sec	4 for every second increase or part thereof exceeding 8 seconds																
Response time for Screen with Query Retrieval for a Medium level transaction over the Quarter	No. of violations to be counted for calculation of penalty																
> 7 sec & <= 9 sec	2																
> 9 sec & <= 11 sec	3																

Sr. No.	Service Level Description	Severity of Violation	Measurement										
			> 11 sec	4 for every second increase or part thereof exceeding 11 seconds									
			<p>In addition to the above, Response time for Screen with Query Retrieval for Medium Complexity Query in any month in the Quarter goes beyond 11s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for High Complexity Query SLA violation</p> <table border="1"> <thead> <tr> <th>Response time for Screen with Query Retrieval for a Complex transaction over the Quarter</th><th>No. of violations to be counted for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>> 10 sec & <= 12 sec</td><td>3</td></tr> <tr> <td>> 12 sec & <= 14 sec</td><td>4</td></tr> <tr> <td>> 14 sec</td><td>5 for every second increase or part thereof exceeding 14 seconds</td></tr> </tbody> </table>			Response time for Screen with Query Retrieval for a Complex transaction over the Quarter	No. of violations to be counted for calculation of penalty	> 10 sec & <= 12 sec	3	> 12 sec & <= 14 sec	4	> 14 sec	5 for every second increase or part thereof exceeding 14 seconds
Response time for Screen with Query Retrieval for a Complex transaction over the Quarter	No. of violations to be counted for calculation of penalty												
> 10 sec & <= 12 sec	3												
> 12 sec & <= 14 sec	4												
> 14 sec	5 for every second increase or part thereof exceeding 14 seconds												
			<p>In addition to the above, Response time for Screen with Query Retrieval for High Complexity Query in any month in the Quarter goes beyond 14s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p>										
10	Reports Generation Response Time <ul style="list-style-type: none"> • Simple Report • Medium Complexity Report 	Medium	<p>Reports Generation Response Time during peak usage as measured at any of location shall not exceed 4 seconds for Simple Query, 7 seconds for Medium Complexity Query and 10 seconds for High Complexity Query.</p> <p>This service level will be measured on a quarterly basis.</p> <p>Penalty for Simple Report SLA violation</p>										

Sr. No.	Service Level Description	Severity of Violation	Measurement																			
	<ul style="list-style-type: none"> High Complexity Report (Time of the report generation will depend on the complexity of the query, no. of parameters fetched, and level of customization required to generate the report) 		<table border="1"> <thead> <tr> <th>Report Generation Response time from a Simple Query over the Quarter</th> <th>No. of violations to be counted for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>> 4 sec & <= 6 sec</td> <td>2</td> </tr> <tr> <td>> 6 sec & <= 8 sec</td> <td>3</td> </tr> <tr> <td>> 8 sec</td> <td>4 for every second increase or part thereof exceeding 8 seconds</td> </tr> </tbody> </table> <p>In addition to the above, Response time to generate a report from a Simple report in any month in the Quarter goes beyond 8s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for Medium Complexity report SLA violation</p> <table border="1"> <thead> <tr> <th>Report Generation Response time from a Medium Complexity Query over the Quarter</th> <th>No. of violations to be counted for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>> 7 sec & <= 9 sec</td> <td>2</td> </tr> <tr> <td>> 9 sec & <= 11 sec</td> <td>3</td> </tr> <tr> <td>> 11 sec</td> <td>4 for every second increase or part thereof exceeding 11 seconds</td> </tr> </tbody> </table> <p>In addition to the above, Response time to generate a report from a Medium Complexity report in any month in the Quarter goes beyond 11s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.</p> <p>Penalty for High Complexity report SLA violation</p> <table border="1"> <thead> <tr> <th>Report Generation Response time from a</th> <th>No. of violations to be counted for</th> </tr> </thead> </table>	Report Generation Response time from a Simple Query over the Quarter	No. of violations to be counted for calculation of penalty	> 4 sec & <= 6 sec	2	> 6 sec & <= 8 sec	3	> 8 sec	4 for every second increase or part thereof exceeding 8 seconds	Report Generation Response time from a Medium Complexity Query over the Quarter	No. of violations to be counted for calculation of penalty	> 7 sec & <= 9 sec	2	> 9 sec & <= 11 sec	3	> 11 sec	4 for every second increase or part thereof exceeding 11 seconds	Report Generation Response time from a	No. of violations to be counted for	
Report Generation Response time from a Simple Query over the Quarter	No. of violations to be counted for calculation of penalty																					
> 4 sec & <= 6 sec	2																					
> 6 sec & <= 8 sec	3																					
> 8 sec	4 for every second increase or part thereof exceeding 8 seconds																					
Report Generation Response time from a Medium Complexity Query over the Quarter	No. of violations to be counted for calculation of penalty																					
> 7 sec & <= 9 sec	2																					
> 9 sec & <= 11 sec	3																					
> 11 sec	4 for every second increase or part thereof exceeding 11 seconds																					
Report Generation Response time from a	No. of violations to be counted for																					

Sr. No.	Service Level Description	Severity of Violation	Measurement										
			High Complexity Query over the Quarter	calculation of penalty									
			> 10 sec & <= 12 sec	3									
			> 12 sec & <= 14 sec	4									
			> 14 sec	5 for every second increase or part thereof exceeding 14 seconds									
			In addition to the above, Response time to generate a report from a High Complexity report in any month in the Quarter goes beyond 14s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.										
11	Look up response time – To display the required GIS data including map and attribute information	High	<p>Loop up response time – To display the required GIS data including map and attribute information during peak usage as measured at any of location shall not exceed 2 seconds.</p> <p>This service level will be measured on a quarterly basis.</p> <table border="1"> <thead> <tr> <th>Loop up response time</th> <th>No. of violations to be counted for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>> 2 sec & <= 4 sec</td> <td>2</td> </tr> <tr> <td>> 4 sec & <= 6 sec</td> <td>3</td> </tr> <tr> <td>> 6 sec</td> <td>4 for every second increase or part thereof exceeding 6 seconds</td> </tr> </tbody> </table>			Loop up response time	No. of violations to be counted for calculation of penalty	> 2 sec & <= 4 sec	2	> 4 sec & <= 6 sec	3	> 6 sec	4 for every second increase or part thereof exceeding 6 seconds
Loop up response time	No. of violations to be counted for calculation of penalty												
> 2 sec & <= 4 sec	2												
> 4 sec & <= 6 sec	3												
> 6 sec	4 for every second increase or part thereof exceeding 6 seconds												
			In addition to the above, if the Look up response time – To display the required GIS data including map and attribute information in any month in the Quarter goes beyond 6s, one (1) additional violation will be added for each such month to the overall violations for this service level in the quarter.										

2.27.8 Handholding Support: Application Support

This service level will be monitored on a monthly basis.

#	Defect	Definition
1	Level 1 Defects	The failure to fix has an immediate impact on PCMC's/PCSCL's ability to service its citizens, user units , inability to perform critical functions or a direct impact on the organization.
2	Level 2 Defects	The failure to fix has an impact on PCMC's/PCSCL's ability to service its citizens, user units/ that while not immediate, can cause service to degrade if not resolved within reasonable time frames.
3	Level 3 Defects	The failure to fix has no direct impact on PCMC's/PCSCL's ability to serve its citizens, user units, or perform critical functions.

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

Service Level Description	Severity of Violation	Measurement								
Application Support Performance	High	<p>95% of the Level 1 defects shall be resolved within 4 business hours from the time of reporting full details. This service level will be monitored on a monthly basis.</p> <table border="1"> <thead> <tr> <th>Performance over the Quarter</th> <th>Violations for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>< 95% &gt;= 90%</td> <td>1</td> </tr> <tr> <td>< 90% &gt;= 85%</td> <td>2</td> </tr> <tr> <td>< 85%</td> <td>3</td> </tr> </tbody> </table> <p>In addition to the above, if the service level in any month in the Quarter falls below 85%, one (1) additional violation will be added for each such month to the overall violations for this service level.</p>	Performance over the Quarter	Violations for calculation of penalty	< 95% >= 90%	1	< 90% >= 85%	2	< 85%	3
Performance over the Quarter	Violations for calculation of penalty									
< 95% >= 90%	1									
< 90% >= 85%	2									
< 85%	3									
Application Support Performance	High	<p>95% of the Level 2 defects shall be resolved within 72 hours from the time of reporting full details.</p> <p>This service level will be monitored on a monthly basis.</p> <table border="1"> <thead> <tr> <th>Performance over the Quarter</th> <th>Violations for calculation of penalty</th> </tr> </thead> <tbody> <tr> <td>< 95% &gt;= 90%</td> <td>1</td> </tr> <tr> <td>< 90% &gt;= 85%</td> <td>2</td> </tr> <tr> <td>< 85%</td> <td>3</td> </tr> </tbody> </table> <p>In addition to the above, if the service level in any month in the Quarter falls below 85%, one (1) additional violation</p>	Performance over the Quarter	Violations for calculation of penalty	< 95% >= 90%	1	< 90% >= 85%	2	< 85%	3
Performance over the Quarter	Violations for calculation of penalty									
< 95% >= 90%	1									
< 90% >= 85%	2									
< 85%	3									

Service Level Description	Severity of Violation	Measurement								
		will be added for each such month to the overall violations for this service level.								
Application Support Performance	High	<p>100% of the Level 3 defects shall be resolved within 120 hours from the time of reporting full details. This service level will be monitored on a monthly basis.</p> <table border="1"> <thead> <tr> <th>Performance over the Quarter</th><th>Violations for calculation of penalty</th></tr> </thead> <tbody> <tr> <td>< 100% &\geq 90%</td><td>1</td></tr> <tr> <td>< 90% &\geq 80%</td><td>2</td></tr> <tr> <td>< 80%</td><td>3</td></tr> </tbody> </table> <p>In addition to the above, if the service level in any month in the Quarter falls below 80%, one (1) additional violation will be added for each such month to the overall violations for this service level.</p>	Performance over the Quarter	Violations for calculation of penalty	< 100% & \geq 90%	1	< 90% & \geq 80%	2	< 80%	3
Performance over the Quarter	Violations for calculation of penalty									
< 100% & \geq 90%	1									
< 90% & \geq 80%	2									
< 80%	3									

2.27.9 Non-Applicability of SLA's

Penalties shall not be levied on the successful bidder in the following cases

1. The noncompliance to the SLA has been solely due to reasons beyond the control of the successful bidder
2. There is a Force Majeure event affecting the SLA, which is beyond the control of the successful bidder

2.28 Hardware

Following particulars will be provided by PCSCL/PCMC

1. Database Server
2. Application Server
3. Virtualization software
4. Antivirus software

SI has to take care of following particulars during entire project duration

1. Operating Systems for servers
2. Middleware
3. All the necessary installation, commissioning, implementation and maintenance of necessary software, applications etc. to run the project
4. GIS desktop software and licenses, if any
5. GIS Server Licenses, if any
6. Hardware for Digital Signature supporting minimum 5000 signatures, if any

2.28.1 Database Servers

2.28.1.1 Database Server Quantity

#	Server	Nos.#
1	Database Server	3 Nos.
2	GIS-Database Server	1 Nos.
3	Image-Database Server	1 Nos.

The distribution provided in the table may change as per the need of the solution

2.28.1.2 Database Server Specification

Category	Minimum Requirement Specifications
CPU	Four numbers of latest generation Intel Skylake Gold 8180M CPU 8180M (38.5M cache, 28 Cores, 56 Threads, 2.50 GHz (205W) 10.40 GT/sec Intel® QPI)
Motherboard	Intel® C621 Series Chipset
Memory	1.5TB DIMMS scalable to at least up to 4.5 TB, using 128GB DDR4 Load Reduced DIMM (LRDIMM) memory modules. Should be

Category	Minimum Requirement Specifications
	capable of identifying and reporting whether genuine OEM memory is installed for system reliability
Memory Protection	Advanced ECC
	Memory mirroring
	Memory online spare mode
Hard Drive	4 x 3.2TB Hot plug Mixed Use SFF SSD drives or better
Storage Controller	Integrated PCIe 3.0 based 12G SAS Raid Controller with RAID 0, 1 with 1GB of Flash backed write cache onboard
Networking features	2 x Dual Port 20GbE Converged Network Adaptor
Interfaces	Minimum of 1 X internal / external USB 3.0 port
Blade Server Connectivity to SAN	Should be provided with 2 x 16 Gbps Dual port Fiber Channel HBA. If the bidder is proposing FCoE connectivity, then bidder needs to provide 4 X 20G FCoE HBA/ports in place of 2 x Dual-port 16Gbps FC HBA over and above 2 x Dual port 20GbE Converged Network Adaptor
Bus Slots	Minimum of 2 Nos. or more of x16 PCIe 3.0 based mezzanine slots supporting Ethernet & FC adapters/Converged Ethernet adapters
Graphics	Integrated G200eh Video Controller
OS Support	Microsoft Windows Server latest version
	Red Hat Enterprise Linux (RHEL) latest version
	SUSE Linux Enterprise Server (SLES) latest version
	Vmware latest version
Antivirus	To be provided along with 3 rd party Anti-Malware, HIPS, Integrity monitoring, Log Inspection providing complete protection for Physical Servers and Virtual Machines

2.28.2 Application Server

2.28.2.1 Application server quantity

#	Server	Nos.#
1	Application Server	7 Nos.
2	GIS-Application Server	1 Nos.
3	Testing & Staging Server	3 Nos.
4	GIS-Testing & Staging Server	1 Nos.

#The distribution provided in the table may change as per the need of the solution

2.28.2.2 Application server Specification

Category	Minimum Requirement Specifications
CPU	Two numbers of latest generation Intel Skylake Gold 8168 CPU 8168 (33M cache, 24 Cores, 48 Threads, 2.70 GHz (205W) 10.40 GT/sec Intel® QPI)
Motherboard	Intel® C621 Series Chipset
Memory	512 GB DIMMS scalable to at least up to 1.5 TB, using DDR4 Load Reduced DIMM (LRDIMM) memory modules. Should be capable of identifying and reporting whether genuine OEM memory is installed for system reliability
Memory Protection	Advanced ECC
	Memory mirroring
	Memory online spare mode
Hard Drive	2 x 900 GB Hot plug 12G SAS SFF hard drives 15K RPM or better
Storage Controller	Integrated PCIe 3.0 based 12G SAS Raid Controller with RAID 0, 1 with 1GB of Flash backed write cache onboard
Networking features	Dual Port 20GbE Converged Network Adaptor

Category	Minimum Requirement Specifications
Interfaces	Minimum of 1 X internal / external USB 3.0 port
Blade Server Connectivity to SAN	Should be provided with 16 Gbps Dual port Fiber Channel HBA. If the bidder is proposing FCoE connectivity, then bidder needs to provide 2 X 20G FCoE HBA/ports in place of Dual-port 16Gbps FC HBA over and above Dual port 20GbE Converged Network Adaptor
Bus Slots	Minimum of 2 Nos. or more of x16 PCIe 3.0 based mezzanine slots supporting Ethernet & FC adapters/Converged Ethernet adapters
Graphics	Integrated G200eh Video Controller
OS Support	Microsoft Windows Server latest version
	Red Hat Enterprise Linux (RHEL) latest version
	SUSE Linux Enterprise Server (SLES) latest version
	Vmware latest version
Antivirus	To be provided along with 3 rd party Anti-Malware, HIPS, Integrity monitoring, Log Inspection providing complete protection for Physical Servers and Virtual Machines

2.29 Backup Solution

The SI is expected to provide backup solution with following configurations:

1. The backup solution shall provide facility to take backups of various IT applications on the frequency defined by PCSCL/PCMC (e.g. instantaneous, hourly, daily, monthly etc.)
2. PCSCL/PCMC may decide to take backup of their data as per their need
3. The proposed Backup Solution should be available on various OS platforms such as Windows and UNIX platforms and be capable of supporting SAN based backup using client footprint instead of media server footprint from various platforms including IBM AIX, HP-UX, Linux, Solaris and Windows.
4. Proposed backup solution shall have same GUI across heterogeneous platform to ensure easy administration.
5. The proposed Backup Solution should support tape Mirroring running concurrently with primary backup. e.g. With the primary volume Backup 4 additional tape copies can be created simultaneously without the need to duplicate 4 copies after the main backup.

6. The proposed backup solution must support standalone tape drive and should not be license feature.
7. The proposed Backup Solution supports the capability to write up to 32 data streams to a single tape device or multiple tape devices in parallel from multiple clients to leverage the throughput of the Drives using Multiplexing technology.
8. The proposed backup solution should allow creating tape clone facility after the backup process which can have different retention policy than first backup set.
9. The proposed Backup Solution has in-built calendar based scheduling system and supports Clustering the Backup Server on Windows, Linux and UNIX.
10. The backup software must use an open format (TAR) for writing backup data to tapes, so that native OS tools can also be used to recover in case the backup application is not available. It will also allow the data backup from one Unix platform to be restored on another platform.
11. The proposed Backup Solution has in-built media management and supports cross platform Device & Media sharing in SAN environment. It provides a centralized scratch pool thus ensuring backups never fail for media.
12. Backup software must support open file backup for Windows & Linux/Unix environment.
13. Backup Software is able to rebuild the Backup Database/Catalog from tapes in the event of catalog loss/corruption.
14. The proposed Backup Solution must support online backup for different type of databases; including Informix, DB2, Oracle, MS SQL, Sybase etc.
15. Backup solution should support Block level incremental backup of database.
16. The backup solution must provide file backup, Bare Metal restore, deduplication, encryption, database online backup, etc with single agent. Multiple agents/clients should not be installed in server to achieve above features.
17. The Proposed backup solution shall provide granularity of single file restore.
18. The Proposed backup solution shall be designed in such a fashion so that every client/server in a SAN can share the robotic.
19. Backup solution must support LAN free backups of clients by using the client footprint. There should not be any need of installing or configuring clients as Media servers/ Storage Server on the client which takes more server resources for backups.
20. Backup Solution shall be able to copy data across firewall.
21. The Proposed Appliance must support backup of all the databases (Proprietary databases such as SAP, Oracle etc. and open source databases such as PostgreSQL etc.)
22. Backup Solution shall support automatic skipping of backup during holidays.
23. Backup solution must have option of immediate recovery/restoration of Virtual machine directly from backed up disk destination.
24. Backup solution must have integration with Vcentre for virtual machine backup reporting.
25. Backup software must support single pass backup in vSphere; it means single backup should be sufficient to restore the whole VMDK image or single file.

26. Backup Solution must support fast/accelerate backup where unchanged blocks should not be scanned in both virtual environment (ESX) and physical environment running heterogeneous platform (Linux & Windows) for flat file backup.
27. Backup solution must have inbuilt data replication feature independent of hardware for creating multiple copy at different locations with different retention.
28. Backup solution must have deduplication feature which can be used with any supported disk hardware.
29. Backup solution must support client, media and target level deduplication. Client deduplication must have database intelligence on MS SQL, Oracle, DB2 and furthermore on all databases as per OEM backup supportability guide
30. Backup solution should not have any special disk (SSD) requirement for Deduplication
31. Backup solution must have integration with System Center Virtual Machine Manager (SCVMM) for Hyper-V virtual machine recovery.
32. Proposed backup solution must support ESX backup in non windows environment, even without the need of windows backup server. There should not be any limitation from media server on supporting number of ESX/virtual guest host per media server
33. Backup software must have inbuilt backup image replication feature for creating multiple copy at different locations for DC-DR requirements and should be configurable through single parent policy.
34. Backup solution must have network resilience feature with WAN optimization; which can be used for remote site backup in case of low bandwidth. It should not be at extra cost and must be without the need of specific vendor hardware
35. Backup software must have fast backup option to reduce backup window in virtual & non virtual environment. It should not be at additional cost and support all major platforms like Windows, Linux & Unix.
36. Backup solution to support Bare Metal Restore to help P2P, P2V, V2V conversion.
37. Instant VM recovery to reduce downtime in case of failed VM restoration from Backup.
38. Single patch upgrade for backup software, backup appliance, file system, security updates
39. Backup solution to support Cloud storage as Backup Target. Viz Amazon S3, Google Neardrive.
40. Backup solution to leverage OST (Open Storage Technology) supported storage features during backup.
41. It should support intelligent policy for VMWARE and HyperV VMs (Discovery and Load Balancing)
- 42. The solution should be supplied with 3 year warranty and 4 year maintenance.**
- 43. All the Bidders need to provide perpetual Capacity Based Licenses only. The appliance capacity shall be 53 TB with backup capacity license for 10 TB.**

Technical Specifications of the Appliance

#	Specifications
1.	Should be able to backup open files on Windows and other OS platforms like RHEL, SUSE Linux, AIX, Solaris & HP-UX
2.	Should support windows 2008/2012 servers and Windows XP and Windows 7 OS platforms
3.	Central administration console must be available through JAVA and it should also have utility to connect from desktop/laptop.
4.	Backup software Should support AD in terms of single user restoration, OS restoration and whole system state. (Granular Restore Technology)
5.	Proposed appliance must support standalone tape drive for backup.
6.	Backup Software must be capable of dedupe various database including Oracle, DB2, Exchange, Sharepoint Informix, Sybase, MS SQL MaxDB etc. and backed up over fiber channel using client binary instead of configuring production machines as Media/storage server.
7.	Appliance Backup software must perform Flat file backup, database backup, Bare Metal Restore, Encryption, deduplication etc with single agent. There should not be requirement of multiple agents installation on production machines.
8.	The proposed single appliance must have disk backup in both Dedupe form and in advance disk (without dedupe) for fast restoration.
9.	The backup Software should have support for 256 Bit AES Encryption.
10.	The backup software should support full integration to virtual environment like VMWare, Microsoft HyperV etc. for the backup and recovery of full virtual machines and the individual files and folders inside them.
11.	Should support single pass backup for faster backup/recovery
12.	Proposed Appliance should be Linux based Operating system and must have security component i.e. Host Intrusion prevention System for data security.
13.	Proposed Linux base appliance must be able to backup VMWare environment without the need of Windows host.

#	Specifications
14.	Proposed appliance and backup software should be from same vendor. Appliance Hardware components, Operating system and backup solution must support by single vendor to avoid multi vendor ownership which results in to daily challenges in later stage.
15.	The backup software should support synthesizing new full backups without the need of taking any full backup from clients, with the help of old full backups and incremental backup images.
16.	The backup software must have integrated advanced backup technologies i.e. deduplication and tape archiving. Deduplication should work with SAS, SATA and nearline SATA. There should not be any dependency of SSD for dedupe backups (in terms of performance)
17.	The Proposed Appliance should support wide range of hardware to connect third party hardware in terms of Tape Drive, VTL if required.
18.	The proposed Appliance should have dual intel xeon six core processor or better with compatible intel chipset.
19.	The proposed appliance should have at least 64 GB RAM installed.
20.	The proposed appliance hardware & software (Operating System and backup software) upgrade and patches must be from single Box OEM to avoid multi OEM management challenges.
21.	The proposed backup solution must have hardware configuration i)4 x 1 Gigabit ethernet ports ii) 2 * 10 GB port iii) 10 * 8 GB FC iv) Expandable to 140 TB v) 64 GB RAM minimum vi) Two cpu each 6 core minimum
22.	The proposed Appliance should have Operating System disk in mirroring and data disk on Raid 6 with Hot spare.
23.	Proposed appliance must have expandable option by adding head & disk unit to 228 TB usable space without the need of Deduplication license if front end data size is not changed. Additional disk space will be utilized for multiple copy with long retention.
24.	The Proposed Appliance must support backup of all the databases (Proprietary databases such as SAP, Oracle etc. and open source databases such as PostgreSQL etc.)

#	Specifications
25.	Proposed backup solution must support ESX backup without the need of any windows environment or backup server. There should not be any limitation of supporting number of ESX server and guest host machines per media server.
26.	Proposed Appliance Backup software must have inbuilt backup image replication feature for creating multiple copy at different locations with different retention. There should not be any dedupe license requirement on hardware and software for keeping multiple copy in multiple location.
27.	Proposed Backup solution should support instant recovery (directly through backed up images) of virtual machines.
28.	Appliance should have WAN Optimization feature for remote backup and replication.
29.	Solution should support Global Deduplication (Client side, Media Server and Target)
30.	Single patch upgrade for backup software, backup appliance, file system, security updates
31.	The Hardware appliance and the software must be from the same OEM

3 Annexures

3.1 Annexure-1: Details of layers in Base map

#	Layer	Feature Type	Attribute Data	Remark
1.	State Boundary	Polygon	ID, Name, Area in Square Meter	
2.	District Boundary	Polygon	ID, Name, Area in Square Meter	
3.	Tehsil / Mandal / Block Boundary	Polygon	ID, Name, Area in Square Meter	
4.	Village Boundary	Polygon	ID, Village Name, Area in Square Meter	
5.	Municipal Boundary	Polygon	ID, Name, Area in Square Meter	
6.	Zone Boundary	Polygon	ID, Name, Zone Number, Zone Name, Area in Square Meter	
7.	Ward Boundary	Polygon	ID, Name, Ward Number, Ward Name, Zone Number, Zone Name, Area in Square Meter	
8.	PMRDA Boundary	Polygon	ID, Name, Area in Square Meter	
9.	Census Gut Boundary	Polygon	ID, Gut Number, State Code, District Code, Sub District Code, Sub District Name, Ward Number, Ward Name, Zone Number, Zone Name, Area in Square Meter	
10.	Slum Boundary	Polygon	ID, Name, Type, Zone Number, Zone Name, Area in Square Meter	Notified Slum Non- notified Slum Squatter
11.	Grids	Polygon	ID, Grid Number	1000m x 1000m
12.	Sub Grids	Polygon	ID, Grid Number, Sub Grid Number	500m x 500m, 250m x 250m
13.	Forest Boundary	Polygon	ID, Name, Area in Square Meter	

#	Layer	Feature Type	Attribute Data	Remark
14.	Road Centerline	Line	Road ID, Type, Road Median (Yes/No), Construction Material, Road Name, Road Number, ownership of Road, number of Lane, Road/Rail Level, Bridges, Fly Over, Culvert, Tunnel, Direction, Width in m (ROW), Length in m,	Road/Rail Level – 0, 1, 2, 3 0=Ground 1=Above Ground Direction-one Way/Both way For Type and Sub Type refer Table Number-1
15.	National Highway	Polygon	ID, Road Name, Road Number	
16.	State Highway	Polygon	ID, Road Name, Road Number	
17.	Major District Road	Polygon	ID, Road Name, Road Number	
18.	Other District Road	Polygon	ID, Road Name, Road Number	
19.	Expressway	Polygon	ID, Road Name, Road Number	
20.	Bypass	Polygon	ID, Road Name, Road Number	
21.	Ring Road	Polygon	ID, Road Name, Road Number	
22.	Service Road	Polygon	ID, Road Name, Road Number	
23.	Major City Road	Polygon	ID, Road Name, Road Number	
24.	Minor City Road	Polygon	ID, Road Name, Road Number	
25.	Other Public Road	Polygon	ID, Road Name, Road Number	
26.	Other Private Road	Polygon	ID, Road Name, Road Number	
27.	BRTS	Polygon	ID, Road Name, Road Number	
28.	Cycle Track	Polygon	ID, Road ID, Road Name, Road Number, Height	
29.	Village road/Other Road	Polygon	ID, Road Name, Road Number	

#	Layer	Feature Type	Attribute Data	Remark
30.	Foot path	Polygon	ID, Type, Road ID, Road Name, Road Number, Construction Material, Width, Height	Paved, Unpaved
31.	Carriageway Divider	Polygon	ID, Road Name, Road Number, Width, Height	
32.	Culvert	Line	ID, Type, Road Name, Road Number	Road, Rail, Other
33.	Tunnel	Polygon	ID, Type, Tunnel Name, Road Name, Road Number, Width, Length	Road, Rail, Utilities
34.	Bridge	Polygon	ID, Type, Bridge Name, Road/Rail ID, Road Name, Road Number, Width, Length	Bridge across river, Over Bridge, Under Pass, Road Bridge across Rail, Subway, Rope bridge
35.	Foot over bridge	Polygon	ID, Type, Road Name, Road Number, Width, Length	Road, Rail, Utilities
36.	Flyover	Polygon	ID, Type, Name, Road Name, Road Number, Width, Length	Road, Rail
37.	Rail Road	Line	ID, Type, Railway Line Name, Length in km	Broad Gauge, Narrow Gauge, Meter Gauge, Metro
38.	River	Polygon	ID, Name of the Waterbody, Length, Area in Square Meter	
39.	Stream/ Nallah	Polygon / Line	ID, Name of the Waterbody, Length, Area in Square Meter	
40.	Canal	Polygon / Line	ID, Name of the Waterbody, Length, Area in Square Meter	
41.	Ponds	Polygon	ID, Name of the Waterbody, Area in Square Meter	
42.	Lake	Polygon	ID, Name of the Waterbody, Area in Square Meter	

#	Layer	Feature Type	Attribute Data	Remark
43.	Tank	Polygon	ID, Type, Name of the Waterbody, Area in Square Meter	Overhead Tank, On Ground
44.	Drainage	Line	ID, Length,	
45.	Strom Water Line	Line	ID, Length,	
46.	Island	Polygon	ID, Type, Name of the Waterbody, Area in Square Meter	River, Lake
47.	Reservoir	Polygon	ID, Name of the Waterbody, Area in Square Meter	
48.	Back Water	Polygon	ID, Area in Square Meter	
49.	Building Footprint	Polygon	ID, Building Name, Type, Sub Type, Ward Number, Zone number, Locality Name, Colony Name, Number of floors, Number of Household, Construction Type, ownership of Property, Description,	For Type and Sub Type refer Table Number-2
50.	Vacant Land	Polygon	ID, Name, Zone Number, ownership of Property, Zone Name, Area in Square Meter	Vacant land property
51.	Hutment	Polygon	ID, Name, Area in Square Meter	
52.	Property Tax Zone/ Ward Boundary	Polygon	ID, Name, Zone Number, Zone Name, Area in Square Meter	
53.	PCMC Land and estate	Polygon	ID, Name, Zone Number, Zone Name, Area in Square Meter etc.	Identified PCMC land and estate
54.	Public Bicycle Sharing Location (PBS)	Point	ID, Name, Zone Number, Zone Name, Area in Square Meter etc.	

#	Layer	Feature Type	Attribute Data	Remark
55.	Land use/Land cover	Polygon	ID, Type, Sub Type, Name, Area in Square Meter, Square Meter	For Type and Sub Type refer Table Number-3
56.	DGPS Points	Point	ID, Point No, Latitude, Longitude, Elevation, Locality	co-ordinate in degree decimal, UTM, and Meter
57.	Contour	Line	ID, Height	2m,5m, 10m, 20m
58.	Elevation model & Elevation Profile	Raster	-	
59.	Landmarks	Point	ID, Type, Name, Ward Number, Zone Number, Locality	
60.	Electrical Poles/ Street Light	Point	ID, Type, Road Name, Road ID, Pole Height, Ward Number, Zone Number, Locality, Height	
61.	Transformer	Point	ID, Type, Road Name, Road ID, Ward Number, Zone Number, Locality	
62.	Feeder Pillar	Point	ID, Type, Road Name, Road ID, Ward Number, Zone Number, Locality	
63.	Signal	Point	ID, Type, Road Name, Type, Road Name, Road ID, Ward Number, Zone Number ,Chowk, Locality, Height	
64.	Electric Sub station	Point	ID, Type, Road Name, Type, Road Name, Road ID, Ward Number, Zone Number , Locality	
65.	Manhole	Point	ID, Road Name, Ownership, , Road ID, Depth,	

#	Layer	Feature Type	Attribute Data	Remark
			Diameter/ length & Width, Ward Number, Zone Number, Locality	
66.	Hoardings	Point	ID, Type, Road Name, Road ID, Length, width, Ward Number, Zone Number, Locality	
67.	Traffic Sign	Point	ID, Type, Road Name, Road ID, Ward Number, Zone Number, Locality, Height	
68.	Railing	Line	ID, Type, Road Name, Road ID, Length, Ward Number, Zone Number, Locality	
69.	Gantry Sign	Point	ID, Type, Road Name, Road ID, Length, width, Height From Road, Ward Number, Zone Number, Locality	
70.	Kerbing	Line	ID, Type, Road Name, Road ID, Length, Height, Ward Number, Zone Number, Locality	
71.	Bus Stops	Point	ID, Type, Road, Bus Stop number, Bus Stop Name, Road ID, Ward Number, Zone Number, Locality	
72.	Electrical Lamps	Point	ID, Road Name, Road ID, Ward Number, Zone Number, Locality	
73.	Fire hydrants	Point	ID, Road Name, Ownership, , Road ID, Ward Number, Zone Number, Locality	
74.	School	Point	ID, Type, Name, Ownership, , Ward Number, Zone Number, Locality	Pre Primary School, Primary School, Secondary School
75.	College	Point	ID, Type, Name, Ownership, , Ward Number, Zone Number, Locality	Art College, Commerce, Science College, Medical College, Engineering College,

#	Layer	Feature Type	Attribute Data	Remark
				Junior College, Research Institute, Management Institutes, Business School
76.	University	Point	ID, Name, Ward Number, Zone Number, Locality	
77.	Vocational Institute	Point	ID, Name, Ward Number, Zone Number, Locality	
78.	Anganwari	Point	ID, Name, Ownership, ,Ward Number, Zone Number, Locality	
79.	Training Institute	Point	ID, Name, Ward Number, Zone Number, Locality	
80.	Govt. Hospital	Point	ID, Name, Ownership, Ward Number, Zone Number, Locality	
81.	Private Hospital	Point	ID, Name, Ward Number, Zone Number, Locality	
82.	Diagnostic Centre	Point	ID, Name, Ownership , Ward Number, Zone Number, Locality	
83.	Clinic/Dispensary	Point	ID, Name, Ownership, Ward Number, Zone Number, Locality	
84.	Nursing Home	Point	ID, Name, Ownership, ,Ward Number, Zone Number, Locality	
85.	Primary/Commun ity Health Centre	Point	ID, Name, Ward Number, Zone Number, Locality	
86.	Veterinary Hospital/Clinic	Point	ID, Name, Ownership, ,Ward Number, Zone Number, Locality	
87.	Blood Bank	Point	ID, Name, Ward Number, Zone Number, Locality	
88.	Central Govt. Office	Point	ID, Name, Ward Number, Zone Number, Locality	
89.	State Govt. Office	Point	ID, Name, Ward Number, Zone Number, Locality	
90.	PCMC Office	Point, Polygon	ID, Name, Ward Number, Zone Number, Locality, Sub	All PCMC Offices

#	Layer	Feature Type	Attribute Data	Remark
			Locality, Floor Number, Number of floors	
91.	Banks	Point	ID, Type, Name, Ward Number, Zone Number, Locality	International Bank, Nationalized Bank, Scheduled Bank, Private Bank, etc
92.	ATM	Point	ID, Type, Name, Ward Number, Zone Number, Locality	International Bank ATM, Nationalized Bank ATM, Scheduled Bank ATM, Private Bank ATM, etc.
93.	Financial Institute	Point	ID, Type, Name, Ward Number, Zone Number, Locality	Pathpedi/ Pathsanst, Insurance Companies, Other Financial Institute
94.	Police Station	Point	ID, Name, Ward Number, Zone Number, Locality	
95.	Cantonment /Battalion	Point	ID, Name, Ward Number, Zone Number	
96.	Jail	Point	ID, Name, Ward Number, Zone Number, Locality	
97.	Crematorium/Burial Ground/Grave Yard	Point	ID, Name, Ward Number, Zone Number, Locality	
98.	Community hall	Point	ID, Name, Ward Number, Zone Number, Locality	
99.	Dharmashala	Point	ID, Name, Ward Number, Zone Number, Locality	
100.	Auditorium	Point	ID, Name, Ward Number, Zone Number, Locality	
101.	Shopping Centre	Point	ID, Name, Ward Number, Zone Number, Locality	
102.	Museum	Point	ID, Name, Ward Number, Zone Number, Locality	

#	Layer	Feature Type	Attribute Data	Remark
103.	Public Library	Point	ID, Name, Ward Number, Zone Number, Locality	
104.	Art Gallery & Cultural Centre	Point	ID, Name, Ward Number, Zone Number, Locality	
105.	LPG/ CNG Gas Station	Point	ID, Name, Ward Number, Zone Number, Locality	
106.	Public/Community Toilet	Point	ID, Type, Name, Ward Number, Locality Name, Road ID, Road Name, Model	Type-Eco-friendly/General Status- working/ Not Working Model- Public/PPP
107.	Petrol Pump	Point	ID, Petrol Pump Name, Ward Number, Road ID, Road Name, Locality name, Status	Status- Working/ Non-Working
108.	Fire Station	Point	ID, Fire Station Name, Ward Number, Road ID, Road Name, Locality name, Status	
109.	Temple	Point	ID, Name, Ward Number, Zone Number, Locality	
110.	Mosque	Point	ID, Name, Ward Number, Zone Number, Locality	
111.	Idgah	Point	ID, Name, Ward Number, Zone Number, Locality	
112.	Church	Point	ID, Name, Ward Number, Zone Number, Locality	
113.	Gurudwara	Point	ID, Name, Ward Number, Zone Number, Locality	
114.	Monastery	Point	ID, Name, Ward Number, Zone Number, Locality	
115.	Synagogue	Point	ID, Name, Ward Number, Zone Number, Locality	
116.	Chhatri	Point	ID, Name, Ward Number, Zone Number, Locality	
117.	Garden	Point	ID, Name, Ward Number, Zone Number, Locality	
118.	Park	Point	ID, Type, Name, Ward Number	

#	Layer	Feature Type	Attribute Data	Remark
119.	Club	Point	ID, Name, Ward Number, Zone Number, Locality	
120.	Sports Centre/ Complex	Point	ID, Name, Ward Number, Zone Number, Locality	
121.	Gymnasium	Point	ID, Name, Ward Number, Zone Number, Locality	
122.	Public Swimming Pool	Point	ID, Name, Ward Number, Zone Number, Locality	
123.	Stadium	Point	ID, Name, Ward Number, Zone Number, Locality	
124.	Planetarium	Point	ID, Name, Ward Number, Zone Number, Locality	
125.	Aquarium	Point	ID, Name, Ward Number, Zone Number, Locality	
126.	Golf Course	Point	ID, Name, Ward Number, Zone Number, Locality	
127.	Race Course	Point	ID, Name, Ward Number, Zone Number, Locality	
128.	Amusement /Theme Park	Point	ID, Name, Ward Number, Zone Number, Locality	
129.	Post Office	Point	ID, Name, Ward Number, Zone Number, Locality	
130.	IT Park	Point	ID, Name, Ward Number	
131.	Court	Point	ID, Name, Ward Number, Zone Number, Locality	
132.	Monument	Point	ID, Name, Ward Number, Zone Number, Locality	
133.	Fort	Point	ID, Name, Ward Number, Zone Number, Locality	
134.	Cave	Point	ID, Name, Ward Number, Zone Number, Locality	
135.	Archaeological Site	Point	ID, Name, Ward Number, Zone Number, Locality	
136.	Meteorological Station	Point	ID, Name, Ward Number, Zone Number, Locality	
137.	Bus stand /Terminus	Point	ID, Name, Ward Number, Zone Number, Locality	
138.	Railway Station	Point	ID, Name, Ward Number, Zone Number, Locality	
139.	Metro Station	Point	ID, Name, Ward Number, Zone Number, Locality	

#	Layer	Feature Type	Attribute Data	Remark
140.	Railway Yard / Sliding	Point	ID, Name, Ward Number, Zone Number, Locality	
141.	Airport / Airstrip	Point	ID, Name, Ward Number, Zone Number, Locality	
142.	Truck Terminus	Point	ID, Name, Ward Number, Zone Number, Locality	
143.	Freight Complex	Point	ID, Name, Ward Number, Zone Number, Locality	
144.	Transport Nagar	Point	ID, Name, Ward Number, Zone Number, Locality	
145.	Public Parking	Point	ID, Name, Ward Number, Zone Number, Locality	
146.	Bird Sanctuary	Point	ID, Name, Ward Number, Zone Number, Locality, Area Square Meter	
147.	Bio-diversity Park	Point	ID, Name, Ward Number, Zone Number, Locality, Area Square Meter	
148.	Botanical Garden	Point	ID, Name, Ward Number, Zone Number, Locality, Area Square Meter	
149.	Zoo	Point	ID, Name, Ward Number, Zone Number, Locality, Area Square Meter	
150.	National Park	Point	ID, Name, Ward Number, Zone Number, Locality, Area Square Meter	

Attribute Type and Sub Type

Table Number-1

Road Centerline - Type and Sub Type		
#	Type	Sub Type
1	National Highway	
2	State Highway	
3	Major District Road	
4	Other District Road	
5	Expressway	
6	Bypass	

7	Ring Road	
8	Service Road	
9	Major City Road#	
10	Minor City Road#	
11	Other Public Road	
12	Other Private Road	
13	BRTS	
14	Village road/Other Road	

#Roads having width of 10.5m/11m and more will be called Major City Road and less than 10.5m/11m as MinorCity Road (for information, the road widths mentioned are as per IRC standards)

Table Number-2: Building footprint Type and Sub type

#	Type	Sub Type
1	Residential	Residential Area/Colony
2		Township
3		Housing scheme
4		House
5		Group of Houses
6		Apartment
7	Commercial	Retail
8		Wholesale
9		General Business
10		Hotel / Lodge / Restaurant
11		Shopping Centre / Mall
12		Multiplex / Cinema
13		Function Hall / Marriage Garden
14		Warehouse
15		Storage Godown
16		Resort
17		Petrol Pump / LPG
18		filling station
19		Informal Shop
20		Hostel
21	Industrial	Manufacturing Service
22		Chemical
23		Pharmaceutical
24		Textile
25		IT Parks
26		Industrial Estate / SEZ
27		Agro based & Food Processing
28		Obnoxious

#	Type	Sub Type
29		Cottage and Household
30		Other Industries
31	Mixed	Residential & Commercial
32		Residential & Household Industry
33		Residential & Educational
34		Residential & Health Services
35		Commercial & Industrial
36		Commercial & Health Services
37		Commercial & Educational
38		Commercial & Recreational
39		Residential & Commercial & Institutional
40		School
41	Educational	College
42		University
43		Vocational Institute
44		Anganwari
45		Training Institute
46		Govt. Hospital
47	Health Services	Private Hospital
48		Diagnostic Centre
49		Clinic/Dispensary
50		Nursing Home
51		Primary/Community Health Centre
52	Central Government Property	Office
53		Quarter
54	State Government Property	Office
55		Quarter
56	Railway	Railway Property@
57	Public& Semi- public	Private Office
58		Banks
59		Credit Society
60		Foreign Establishment
61		Police Station
62		Cantonment/Battalion
63		Jail
64		Crematorium Burial Groun /Grave Yard
65		Guesthouse
66		Community hall
67		Dharmashala
68		Tourist Facility Centre

#	Type	Sub Type
69		Auditorium
70		Convention Centre
71		Museum
72		Public Library
73		Art Gallery & Cultural Centre
74		LPG/CNG Gas Booking Office
75		Ticket Booking & Reservation Office
76		Stock Exchange
77		Disaster Management Centre
78		Metrological Station
79		Dhobi Ghat
80		Crech/Day Care
81		Public/Community Toilet
82		Social Welfare Centre
83		Orphanage
84		Old Age Home
85		Night Shelter
86		Fire Station
87	Religious	Temple
88		Mosque
89		Idgah
90		Church
91		Gurudwara
92		Monastery
93		Synagogue
94		Chhatri
95	Recreational	Garden
96		Park
97		Play Ground
98		Club
99		Sports Centre
100		Gymnasium
101		Swimming Pool
102		Stadium
103		Planetarium
104		Aquarium
105		Open Air Theatre
106		Golf Course
107		Race Course
108		Exhibition Ground

#	Type	Sub Type
109	Public Utilities	Amusement /Theme Park
110		Water Treatment Plant
111		Water Pumping Station
112		Ground Level Reservoir
113		Sewage Treatment Plant
114		Sewage Pumping Station
115		Electric Power Plant
116		Electric Sub-Station
117		City Gate Metering Stations
118		Area Regulator Stations
119		Rain Water Harvesting System
120		Effluent Treatment Plant
121	Solid Waste Management	Recycling Plant
122	Communication	Telephone exchange
123		Post/Telegraph Office
124		Radio/TV Station
125		Satellite & Telecommunication Centre
126	Transportation	Bus stand /Terminus
127		Railway Station
128		Railway Yard / Siding
129		Airport / Airstrip
130		Port
131		Truck Terminus
132		Freight Complex
133		Bus Stop
134		Transport Nagar
135	Traffic related	Multi-level Parking
136	Eco-Sensitive Area	Bird Sanctuary
137		Bio-diversity Park
138		Botanical Garden
139		Zoo
140		National Park
141	Others	Farm house
142		Dairy farm
143		Poultry farm
144		Slaughter House
144		Dairy Booth

@includes Office, Quarters, Recreational Space, Institutions etc. under Railways

Table Number-3: Land use/Land cover- Type and Sub Type

#	Type	Sub Type
1	Residential	Residential Area/Colony
2		Township
3		Housing scheme
4		Residential
5	Commercial	Retail
6		Wholesale
7		General Business
8		Hotel / Lodge
9		Shopping Centre / Mall
10		Multiplex / Cinema
11		Function Hall / Marriage Garden
12		Warehouse
13		Storage Godown
14		Resort
15		Petrol Pump / LPG
16		filling station
17		Informal Shop
18		Hostel
19		Market (Daily & Weekly) / Mandi
20		Commercial
21	Industrial	Manufacturing Service
22		Chemical
23		Pharmaceutical
24		Textile
25		IT Parks
26		Industrial Estate / SEZ
27		Agro based & Food Processing
28		Obnoxious
29		Cottage and Household
30		Other Industries
31	Mixed	Residential & Commercial
32		Residential & Household Industry
33		Residential & Educational
34		Residential & Health Services
35		Commercial & Industrial
36		Commercial & Health Services
37		Commercial & Educational
38		Commercial & Recreational
39		Residential & Commercial & Institutional

#	Type	Sub Type
40	Educational	School
41		College
42		University
43		Other
44	Health Services	Govt. Hospital
45		Private Hospital
46		Diagnostic Centre
47		Other Health Facility
48	Central Government Property	Office
49		Quarter
50	State Government Property	Office
51		Quarter
52	Railway	Railway Property@
53	Public& Semi- public	Private Office
54		Banks
55		Credit Society
56		Foreign Establishment
57		Police Station
58		Cantonment/Battalion
59		Jail
60		Crematorium Burial Groun /Grave Yard
61		Guesthouse
62		Community hall
63		Dharmashala
64		Tourist Facility Centre
65		Auditorium
66		Convention Centre
67		Museum
68		Public Library
69		Art Gallery & Cultural Centre
70		LPG/CNG Gas Booking Office
71		Stock Exchange
72		Disaster Management Centre
73		Metrological Station
74		Dhobi Ghat
75		Crech/Day Care
76		Public/Community Toilet
77		Social Welfare Centre
78		Orphanage
79		Old Age Home

#	Type	Sub Type
80	Religious	Night Shelter
81		Fire Station
82		Temple
83		Mosque
84		Idgah
85		Church
86		Gurudwara
87		Monastery
88		Synagogue
89		Chhatri
90	Recreational	Garden
91		Park
92		Play Ground
93		Club
94		Sports Centre
95		Gymnasium
96		Swimming Pool
97		Stadium
98		Planetarium
99		Aquarium
100		Open Air Theatre
101		Golf Course
102		Race Course
103		Exhibition Ground
104		Amusement /Theme Park
105	Public Utilities	Water Treatment Plant
106		Water Pumping Station
107		Ground Level Reservoir
108		Sewage Treatment Plant
109		Sewage Pumping Station
110		Electric Power Plant
111		Electric Sub-Station
112		City Gate Metering Stations
113		Area Regulator Stations
114		Rain Water Harvesting System
115		Effluent Treatment Plant
116	Solid Waste Management	Land Fill Site
117		Dumping Yard
118		Recycling Plant
119		Garbage Collection

#	Type	Sub Type
120	Communication	Point/Dumper
121		Telephone exchange
122		Post/Telegraph Office
123		Radio/TV Station
124		Satellite & Telecommunication Centre
125		Public Telephone Booth
126		Cell Tower
127		WiFi Hotspot
128	Heritage	Monument
129		Fort
130		Archaeological Site
131	Slum	Notified Slum
132		Non- notified Slum
133		Squatter / Kachibasti
134	Vacant Land	Private Vacant
135		Municipal Asset
136		Government Asset
137		Reclaimed Land
138		Layout / Plotted
139	Transportation	Bus stand /Terminus
140		Railway Station
141		Railway Yard / Siding
142		Railway Track Area
143		Airport / Airstrip
144		Helipad
145		Port
146		Harbour
147		Jetty
148		Truck Terminus
149		Freight Complex
150		Transport Nagar
151	Traffic related	Traffic Island
152		Parking Space / Area
153	Green Areas	Green Cover
154	Agricultural Land	Agricultural Land
155	Eco-Sensitive Area	Bird Sanctuary
156		Bio-diversity Park
157		Botanical Garden
158		Zoo
159		National Park

#	Type	Sub Type
160		Oxbow Lakes
161	Others	Others

@includes Office, Quarters, Recreational Space, Institutions etc. under Railways

Note: The number of layers and attributes may increase/ decrease during implementation and O&M phase. If any layer needs to be added during O&M phase, the SI will update it at no additional cost.

3.2 Annexure-2: Indicative Specifications for Work Flow Management System

#	File Noting creation & Approval workflow	Compliance (Yes/No)
1.	The system shall have Text Editor functionalities such as bold, alignment, font, color, highlight etc.	
2.	User shall be able to route the file noting for approval	
3.	The system shall provide a facility to Add / Edit comment to a Note in a workflow.	
4.	All the comments shall be appended to the main content of the Note.	
5.	The system shall capture the digital signature of user	
6.	The system shall have the facility to print the Note with Revision history at any point of time.	
7.	The system shall have a facility to ‘approve’ a Note through some actionable control.	
8.	The system shall provide an interface to search and check the status of a Note in workflow	
9.	System should differentiate various categories of files	
10.	The system shall have a facility to create/open a new electronic subject file.	
11.	The system shall have a facility to create both main as well as part file.	
12.	The system shall also generate a Barcode/QR code on successful creation of a file. This barcode can be pasted on a physical file for tracking, in case physical file is also used.	
13.	The system shall have facility to print barcode/QR code of file at any point of time.	
14.	The system shall have facility to add documents in the File.	
15.	The system should have a facility to search a file on File number, file subject etc.	
16.	The system should have index table of all created files	
17.	The system shall have a facility to save the file in the desired location folder.	

18.	The system shall provide facility to view all letters/documents	
19.	The system shall provide facility to users to append their notes, which shall be automatically stamped with user name, date and time, digital signature	
20.	The system shall provide facility to users to link the notes to any document, file and previous notes, so that corresponding objects can be directly opened from the note view	
21.	File view shall provide facility to view all documents inside file, Noting / commenting, Edit file properties	
External Letter/Correspondence (DAK) Management		Compliance (Yes/No)
1.	The system shall have a repository or predefined folder / area where all new correspondences (DAKs) are received after scanning.	
2.	The system shall have a facility to add correspondences (DAKs) in electronic format from local computer drive.	
3.	The system shall have a facility to add a Note with a correspondences (DAKs)	
4.	The system shall have a facility to save the correspondences (DAKs) in an existing file.	
5.	The system shall have a facility to route the correspondences (DAKs)	
6.	The system shall support ad-hoc routing of a document	
7.	The system shall have a facility to prepare response and attach with the correspondences (DAKs) workflow	
8.	The system shall provide an interface to track & search the status of a correspondences (DAKs) in a workflow	
9.	The system shall have a facility to send the reminders concerned people	
10.	The system shall have a facility to track a department where a correspondence (DAKs) is pending.	
11.	The system shall provide advanced search interface for tracing & searching a correspondence (DAKs) based on dates, subject etc.	

3.3 Annexure-3: Building Property Field Survey Information

Bidder should conduct the field survey and capture following information for all the buildings and structures within PCMC jurisdiction to identify the missing buildings, properties and information

1. GIS ID
2. PT_Tax_Ward/Zone_No
3. Property No
4. Building Name
5. Owner Name (English/ Marathi)
6. No of Floors
7. No of households
8. No of Basement
9. Total No. of Properties (Residential/ Non- residential)
10. Flat No
11. Floor No
12. Property/holding Address (Present Address, Permanent Address)
13. Construction Type
14. Property Usage –Residential / Commercial / Mixed
15. Property Type/ Sub Type
16. Occupancy status - rented /self-occupied/mix
17. Room details/ Number of Rooms
18. Zone No
19. Ward No
20. Village /Locality/Sub Locality
21. Year of Construction and age of the property in Months
22. Authorized / Un-Authorized
23. Property Holder's Email ID / Mobile No
24. Mobile Tower Y /N
25. Hoarding Y/N
26. Electric Consumer No
27. Water Connection Y/N
28. Water Meter Y / N
29. Water Consumer No
30. No of Connections
31. Connection Type Resi/Comm.
32. Property Holder Name
33. Sub Lessee Name
34. Survey No/ City_Survey_No/Block No
35. No. of Shops

36. Digital photograph of each property within the municipal boundary and its linking with respective property/holdings database

37. In case of Multi-storey Building (Commercial complex/Apartments) following information shall be also collected

- Apartment/Building Name
- Total No. of Property
- Lift Facility
- Total number of floors excluding ground floor
- Status of different facility like lift, power backup, parking, fire fighting
- Total no. of residential and non-residential holdings
- Source of water in the building

38. In case of Commercial/Industrial following additional information shall be also collected

- Firm/Shop/Industry Name
- License Status – Yes/No
- Firm/Shop/Industry Owner Name and address
- License status and license no.
- License validity date
- Business/Industry type

39. Minimum documents to be collected for Property (Indicative)

- Adhaar Card
- Electricity Bill
- Property Tax receipt (If available)
- Photos

3.4 Annexure-4: Deviated Properties detail Survey Information

Field data collection for Deviation properties detail survey data

Bidder should collect below mentioned data about Tagged properties as output of phase I, after consulting with PCMC officers (Project Manager and the relevant Ward officer). Activities involved are

1. Collect and record property details
2. Collect Document and Communication details
3. Updating the deviated information in the system and compare with the old record to derive delta enhancement in the revenue
4. Documentation and report generation:
5. Create and amend online report on deviations
6. Online data updation

3.5 Annexure-5: Analysis and Reports for Survey Activities

Reports

The reports to be generated from the platform are detailed out as follows:

Field surveyed data

1. Buildings with change of name reference to PCMC records
2. Buildings with dual names of Identification reference to PCMC records
3. Buildings with double assessment
4. Properties paying tax
5. Dangerous properties (depending on inspection report and building age)
6. Area having particular (Residential/ Nonresidential) type of property
7. Properties with particular type of construction
8. Properties with number of stories and above
9. Properties with age *** (user defined) and above
10. Properties with actual carpet area / Built up area should be shown with multiple options for search all attributes
11. Display properties as and when they are assessed for tax
12. Commercial properties in slum area
13. Commercial slum areas (garages, Production hubs etc.)
14. Location of PCMC owned vacant lands
15. Locating all parks and gardens in the area
16. Locating all the open spaces in the area
17. Locating all the water bodies in the area with building wise relevant water connection no.

Revenue collection reports

- a) For Deviated properties accounting for the extended areas

Performance comparison report

- a) With the historical data of Month, quarter, Half year and Year
- b) Comparison of the existing building with arrears, deposits, deposits in arrears and/or outstanding and recovery from arrears and outstanding demand.

Real time basis Taxation report

1. Report of tax collection (Total, Ward wise, use type wise,
 - a) Tax wise (Head) daily collection report (Municipal Taxes – General Tax, Water benefit tax, Sewerage tax, sewerage benefit tax, municipal education cess, street tax, tree cess and Government taxes – State education cess, Employment guarantee tax)
 - b) Report generation as per rateable value

- c) Report generation as per land use with searchable option for all types of land use

Other Reports

- a) Bill wise/ property wise/ year wise outstanding arrears of property taxes, government taxes with penalties.
- b) Tax payers having annual demand more than 1 lakhs to 5 lakhs, 5 lakhs to 10 lakhs and above 10 lakhs.

3.6 Annexure-6: Road Feature data to be captured

Note: Find below list of Road features, which are visible on the panoramic images, to be captured in the excel sheet.

Road Attributes	Type
Road Card Attributes	
Road Attributes	Road Name
	Road Number
	Start Chainage
	Start GPS (Lat/Long)
	Start Reference
	End Chainage
	End GPS (Lat/Long)
	End Reference
	Road Category (Major if >10m roadway else Minor)
	Images of roads
Carriageway	
Left Carriageway Lane 1 to 5	Surface Type
	Width
Median	Surface Type
	Width
Right Carriageway Lane 1 to 5	Surface Type
	Width
Junctions	
No of Carriageway Entrances identified in a Road Stretch (1 to 10)	Type
	Chainage
	Location

	Signalised
SWD Card (Road Side Storm water drains)	
SWD Road side Left/Right	Drain Y/N
	Type of Drain
	Chainage
	Location of SWD / size
	Remarks
Footpath Card	
Footpath Left / Right	Chainage
	Type
	Length
	Width
	Details of gate entrances / Covers (Type /size / Location)
Street Light	Type
	No of Poles / Height / No. of fittings.
Traffic Card	
Traffic Sign - Left Carriageway	Category
	Span
	Chainage
	Location/Remark
Traffic Sign - Right Carriageway	Category
	Span
	Chainage
	Location/Remark
Traffic Sign - Median/Island	Category

	Span
	Chainage
	Location/Remark
Gantry Sign - Left Carriageway	Category
	Span
	Chainage
	Location/Remark
Gantry Sign - Right Carriageway	Category
	Span
	Chainage
	Location/Remark
Road Markings	
Railing - Median/Island	Category
	Span
	Location/Remark
Railing - Left Carriageway	Category
	Span
	Location/Remark
Railing - Right Carriageway	Category
	Span
	Location/Remark

Kerbing - Median/Island	Category	
	Span	
	Location/Remark	
Kerbing - Left Carriageway	Category	

	Span
	Location/Remark
Kerbing - Right Carriageway	Category
	Span
	Location/Remark
Other Road Features	
Manholes	Circular/Rectangular
Trees	
Bus Stops	
Electrical Lamps	
Fire hydrants	
Signals	
Hoardings	
Bridge Card	
Bridges / Culvert 1 to 5	Category
	Total Length
	Chainage
	Type
	Location
	Spanning across
	No of span
	Length of span
	Reference Point
Bridge Carriageway	
Left Carriageway Lane 1 to 5	Surface Type
	Width
Median	Surface Type

	Width
Right Carriageway Lane 1 to 5	Surface Type
	Width

3.7 Annexure-7: Enterprise GIS Software Specifications

Bidder shall supply Enterprise GIS software to set up GIS enabled applications and provide a maintenance support for Implementation Phase plus five years to provide flexible software management. It is envisioned that the deployment model would be in Active-Active mode to ensure maximum uptime. Desktop GIS software with extension (added capabilities) would be used for GIS data creating, updating & publishing. Following are the quantities & specifications of the GIS software that would be required:

#	Software / Tools category
1	Enterprise GIS Server Software with facility of Spatial analysis, Network analysis, 3D Data and Analysis and Data interoperability
2	Desktop GIS Software with facility of Spatial analysis, Network analysis, 3D Data and Analysis, image analysis and Data interoperability

3.7.1 GIS Desktop Specifications

#	<i>GIS Desktop Specifications</i>	Compliance	Remark
1.	Create/manage/use spatial bookmarks, Use map templates to standardize maps, Interactively set transparency for all data		
2.	Facility to create buffer, overlay analysis		
3.	The system should support a common database instance for all modules viz. Web portal, Citizen Geoportal and Desktop software. The data must be stored in industry standard RDBMS Format and Should allow user to define a spatial query against SQL spatial types in a spatial database to create a layer (query layer) that can be viewed and queried in GIS Software.		
4.	Create layers or shortcuts to geographic data that store symbology for Displaying features.		
5.	Facility to view and overlay vector and raster data in different formats and projections		
6.	Thematic classifications like: Single symbol, Unique value, Match to predefined style, Graduated colours or symbols, Proportional symbols, Dot density mapping, Chart mapping including pie and bar chart, Bivariate and multivariate data rendering .		
7.	Should support rule based symbology and cartographic representations of map entities.		
8.	Should support time series data support		
9.	Should support Image classification like thematic classes Contrast, Brightness.		

#	<i>GIS Desktop Specifications</i>	Compliance	Remark
10.	Should have Image rectification tools for easily georeferencing existing scanned images.		
11.	On-the-fly automatic labelling, multi-labelling, interactive labelling, rotation of labels from an attribute field, interactive label placement, predefined label styles		
12.	Software should provide Raster handling tools like contrast, brightness, transparency etc.		
13.	Facility to do spatial analysis such as hydrology analysis		
14.	Facility to do spatial analysis, network analysis and 3D analysis like slope/aspect calculation etc.		
15.	Facility for On-the-fly re-projection, Map composer, Identify/select features and edit/view/search attributes		
16.	Provision to handle the satellite/ air borne sensor data of different Formats		
17.	Facility to link between maps and tables		
18.	Facility for DEM Hydro-Processing, DEM visualization, Drainage network extraction & Network and Catchment extraction etc.		
19.	Open architecture and support seamless access to the data stored in database		
20.	Export graphics to industry standard formats like Portable document format (PDF), Joint Photographic Experts Group (JPEG), Tagged image file format (TIFF) etc.		
21.	Facility to do mosaic of raster data		
22.	Display of raster and multiple vector maps in map windows		
23.	Provision to take prints in defined templates		
24.	Provision to handle the satellite/ air borne sensor data of different formats		
25.	Create layers from all supported data sources including coverage feature classes; shapefiles; CAD, TIN, raster, and Spatial database feature; or tables /spreadsheets containing x,y coordinates.		
26.	The software should have Reports Generation facility.		
27.	Facility to display Aerial, Projection and Surface distances.		
28.	Edit multiple layers simultaneously with Unlimited undo/redo operations. The implementation must allow a Maker Checker workflow for direct database level editing. The editor can edit the data but the same must be saved along with Audit trail within the database. The checker or validator must be able to accept or reject any changes made by the editor. Individual editor must be binded with their own validator. All users must be the same which have access to the other modules and no separate user directory for desktop must be created. Till the validator approves the changes, the changes must remain in a staging database and must not be published to the other softwares viz. the departmental portal and the citizen portal.		

#	<i>GIS Desktop Specifications</i>	Compliance	Remark
29.	Should support inherent RDBMS and all data must be stored in industry standard RDBMS only.		
30.	Should be able to control & create rule based topology for the spatial database.		
31.	Feature construction tools including: Point-and-click feature location with mouse, locations with mouse, x, y coordinate input with keyboard coordinate input with keyboard		
32.	Feature edits tools including: Move, rotate, delete, copy, and paste, Reshape, Split and trim, Divide into N-parts or into specified intervals, Vertex editing (add, delete, and move), etc.		
33.	Should have Spatial data adjustment tools including: Rubber sheeting, Transformation, Edge matching, Attribute transfer.		
34.	Snap to vertex, endpoint, midpoint, or along the edge of features & layer wise snapping		
36.	Should be able to plot data on the map directly from the tables		
37.	UNICODE support for Multilanguage attributes		
38.	Direct Read of Vector Data like Shapefiles, Spatial database etc.		
39.	Should be able to operate on Windows 7, 8.1, 10.		
41.	Perform interactive perspective viewing, including pan and zoom, rotate, tilt for presentation, analysis, or export for display on the Web.		
42.	Software should have the facility visualize temporal data		
43.	Software should be capable of authoring the layers with time information		
44.	Software should have report generation tool for creating and managing reports.		
45.	Should have the capability to web enable the 3D models.		
48.	Should have capability to Computes 3D points from stereo pairs and outputs a point cloud as a set of LAS files		
50.	Software should support Metadata management.		
51.	Create statistics & various statistical operations, viz. create charts and reports, Sort tables by multiple attributes, Populate values based on expression, Summery of data.		
52.	View and create KML and view LIDAR data		
53.	Toolset should include features like locate various data points captured by LiDAR or equivalent technology (Locate Points By Proximity, Point Statistics By Area etc.)		
54.	Derive contour, slope, viewshed, aspect, and hillshades of these surfaces.		

#	<i>GIS Desktop Specifications</i>	Compliance	Remark
55.	Ability to carry out neighborhood and zone analyses.		
56.	Should assist in calculation of the cost of travel, cost-weighted distance, and shortest path.		
57.	Should provide tools for building network data for Network Analysis		
58.	Software should support assigning and editing network features such as barriers, turns and uni-directional flow.		
59.	Software should generate containing travel time and travel distance for origins and destinations		
60.	Tool should Check network connectivity		
62.	Software should have out-of-the-box validation checks to detect errors in the data		
63.	Should support geoprocessing services to run the functions like Neighborhood analysis, Ground water Analysis, Raster classifications		

3.7.2 GIS Server Specifications

#	<i>GIS Server Specifications</i>	Compliance	Remark
1.	Web GIS Application Software to operate on Windows and Linux and Mac and support concurrent users to view the datasets in web environment		
2.	Facility for basic Navigation tools like the software should have tools to Pan, Zoom, and Rotate the Map according to user requirements		
3.	Facility for spatial data classification based on specific attribute value and report generation		
4.	Ability to search and to zoom into the user specified x, y coordinates		
5.	Support Predefined Geographic Coordinate Systems, Projected Coordinate Systems, Predefined Vertical Coordinate Systems		
6.	Provision for definition of map projection system and geodetic datum to set all the maps in a common projection and scale.		
7.	Server based GIS should be OGC Compliant and must Support any client. It shall be <ol style="list-style-type: none"> Form independent i.e. it shall work on mobiles, tablets etc. Web browsers independent Shall support desktop applications 		
8.	Facility for display of spatial layers, query management like have various query tools for queries based on attributes, location, etc.		
9.	Server Software should run as a native 64-bit application and should support Windows 64-bit and / or Linux/UNIX operating systems 64-bit. Server licensing should not be restricted by Hardware / Users / Instance or Sites.		
10.	It should be possible to deploy in all virtualized environment and support vSphere and vCenter.		
11.	Support service-oriented architectures		
12.	Software should have utility for checking availability of server software updates/patches and bidder must provide updates and upgrades for all solutions		
13.	Software should support Feature service		
14.	Support portal standards like JSR-356, UDDI, CSW from OGC, web portal frameworks, and APIs		

#	<i>GIS Server Specifications</i>	<i>Compliance</i>	<i>Remark</i>
15.	It should be possible to create and manage a central spatial information repository using all and any type OGC Compliant and Industry Standard Relational Database Management Systems (RDBMs)		
16.	The Server software should support Replication across Multiple instances or sites		
17.	The GIS server should be scalable and must be offered with at least 2 instances to be deployed on 2 separate physical servers (Active-Active) load balanced via application common application load balancer to be provided supporting a minimum of 250 simultaneous users with heavy usage for departmental portal and minimum 1500 simultaneous users for citizen portal to be separately hosted for Internal and Internet Geoportal. Bidder must provision additional instances for other requirements such as Reverse Proxy, Cache Server, Web Server, Application Server etc. In case client decides to host a Disaster recovery site later, bidder must provision licenses required along with support for project duration.		
18.	Deployment Should support unlimited/ multiple number of spatial data editing and viewing by desktop, web browser and mobile clients.		
19.	Should support any leading Web server / application server.		
20.	Should support Web Services including Map, KML, WMS, WCS, WFS and WFS-T. REST and SOAP. Support all OGC Compliant maps and Open source Map Servers and Web Map Servers.		
22.	Should be capable of visualizing temporal data stored in RDBMS maintaining historical / legacy data version management		
23.	Should have out-of-the-box, end user applications and services for spatial data management, visualization, and spatial analysis.		
24.	The Solution must be deployed on LDAP which must be the same as used for the ERP and other solutions deployed as a part of this project. Users must be common and must get access based on the rights and privileges. Access restrictions must work on Layer level and based on spatial administrative layers defined within the system such as Zones / Wards / Blocks etc.		
25.	Should have option to create geographic database, manage geographic database, and load spatial data into spatial database.		
26.	Should be possible to publish and share geographic data (2D & 3D), maps, analyses		
27.	Should have out of the box Web Application Functionalities like pan, zoom, identifying features on a map, feature based hyperlink, measure distance, maptips, interactive north arrow, overview		

#	<i>GIS Server Specifications</i>	<i>Compliance</i>	<i>Remark</i>
	window, find place, query attribute, search attribute, editing, geo-processing tasks etc.		
28.	Should support server-based analysis and geo-processing, including vector, raster, 3D analysis, and network analysis as well as scripts, and tools		
30.	Solution should support distributed editing through Desktop/Web using Cache image and Raw Image		
31.	Should have geo-processing framework, geo-processing tools, core analysis functionalities, spatial statistics analysis functionalities		
32.	Should have Centrally managed data, models, tools, maps, and applications.		
33.	It should provide network analysis tools for desktop, mobile, and web applications without requiring the end user to install additional GIS software.		
35.	It must be possible to integrate GIS Server services with enterprise applications.		
36.	The offered software must be form factor independent and must be HTML 5 compliant and must not require any installation on the device unless device level hardware is being used for instance Laser Distometer / Camera integration for Property survey.		
37.	The application should provide an out-of-the-box, configurable unlimited mobile clients that allows dynamic query . The mobile application should be able to integrate with GPS devices on Windows, Linux, iOS, & Android Platform.		
38.	Should support Tile layer from Vector and Raster layers for better performance and fast accessibility		
39.	Should support web application to visualize raster, vector, and 3D data, terrain, subsurface, and volumetric views		
40.	Should support web application to analyze GIS data for 3D data		
41.	Should support web application in finding multipoint optimized routing, time-sensitive, turn-by-turn driving directions, service area allocation, and fastest fixed route to the closest facility		
42.	Should support web application for network modeling capability for Network analysis		
43.	Should support web application for Spatial analysis.		
44.	Should support web application in assigning and editing network features such as barriers, turns and uni-directional flow		
45.	Should support web application for water catchment area analysis		
46.	Should assist in calculation of the shortest path.		

#	<i>GIS Server Specifications</i>	<i>Compliance</i>	<i>Remark</i>
50.	Should allow clients to view metadata information for each raster in a mosaic dataset.		
51.	support overlapping imagery and explore temporal changes using the advanced image serving capabilities		
52.	Application shall have capability to be hosted on cloud		
53.	Distribute large volumes of geospatial imagery to thousands of users from a single server.		
54.	Easily integrate with third-party GIS software		
55.	Application should support industry standard APIs		
56.	Should support web application for Mapping & Charting.		

3.7.3 Specifications for Mobile GIS

1. All features shall be available on all possible form factor such as Mobile, Tablet etc.
2. All web applications shall be device independent

Note: For each of specification mentioned in section 3.7, the Bidder must provide documentary evidence of website link(s) and/or printed brochure(s) as supporting evidence. While giving compliance certificate, the bidder shall add one more column and provide such references.

3.8 Annexure-8: Specifications Specification of Lidar or Equivalent to Lidar technology

Terrestrial LiDAR Scanning (TLS)

- Specifications:
 - Data capturing range up to 300 m
 - Data scan rate is 1,00,000 points per second or more
 - Absolute accuracy < 10 cm
 - Scanning with Wide Field of View (FOV) 360° horizontal and 270° vertical
 - Should be eye-safe with laser class 1.
- Data Collection Requirements
 - LiDAR Acquisition must be collected with coupled GNSS data for trajectory processing. GPS GNSS Data must be RTK processed.
 - LiDAR Acquisition must include image to colorize the point cloud and to aid with feature identification and attribution.
 - The images must be indexed and delivered with the LiDAR data.
 - Occlusions shall not be acceptable, except in the below mentioned cases;
 - Water bodies
 - Areas of low reflectivity e.g. glass
 - Object shadowing (e.g., buildings, towers, vertical cliffs)
 - All processing should be carried out with the understanding that point cloud data deliverables are required to be in fully compliant ASPRS LAS, v1.4 Point Record Format 10.
- Deliverables:

This project requires deliverables, which range from a standard CAD product to a physical three-dimensional (3D) scale model of the actual subject. Deliverables specific to TLS surveys include, but are not limited to:

- Geo-referenced 3D point clouds (XYZ or XYZI files) in, LAS, LAZ format.
- Digital photo mosaic files.
- Registration report including GCPs used in the processing of the data.
- Survey narrative report and QA/QC files
- Geospatial metadata files

Mobile Laser Scanning (MLS)

- MLS System Requirements
 - The field collection will utilize ground based Mobile LiDAR. The collection must be completed with a fully integrated mobile LiDAR system consisting of Laser Scanner(s), L1 & L2 GPS + GNSS Antenna(s) & Receiver(s), Inertial Measurement Unit, Digital Cameras and Distance Measuring Instrument (odometer). The MLS must have 360° field of view (FOV).

- MLS Specifications:
 - Comprises of Laser sensor, cameras, GNSS/INS positional navigation system (GPS + IMU), Laptop and mobile platform.
 - Scan rate of 1, 00,000 points per second.
 - Capable of capturing MLS datasets with a minimum point density of 100 points/m and sample spacing of 0.01 m.
 - Provide acquisition of 360° FOV.
 - Minimum range of 110 meters.
 - Should be eye-safe with laser class 1.

Prior to collection the successful bidder will develop a field collection work plan for presentation to the Project Manager. The work plan will detail:

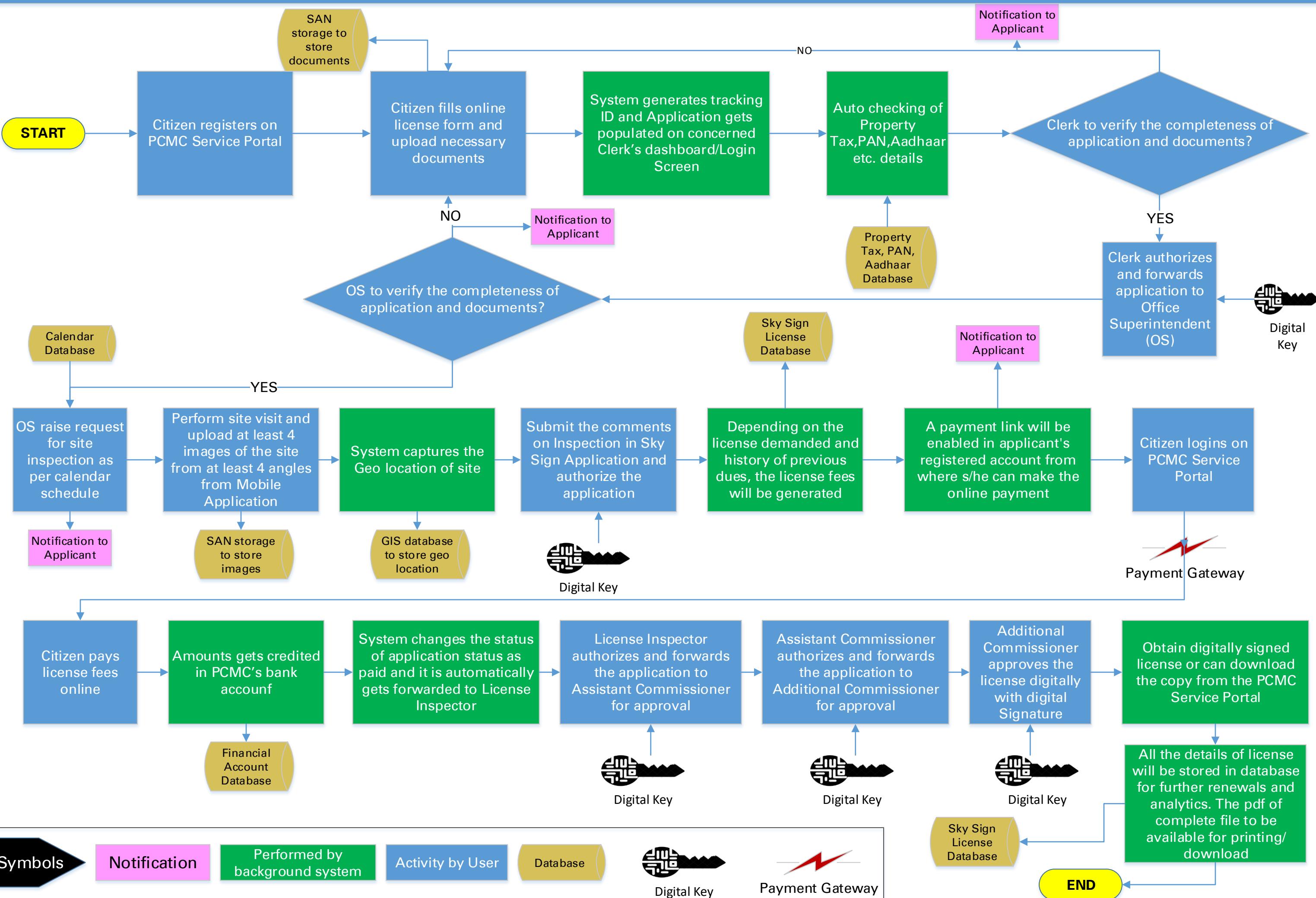
- Routes to be covered.
- Proposed drive paths and number of trajectories to be run on each route
- Times and specification of data collection
- Mobile LiDAR Unit Calibration report(s)
 - Quality Control and Quality Assurance Measures to be employed for field collection
- Data Collection Requirements
 - LiDAR data must be collected with coupled GNSS data. GPS GNSS Data must be RTK processed.
 - LiDAR data acquisition must include image collection along the trajectory routes to colorize the point cloud and to aid with feature identification and attribution.
 - The images must be indexed and delivered with the LiDAR data.
 - Multiple passes must be employed in areas where obstructions occur due to traffic, if any.
 - Data shall be collected in weather free from cloud/fog.
 - GPS Time stamp shall be recorded and delivered for each point.
 - Completed at or near traffic speeds to avoid impeding traffic while ensuring adequate spacing from surrounding traffic to avoid obstructions.
 - Occlusions with shall not be acceptable, except in the below mentioned cases;
 - Water bodies
 - Areas of low reflectivity e.g. glass
 - Object shadowing (e.g., buildings, towers, vertical cliffs)

All processing should be carried out with the understanding that point cloud data deliverables are required to be in fully compliant ASPRS LAS, v1.4 Point Record Format 10.

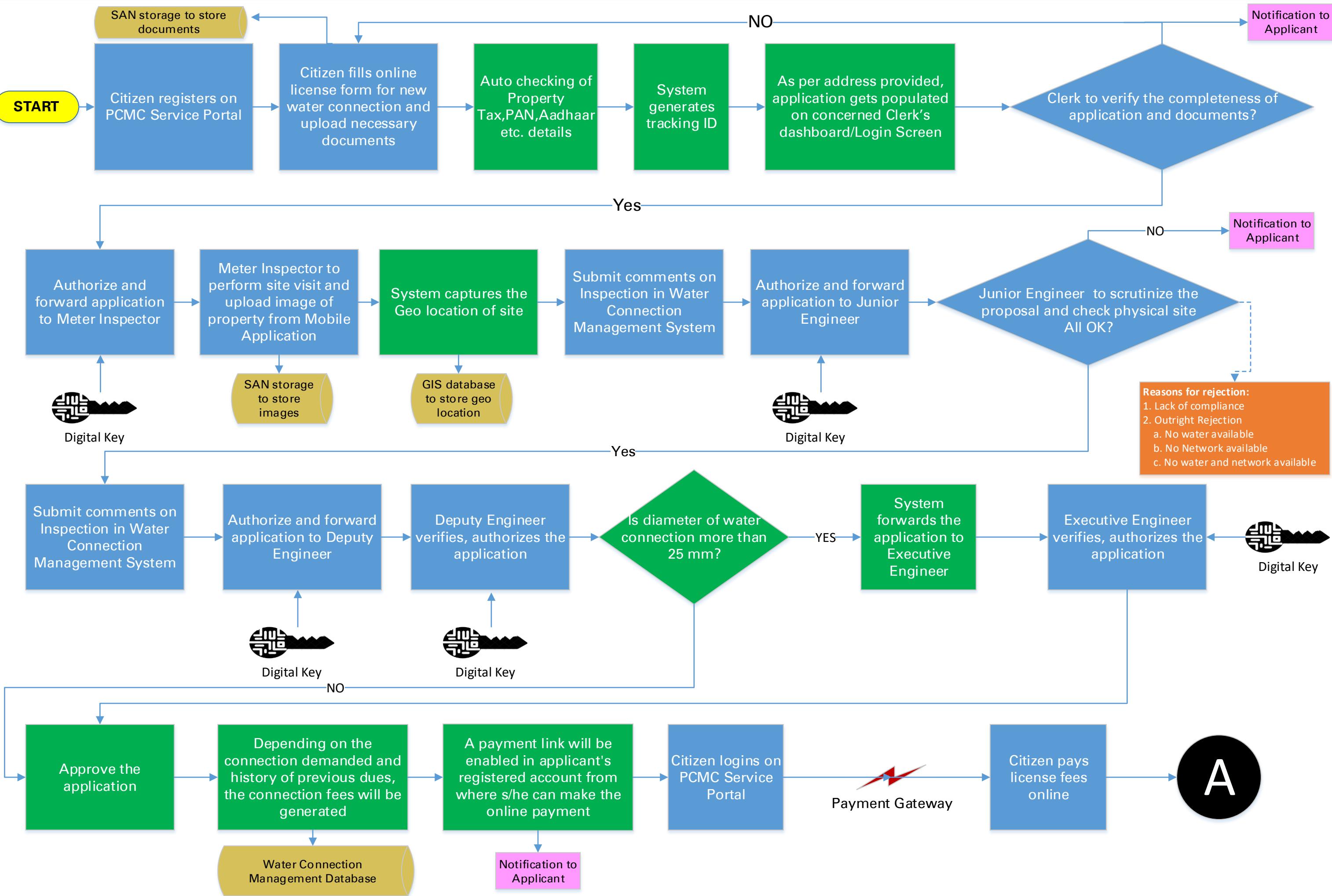
3.9 Annexure-9: List of Existing application in PCMC

Sr	IT Application	Sr	IT Application
1	Asset & Works Management System	19	Fire Brigade
2	Audit Department	20	Food Licenses Management
3	Birth & Death Management	21	Geo Tagging
4	Blood Bank Management	22	GISDA (GIS For Dynamic Administration)
5	BSUP (Nagarvasti, Mahila Bal Kalyaan)	23	Grievance Monitoring
6	Building Permission	24	Hawker Management System
7	Central Medical Stores & Inventory	25	Health Card
8	Central Stores & Inventory	26	Health Program Management
9	Citizen Facility Centre	27	Hospital Management (IPD)
10	Dhanvantari Yojna	28	Hospital Management (OPD)
11	Digital Dashboards - Phase II	29	Intranet
12	Disaster Management	30	IT Assets Management
13	Document Management & File Tracking	31	ITI Management System
14	Election Department	32	Land and Estates Management
15	Electrical Department	33	Legal Department
16	e-Office Project	34	Marriage Registration
17	E-tendering System	35	M-Governance
18	Financial Accounting	36	Municipal Secretariat Management
37	Octroi / LBT	48	Scanning & Digitization
38	PCMC Services Portal	49	School Management
39	Personnel Management	50	Security Management
40	Tenant Tracking	51	Sky Sign & Industrial Licenses
41	Pothole Management	52	Slum Billing Management
42	Project Prakash	53	Solid Waste Management
43	Property Tax Management System	54	Sports Portal
44	Public Auditorium Management	55	Town Planning Management
45	Public Library Management	56	Vehicle Workshop Management
46	RTI Online System	57	Veterinary Management
47	SARATHI Helpline	58	Water Tax Management System

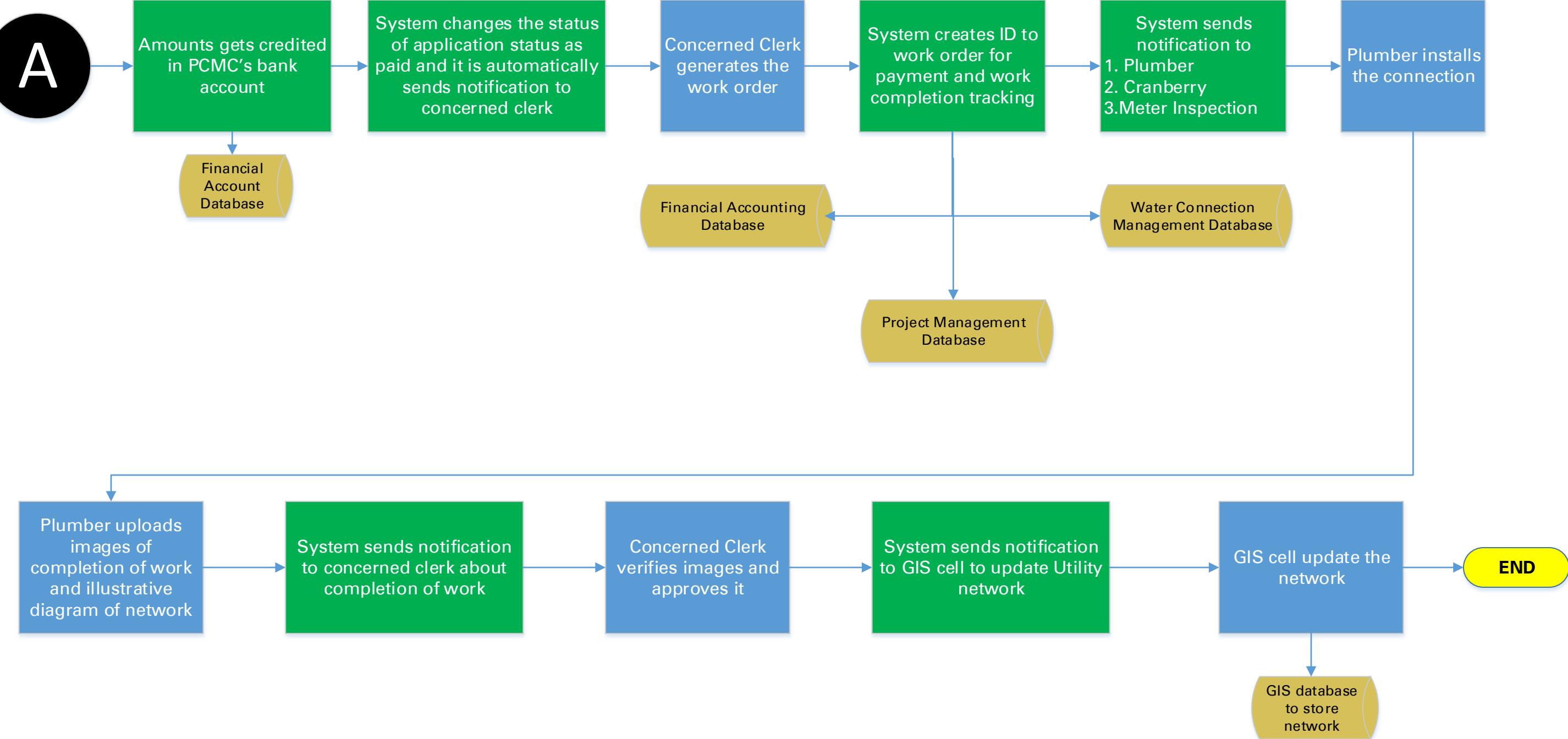
Obtaining Sky Sign License



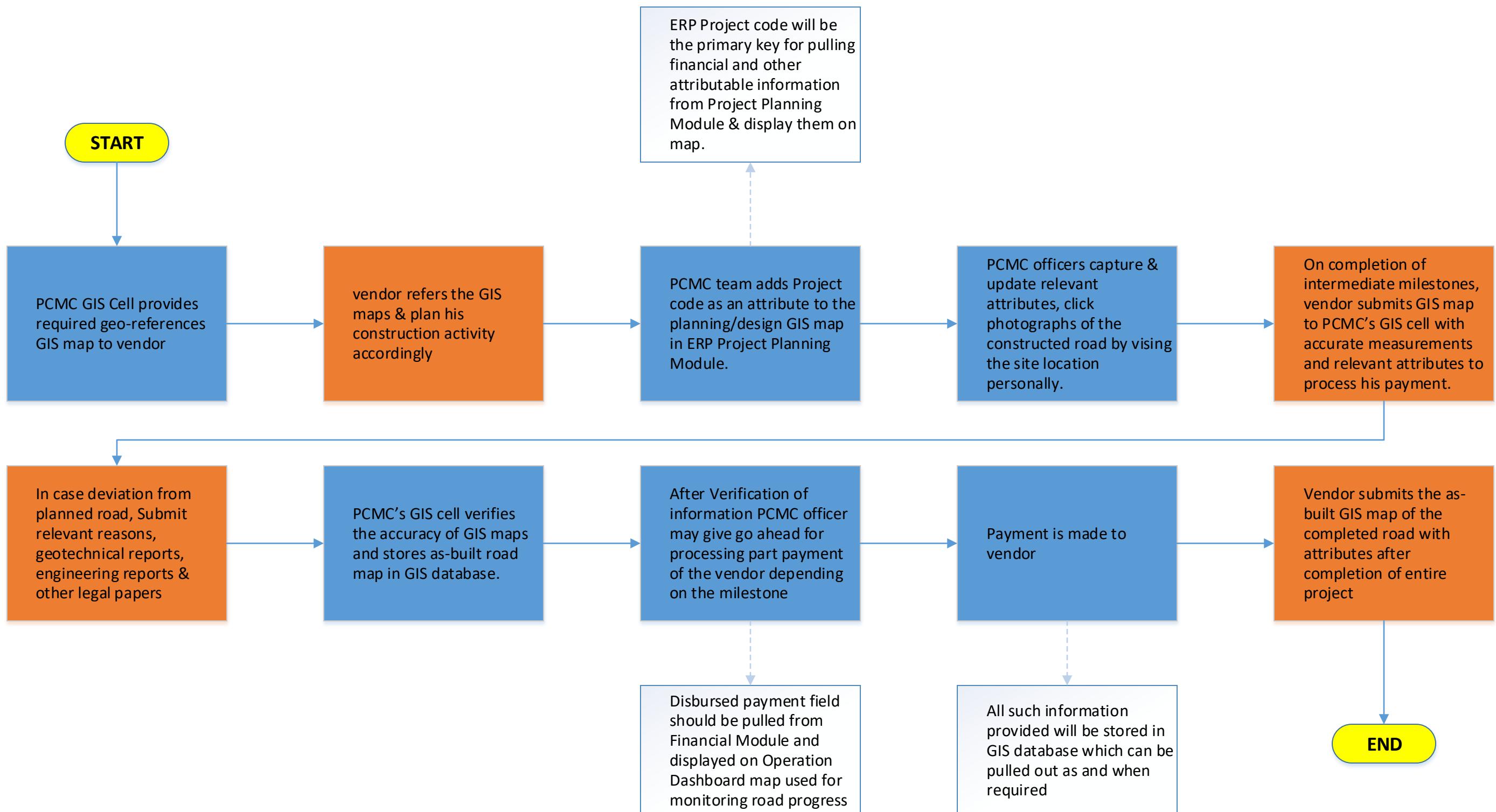
Obtaining New Water Connection (1/2)

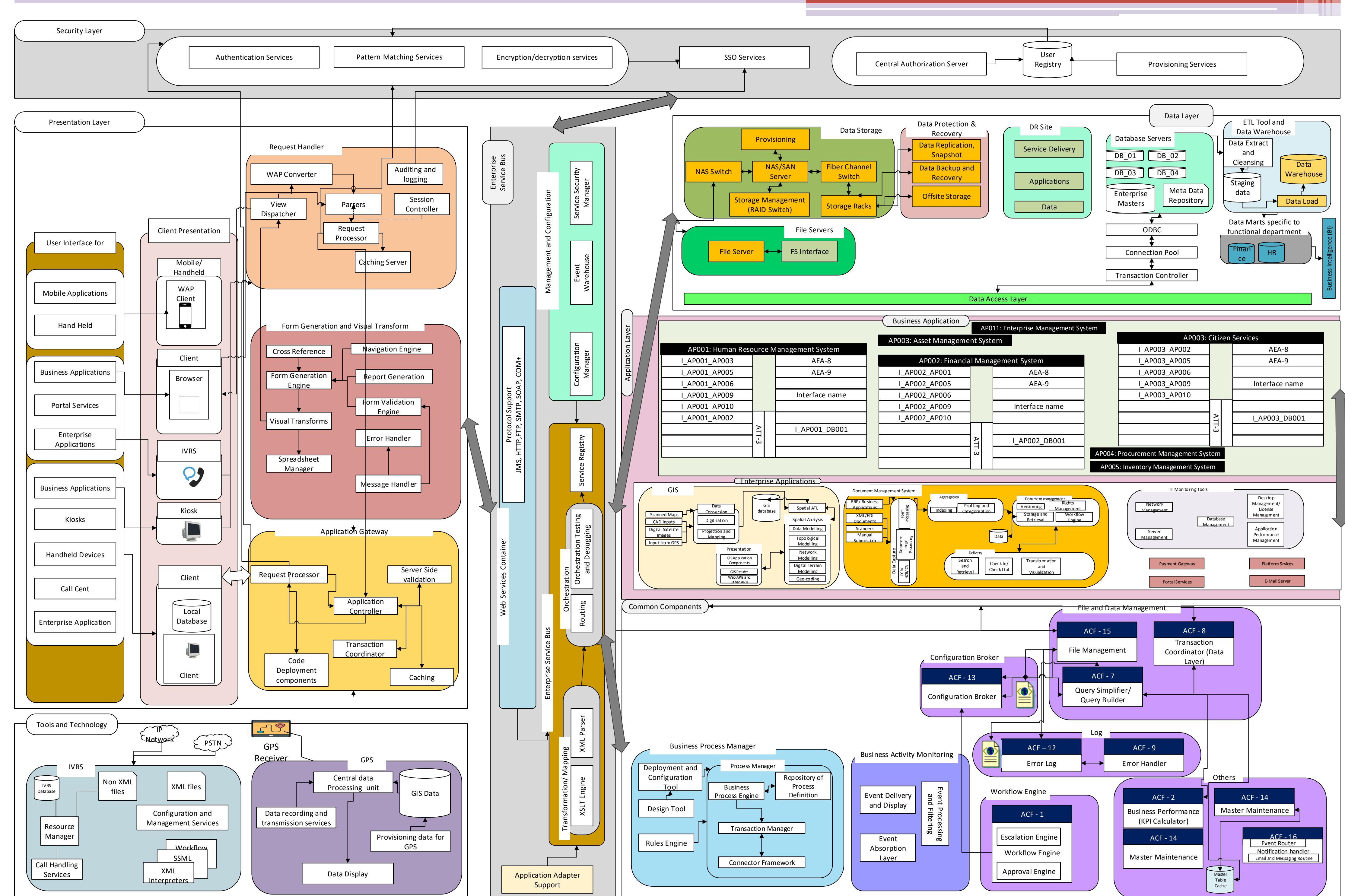


Obtaining New Water Connection (2/2)



Illustrative process for Monitoring construction of new roads





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MASTER SERVICE AGREEMENT

This Contract is made at Pimpri, Maharashtra, on this _____ day of ____, 2019,

BETWEEN

The “Pimpri Chinchwad Smart City Limited” having its registered office at Pimpri Chinchwad Municipal Corporation, Mumbai-Pune Road, Pimpri, Pune-411018 hereinafter referred to as “**PCSCL**”, (which expression unless repugnant to the context therein shall include its administrator and its assignees) of the **FIRST PART**;

AND

<**NAME OF SYSTEM INTEGRATOR**>, a company organized and existing under the Section of 2(20) of Companies Act, 2013, having its registered office at <**ADDRESS OF SYSTEM INTEGRATOR**>, India hereinafter referred to as “**Systems Integrator**” or “**the SI**”, (which

expression unless repugnant to the context therein, shall include its successors, administrators, executors and permitted assignees), of the **SECOND PART**.

WHEREAS the SI has the required professional skills, personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract and RFP and is about to perform services as specified in this RFP Volume I & II (hereinafter called "works") mentioned, enumerated or referred to in certain Contract conditions, specification, scope of work, other Sections of the RFP, covering letter and schedule of prices which, for the purpose of identification, have been signed by the authorized representative on behalf of *<NAME OF SYSTEM INTEGRATOR>* (the SI) and Pimpri Chinchwad Smart City Limited (PCSCL) and all of which are deemed to form part of the Contract as though separately set out herein and are included in the expression "Contract" whenever herein used.

NOW, THEREFORE, IT IS HEREBY AGREED between the parties as follows:

- a. PCSCL has accepted the tender of the SI for the provision and execution of the said works for the sum of INR _____ (Rupees _____), including all taxes and levies upon the terms laid out in this RFP. (as per Price Schedule attached at Pro-forma A)
- b. The SI hereby agrees to provide Services to PCSCL, conforming to the specified Service Levels and conditions set out hereunder.
- c. The following documents attached hereto shall be deemed to form an integral part of this Contract:

Complete Request for Proposal (RFP) Document	<i>Volumes I, II and III of the RFP and corrigendum, addendum and clarifications, if any</i>
Price Schedule	<i>Detailed Price Schedule – Proforma A</i>

- d. The mutual rights and obligations of the "PCSCL" and the SI shall be as set forth in the Contract, in particular:
 - The SI shall carry out and complete the Services in accordance with the provisions of the Contract
 - "PCSCL" shall make payments to the SI in accordance with the provisions of the Contract

NOW THESE PRESENTS WITNESS and the parties hereto hereby agree and declare as follows, that is to say, in consideration of the payments to be made to the SI by PCSCL as hereinafter mentioned, the SI shall deliver the services for the said works and shall do and perform all other works and things in the Contract mentioned or described or which are implied there from or there in respectively or may be reasonably necessary for the completion of the said works within and at the times and in the manner and subject to the terms, conditions and stipulations mentioned in the said Contract.

AND in consideration of services and milestones, PCSCL shall pay to the SI the said sum of INR _____ (Rupees _____), including all taxes and levies or such other sums as may become payable to the SI under the provisions of this Contract, such payments to be made at such time and in such manner as is provided by the Contract.

A. GENERAL CONDITIONS OF CONTRACT (GCC)

1 Definition of Terms

“Acceptance of System”: The system shall be accepted by PCSCL, subsequent to its installation, commissioning of IT and non-IT equipment at all the project locations and successful rollout of services at all project locations, deployment of trained manpower, when all the activities as defined in RFP Volume II - Scope of Work have been successfully executed and completed to the satisfaction of PCSCL.

The SI shall achieve operational acceptance of the complete solutions as defined in the RFP in accordance with the time schedule specified in the implementation schedule, scope of work, technical requirements, design considerations Section and any refinements made in the agreed and finalized project plan, or within the timeframe, the SI has been provided by PCSCL.

As soon as the System or any subsystem, has, in the opinion of the SI, been delivered, commissioned, and made in accordance with the technical requirements of the RFP as per the agreed and finalized Project plan, the SI shall notify PCSCL in writing.

PCSCL shall, after receipt of the SI’s notice, either issue an installation certificate, stating that the system, or major component or subsystem (if Acceptance by major component or subsystem) has achieved Installation by the date of the SI’s notice under or notify the SI in writing of any defects and/or deficiencies, including, but not limited to, defects or deficiencies in the interoperability or integration of the various components and/or subsystems making up the System.

System Integrator (the SI) shall use all reasonable endeavors to promptly remedy any defect and/or deficiencies that notified by PCSCL.

The SI shall then promptly carry out retesting of the system or subsystem and, when in the SI’s opinion the system or subsystem is ready for commissioning and operational acceptance testing, notify PCSCL in writing. The procedure shall be repeated, as necessary, until an Installation certificate is issued. The acceptance criteria shall inter-alia include, but not limited to:

- Installation and commissioning of all the Hardware & Software supplied as part of the Project, clearly documented and demonstrated. The documents would include but not limited to FRS, SLA etc.

- Functional Acceptance Criteria – Demonstration of tasks, business processes or functions which PCSCL has listed out in the RFP as Functional & Non-functional requirement design considerations
- Submission of manuals, design documents, training materials and other necessary documents
- Training to personnel identified by PCSCL as per the project plan & the proposal from the SI
- Summary of test cases and execution results to prove that the acceptance criteria have been met

1.1 “Applicable Law(s)”: Any statute, law, ordinance, notification, rule, regulation, judgment, order, decree, by law, approval, directive, guideline, policy, requirement or other governmental restriction or any similar form of decision applicable to the relevant party and as may be in effect on the date of the execution of this Contract and during the subsistence thereof, applicable to the Project

- 1.3. **“PCSCL”** means the Pimpri Chinchwad Smart City Limited
- 1.4. **“System Integrator (SI)”** means the selected bidder i.e. *<NAME OF SYSTEM INTEGRATOR>* or Substitute System Integrator, as the case may be, who shall carry out all the services mentioned in the scope of work of the RFP
- 1.5. **“Contract”** means the agreement entered into by the parties with the entire documentation specified in the *RFP*
- 1.6. **“Contract Value”** means the price payable to the SI under this Contract for the full and proper performance of its contractual obligations
- 1.7. **“Commercial Off-The-Shelf (COTS)”** refers to software products that are ready-made and available for sale, lease, or license to the general public.
- 1.8. **“Server Room”** means the centralized space to be used for installation and deployment of all the proposed systems and devices for centralized control, monitoring and management of all the solutions. The server room is planned to host city's existing and forth coming systems for centralized management.
- 1.9. **“Document”** means any embodiment of any text or image however recorded and includes any data, text, images, sound, voice, codes, databases or any other electronic documents as per IT Act 2000
- 1.10. **“Effective Date”** means the date on which this Contract is signed and executed by the parties hereto. If this Contract is executed in parts, then the date on which the last of such Contracts is executed shall be construed to be the Effective Date
- 1.11. **“GCC”** means General Conditions of Contract
- 1.12. **“Goods”** means all of the equipment, sub-systems, hardware, products accessories, software and/or other material / items which the SI is required to supply, install and maintain under the contract

- 1.13. "**PCMC**" means the Pimpri Chinchwad Municipal Corporation
- 1.14. "**PCMC HO**" means the Pimpri Chinchwad Municipal Corporation Head Office, Pimpri
- 1.15. "**Command Control Center**" means the center from where Police would conduct surveillance on civil issues on the entire Pimpri Chinchwad City
- 1.16. "**City Operation Center**" means the center from where Pimpri Chinchwad Smart City Limited would conduct monitoring of all the smart city elements throughout the entire Pimpri Chinchwad City
- 1.17. "**Intellectual Property Rights**" means any patent, copyright, trademark, trade name, service marks, brands, proprietary information whether arising before or after the execution of this Contract and the right to ownership and registration of these rights
- 1.18. "**Go-Live**" means commissioning of project post design, development and implementation, including training as per scope of work mentioned in the RFP. the SI shall have the approval from PCSCL for user acceptance testing
- 1.19. "**Notice**" means a consent, approval or other communication required to be in writing under this Contract
- 1.20. "**OEM**" means the **Original Equipment Manufacturer of any equipment / system / software / product**, which are providing such goods to PCSCL under the scope of this RFP
- 1.21. "**The SI's Team**" means the SI who has to provide goods & services to PCSCL under the scope of this Contract. This definition shall also include any and/or all of the employees of the SI, authorized service providers/ partners and representatives or other personnel employed or engaged directly or indirectly by the SI for the purposes of this Contract.
- 1.22. "**Substitute System Integrator**" means the organization replacing the SI in case of contract termination for any reasons
- 1.23. "**Sub-Contractor**" shall mean the entity named in the contract for any part of the work or any person to whom any part of the contract has been sublet with the consent in writing of PCSCL and the heirs, legal representatives, successors and assignees of such person.
- 1.24. "**SCC**" means Special Conditions of Contract.
- 1.25. "**Services**" means the work to be performed by the SI pursuant to this RFP and to the contract to be signed by the parties in pursuance of any specific assignment awarded by PCSCL.

2 Interpretation

In this Agreement, unless otherwise specified:

- a) References to Clauses, Sub-Clauses, Paragraphs, Schedules and Annexures are to clauses, sub-clauses, paragraphs, schedules and annexures to this Agreement;
- b) Use of any gender includes the other genders;

- c) References to a 'company' shall be construed so as to include any company, corporation or other body corporate, wherever and however incorporated or established;
- d) References to a 'person' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
- e) A reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
- f) Any reference to a 'day' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
- g) References to a 'business day' shall be construed as a reference to a day (other than a Sunday) on which banks in the state of Maharashtra are generally open for business;
- h) References to times are to Indian Standard Time;
- i) A reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, novated or supplemented at any time; and
- j) All headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.
- k) System Integrator (SI) has been used for the same entity i.e. Bidder selected for the project.

3 Measurements and Arithmetic Conventions

3.1. All measurements and calculations shall be in the metric system and calculations done to two decimal places, with the third digit of five or above being rounded up and below five being rounded down except in money calculations where such amounts shall be rounded off to the nearest INR.

4 Ambiguities within Agreement

4.1. In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

- a) as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
- b) as between the provisions of this Agreement and the Schedules/Annexures, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules/Annexures; and

- c) as between any value written in numerals and that in words, the value in words shall prevail.

5 Priority of Documents

This Agreement, including its Schedules and Annexures, represents the entire agreement between the Parties as noted in this Clause. If in the event of a dispute as to the interpretation or meaning of this Agreement it shall be necessary for the Parties to refer to documents forming part of the bidding process leading to this Agreement, then such documents shall be relied upon and interpreted in the following descending order of priority:

- a) This Agreement along with
- b) NDA agreement, if any
- c) Schedules and Annexures;
- d) the RFP along with subsequently issued corrigendum and addendums
- e) Technical and financial proposal submitted by the successful bidder, to the extent they along with subsequently issued clarifications furnished by the System Integrator in response to the RFP, to the extent they are not inconsistent with any terms of the RFP.

For the avoidance of doubt, it is expressly clarified that in the event of a conflict between this Agreement, Annexures / Schedules or the contents of the RFP, the terms of this Agreement shall prevail over the Annexures / Schedules and Annexures / Schedules shall prevail over the contents and specifications of the RFP.

6 Scope of work

- 6.1.** Scope of the work as defined in **RFP Volume II** and Annexures thereto of the tender and subsequent pre bid clarifications, corrigendum/addendum, if any.
- 6.2.** PCSCL has engaged the SI to provide services related to implementation of the ICT led smart city solutions using which PCSCL intends to perform its business operations. The SI is required to provide such goods, services and support as PCSCL may deem proper and necessary, during the term of this Contract, and includes all such processes and activities which are consistent with the proposals set forth in the RFP and this Contract and are deemed necessary by PCSCL, in order to meet its business requirements (hereinafter ‘scope of work’).
- 6.3.** Bidder shall also provide complete maintenance support for all the proposed integrated solution as outlined in this RFP for a period of Sixty (60) months from the date of go-live i.e.

“Go-Live” + 60 months. “Go-live” is the date on which the proposed solution is operational as per the requirements provided in this RFP and all the acceptance tests are successfully concluded to the satisfaction of PCSCL.

7 Term and Duration of the Agreement

7.1. This Agreement shall come into effect on <DD/MM/YYYY> (hereinafter the ‘Effective Date’) and shall continue till operation and maintenance completion date which shall be the date of the completion of the operation and maintenance to PCSCL or its nominated agencies, unless terminated earlier (as per clause 37), in which case the contract will get terminated on fulfilment of all obligations mentioned as per clause 37.

8 Conditions Precedent & Effective Date

8.1. Provisions to take effect upon fulfilment of Conditions Precedent

- a) Subject to express terms to the contrary, the rights and obligations under this Agreement shall take effect only upon fulfilment of all the Conditions Precedent set out below. However, PCSCL or its nominated agencies may at any time at its sole discretion waive fully or partially any of the Conditions Precedent for the System Integrator.
- b) For the avoidance of doubt, it is expressly clarified that the obligations of the Parties (or its nominated agencies) under this Agreement shall commence from the fulfillment of the Conditions Precedent as set forth below.

8.2. Conditions Precedent of the System Integrator

The System Integrator shall be required to fulfill the Conditions Precedent, which is as follows:

- a) To provide a Performance Security/Guarantee and other guarantees/ payments within fifteen (15) days of the receipt of notification of award from PCSCL; and
- b) To provide PCSCL or its nominated agencies certified true copies of its constitutional documents and board resolutions authorizing the execution, delivery and performance of this Agreement by the System Integrator (optional)

8.3. Conditions Precedent of PCSCL

PCSCL shall be required to fulfill the Conditions Precedents, which are as follows:

- a) Necessary clearances associated with the execution of the project, unless specified to be performed by the the SI

- b) Approval of the Project by a Competent Authority, etc.

8.4. Extension of time for fulfillment of Conditions Precedent

The Parties may, by mutual agreement extend the time for fulfilling the Conditions Precedent and the Term of this Agreement.

8.5. Non-fulfilment of the System Integrator's Conditions Precedent

- a) In the event that any of the Conditions Precedent of the System Integrator have not been fulfilled within fifteen (15) days of signing of this Agreement and the same have not been waived fully or partially by PCSCL or its nominated agencies, this Agreement shall cease to exist;
- b) In the event that the Agreement fails to come into effect on account of non-fulfilment of the System Integrator's Conditions Precedent, PCSCL or its nominated agencies shall not be liable in any manner whatsoever to the System Integrator and PCSCL shall forthwith forfeit the Earnest Money Deposit.
- c) In the event that possession of any of PCSCL or its nominated agencies facilities has been delivered to the System Integrator prior to the fulfilment of the Conditions Precedent, upon the termination of this Agreement such shall immediately revert to PCSCL or its nominated agencies, free and clear from any encumbrances or claims.

9 Commencement and Progress

- 9.1.** The SI shall subject to the fulfilment of the conditions precedent above, commence the performance of its obligations in a manner as per the Scope of Work (RFP Volume II).
- 9.2.** The SI shall proceed to carry out the activities / services with diligence and expedition in accordance with any stipulation as to the time, manner, mode, and method of execution contained in this Contract.
- 9.3.** The SI shall be responsible for and shall ensure that all activities / services are performed in accordance with the Contract, RFP Scope of Work and Service Specifications and that the SI's Team complies with such specifications and all other standards, terms and other stipulations/conditions set out hereunder.

10 Standards of Performance

- 10.1.** The SI shall perform the services and carry out its obligations under the Contract with due diligence, efficiency and economy, in accordance with generally accepted techniques and best practices used in the industry and with IT standards recognized by international professional bodies and shall observe sound management, engineering and security practices. It shall employ appropriate advanced technology and engineering practices and safe and effective equipment, machinery, material and methods. The SI shall always act, in respect of any matter relating to the Contract, as faithful advisors to PCSCL and shall, at all times, support and safeguard PCSCL's legitimate interests in any dealings with Third Parties.

11 Approvals and Required Consents

- 11.1.** The Parties shall cooperate to procure, maintain and observe all relevant, regulatory and governmental licenses, clearances and applicable approvals (hereinafter the "Required Consents") necessary for the System Integrator to provide the services. The costs of such approvals shall be borne by the Party normally responsible for such costs according to local custom and practice in the locations where the services are to be provided. PCSCL shall also provide necessary support to the SI in obtaining the approvals. In the event that any approval is not obtained, the SI and PCSCL shall co-operate with each other in achieving a reasonable alternative arrangement as soon as reasonably practicable for PCSCL and at the discretion of PCSCL without any adverse impact on PCSCL's interest including but not limited to additional time/expenditure, to continue to process its work with as minimal interruption to its business operations as is commercially reasonable until such approval is obtained, provided that the SI shall not be relieved of its obligations to provide the services and to achieve the service Levels until the approvals are obtained if and to the extent that the SI's obligations are dependent upon such approvals.
- 11.2.** PCSCL or its nominated agencies shall use reasonable endeavors to assist System Integrator to obtain the required consent. In the event that any required consent is not obtained, the System Integrator and PCSCL or its nominated agencies will co-operate with each other in achieving a reasonable alternative arrangement as early and as reasonably practicable for PCSCL or its nominated agencies to continue to process its work with as minimal interruption to its business operations as is commercially reasonable until such required consent is obtained, provided that the

System Integrator shall not be relieved of its obligations to provide the services and to achieve the service levels until the required consents are obtained to the extent that the System Integrator's obligations are not dependent upon such required consents.

12 Obligations of the SI

- 12.1.** The SI's obligations shall include all the activities as specified by PCSCL in the Scope of Work and other Sections of the RFP and Contract and changes thereof to enable PCSCL to meet the objectives and operational requirements. It shall be the SI's responsibility to ensure the proper and successful implementation, performance and continued operation of the proposed solution in accordance with and in strict adherence to the terms of his Bid, the Tender and this Contract.
- 12.2.** In addition to the aforementioned, the SI shall provide services to manage and maintain the said system and infrastructure as mentioned in RFP Volume II.
- 12.3.** PCSCL reserves the right to interview the personnel proposed that shall be deployed as part of the project team. If found unsuitable, PCSCL may reject the deployment of the personnel. But ultimate responsibility of the project implementation shall lie with the SI.
- 12.4.** PCSCL reserves the right to require changes in personnel, which shall be communicated to the SI. the SI with the prior approval of PCSCL may make additions to the project team. the SI shall provide PCSCL with the resume of Key Personnel and provide such other information as PCSCL may reasonably require. PCSCL also reserves the right to interview the personnel and reject, if found unsuitable. In case of change in its team members, for any reason whatsoever, the SI shall also ensure that the exiting members are replaced with at least equally qualified and professionally competent members.
- 12.5.** the SI shall ensure that none of the Key Personnel, proposed, exit from the project during the project implementation Phase.
- 12.6.** The SI shall submit profiles of only those resources that shall be deployed on the project. Any change of resource shall be approved by PCSCL and compensated with equivalent or better resource.
- 12.7.** In case of change in its team members, the SI shall ensure a reasonable amount of time overlap in activities to ensure proper knowledge transfer and handover / takeover of documents and other relevant materials between the outgoing and the new member.
- 12.8.** The SI shall ensure that the SI's team is competent, professional and possesses the requisite qualifications and experience appropriate to the task they are required to

perform under this Contract. The SI shall ensure that the services are performed through the efforts of the SI's Team, in accordance with the terms hereof and to the satisfaction of PCSCL. Nothing in this Contract relieves the SI from its liabilities or obligations under this Contract to provide the Services in accordance with PCSCL's directions and requirements and as stated in this Contract and the Bid to the extent accepted by PCSCL and the SI shall be liable for any non-performance, non-compliance, breach or other loss and damage resulting either directly or indirectly by or on account of the the SI's Team.

- 12.9.** The SI shall be fully responsible for deployment / installation / development and integration of all the software and hardware components and resolve any problems / issues that may arise due to integration of components.
- 12.10.** The SI shall ensure that the OEMs supply equipment / components including associated accessories and software required and shall support the SI in the installation, commissioning, integration and maintenance of these components during the entire period of contract. If the SI deploys COTS solutions, the SI shall ensure that the COTS OEMs supply the software applications and shall support the SI in the installation / deployment, integration, rollout and maintenance of these applications during the entire period of contract. It must clearly be understood by the SI that warranty and AMC of the system, products and services incorporated as part of system would commence from the day of Go-Live of system as complete solutions including all the solutions proposed. The SI would be required to explicitly display that they have a back-to-back arrangement for provisioning of warranty / AMC support till the end of contract period with the relevant OEMs. The annual maintenance support shall include patches and updates of the software, hardware components and other devices.
- 12.11. All the software licenses that the SI proposes shall be perpetual software licenses.**
Licenses shall be in the name of PCSCL/end user. The software licenses shall not be restricted based on location and PCSCL/end user shall have the flexibility to use the software licenses for other requirements if required, provided the same does not violate the usage rights agreed with the original manufacturer.
- 12.12.** All the OEMs that the SI proposes shall have dealer possession licenses.
- 12.13.** PCSCL reserves the right to review the terms of the Warranty and Annual Maintenance Agreements entered into between the SI and OEMs and no such agreement/contract shall be executed, amended, modified and/or terminated without the prior written consent of PCSCL. An executed copy of each of such agreements/contracts shall, immediately upon execution be submitted by the SI to PCSCL.
- 12.14.** Alternatively, the the SI can also submit an undertaking on company letterhead in this regard (specifying broadly the terms of the Warranty and Annual Maintenance

Agreements entered into between the the SI and OEM) signed by a competent authority of the SI/OEM.

- 12.15.** The SI shall ensure that none of the components and sub-components is declared end-of-sale or end-of-support by the respective OEM at the time of submission of bid. If the OEM declares any of the products/ solutions end-of-sale subsequently, the the SI shall ensure that the same is supported by the respective OEM for the entire contract period. Undertaking on company letterhead in this regard signed by the Global CEO or the Country head of OEM/the SI shall be submitted by the SI.
- 12.16.** If a product is de-supported by the OEM for any reason whatsoever, from the date of Acceptance of the System till the end of contract, the SI shall replace the products/ solutions with an alternate that is acceptable to PCSCL at no additional cost to PCSCL and without causing any performance degradation.
- 12.17.** If there are any licenses, all the Licenses will be in the name of PCSCL only.
- 12.18.** the SI shall ensure that the OEMs provide the support and assistance to the SI in case of any problems / issues arising due to integration of components supplied by the SI with any other component(s) / product(s) under the purview of the overall solution. If the same is not resolved for any reason whatsoever, the SI shall replace the required component(s) with an equivalent or better substitute that is acceptable to PCSCL without any additional cost to PCSCL and without impacting the performance of the solution in any manner whatsoever.
- 12.19.** The SI shall ensure that the OEMs for hardware servers/equipment supply and/or install all type of updates, patches, fixes and/or bug fixes for the firmware or software from time to time at no additional cost to PCSCL.
- 12.20.** The SI shall ensure that the OEMs for hardware servers/ equipment or the SI's trained engineers conduct the preventive maintenance on a Quarterly basis and break-fix maintenance in accordance with the best practices followed in the industry. The SI shall ensure that the documentation and training services associated with the components shall be provided by the OEM partner or OEM's certified training partner without any additional cost to PCSCL.
- 12.21.** The SI and their personnel/representative shall not alter / change / replace any hardware component proprietary to PCSCL and/or under warranty or AMC of third party without prior consent of PCSCL.
- 12.22.** The SI representative(s) shall have all the powers requisite for the execution of scope of work and performance of services under this contract. the SI representative(s) shall liaise with PCSCL's representative for the proper coordination and timely completion of the works and on any other matters pertaining to the works. The SI shall extend full co-operation to PCSCL's representative in the manner required by them for supervision/ inspection/ observation of the equipment/ goods/ material, procedures, performance, progress, reports and records pertaining to the works. He shall also

have complete charge of the SI's personnel engaged in the performance of the works and to ensure compliance of rules, regulations and safety practice. He shall also cooperate with the other Service Providers/Vendors of PCSCL working at PCSCL's office locations & field locations and COC, CCC.

12.23. The SI shall be responsible on an ongoing basis for coordination with other vendors and agencies of PCSCL in order to resolve issues and oversee implementation of the same. The SI shall also be responsible for resolving conflicts between vendors in case of borderline integration issues.

12.24. The SI's shall adhere with the followings:

- 12.24.1 The products, solutions, goods and services etc. quoted by them, shall fulfil all the RFP requirements including but not limited to OEM compliance and technical specifications etc. In case any of the quoted products, solutions, goods and services etc. do not meet any of the RFP requirements, the SI is liable to provide requisite substitution/alternate to fulfil the RFP requirements by the approval of PCSCL, without any delay in Project timelines or additional cost to PCSCL.
- 12.24.2. The SI's submitted bid is prepared in conformance of the RFP requirement in totality and any deficiency in the quoted BoM shall be fulfilled by the SI without any enhancement in the quoted project cost in its financial bid or change in the project timelines & SLAs.
- 12.24.3. Any reference of payment to the the SI on actual basis, anywhere in the RFP, only means that, for any reasons if PCSCL at any stage decides to enhance or truncates the scope of work leading to increase or decrease in the no. of hardware components/devices than the one prescribed in the RFP or in the response of the the SI, the payment for the same shall be made for such additional or lower number on the basis of the respective line item unit cost prescribed by the the SI as part of their financial bid.

12.25. Change of Control:

- a) In the event of a change of control of the System Integrator during the term, the System Integrator shall promptly notify PCSCL and/or its nominated agencies of the same.
- b) In the event that the net worth of the surviving entity is less than that of System Integrator prior to the change of control, PCSCL or its nominated agencies may within thirty (30) days of becoming aware of such change in control, require a replacement of existing Performance Guarantee furnished by the System Integrator from a guarantor acceptable to PCSCL or its nominated agencies (which shall not be System Integrator or any of its associated entities).

- c) If such a guarantee is not furnished within thirty (30) days of PCSCL or its nominated agencies requiring the replacement, PCSCL may exercise its right to terminate the SLA and/ or this Agreement within a further thirty (30) days by written notice, to become effective as specified in such notice.
- d) Pursuant to termination, the effects of termination as set out in Clause 37 of this Agreement shall follow.
- e) For the avoidance of doubt, it is expressly clarified that the internal reorganization of the System Integrator shall not be deemed an event of a change of control for purposes of this Clause unless the surviving entity is of less net worth than the predecessor entity.

12.26. Final Testing and Certification

The Project shall be governed by the mechanism of final acceptance testing and certification to be put into place by PCSCL and System Integrator as under:

- a. Final testing and certification criteria will lay down a set of guidelines following internationally accepted norms and standards for testing and certification for all aspects of project development and implementation covering software, hardware and networking including the processes relating to the design of solution architecture, design of systems and sub-systems, coding, testing, business process description, documentation, version control, change management, security, service oriented architecture, performance in relation to compliance with SLA metrics, interoperability, scalability, availability and compliance with all the technical and functional requirements of the RFP and this Agreement;
- b. Final testing and certification criteria will be finalized from the development stage to ensure that the guidelines are being followed and to avoid large scale modifications pursuant to testing done after the application is fully developed;
- c. Final testing and certification criteria will consider conducting specific tests on the software, hardware, networking, security and all other aspects;
- d. Final testing and certification criteria will establish appropriate processes for notifying the System Integrator of any deviations from the norms, standards or guidelines at the earliest instance after taking cognizance of the same to enable the System Integrator to take corrective action; etc.
- e. The Parties shall each ensure that the range of the Services under the SLA shall not be varied, reduced or increased except with the prior written agreement between PCSCL and System Integrator in accordance with the Change Control Schedule set out in Annex II of this Agreement.

- f. Save for the express terms of the Terms of Payment Schedule set out of this Agreement, PCSCL or its nominated agencies and its users may purchase any particular category of Services that may become necessary as per the Change Control Schedule set out in Annex II of this Agreement, without the need to go for a separate procurement process.

12.27. Use of Assets by the System Integrator

During the Term, the System Integrator shall:

- a) Take all reasonable and proper care of the entire hardware and software, network or any other information technology infrastructure components used for the Project and other facilities leased / owned / operated by the System Integrator exclusively in terms of ensuring their usability for the delivery of the Services as per this Agreement (hereinafter the "Assets") in proportion to their use and control of such Assets; and
- b) Keep all the tangible Assets in as good and serviceable condition (reasonable wear and tear excepted) as at the date the System Integrator takes control of and/or first uses the Assets and during the entire Term of the Agreement.
- c) Ensure that any instructions or manuals supplied by the manufacturer of the Assets for use of the Assets and which are provided to the System Integrator will be followed by the System Integrator and any person who will be responsible for the use of the Assets;
- d) Take such steps as may be properly recommended by the manufacturer of the Assets and notified to the System Integrator or as may, in the reasonable opinion of the System Integrator, be necessary to use the Assets in a safe manner;
- e) Ensure that the Assets that are under the control of the System Integrator, are kept suitably housed and in conformity with Applicable Law;
- f) Procure permission from PCSCL or its nominated agencies and any persons duly authorized by them to enter any land or premises on which the Assets are for the time being sited so as to inspect the same, subject to any reasonable third party requirements;
- g) Not knowingly or negligently use or permit any of the Assets to be used in contravention of any statutory provisions or regulation or in any way contrary to Applicable Law

12.28. Access to Sites

- 12.28.1. For so long as the System Integrator provides services to PCSCL or its nominated agencies location, as the case may be, on a non-permanent basis and to the extent necessary, PCSCL as the case may be or its nominated agencies shall, subject to

compliance by the System Integrator with any safety and security guidelines which may be provided by PCSCL as the case may be or its nominated agencies and notified to the System Integrator in writing, provide the System Integrator with:

- a) Reasonable access, in the same manner granted to PCSCL or its nominated agencies employees, to PCSCL as the case may be location twenty-four hours a day, seven days a week;
- b) Reasonable work space, access to office equipment as mutually agreed and other related support services in such location and at such other PCSCL as the case may be location, if any, as may be reasonably necessary for the System Integrator to perform its obligations hereunder and under the SLA

12.28.2. Access to locations, office equipment and services shall be made available to the System Integrator (as per scope of work defined in the tender) by PCSCL as the case may be or its nominated agencies. The System Integrator agrees to ensure that its employees, agents and contractors shall not use the location, services and equipment referred to in RFP for the following purposes:

- a) for the transmission of any material which is defamatory, offensive or abusive or of an obscene or menacing character; or
- b) in a manner which constitutes a violation or infringement of the rights of any person, firm or company (including but not limited to rights of copyright or confidentiality)

12.29. Start of Installation

12.29.1. The SI shall co-ordinate with PCSCL and stakeholders for the complete setup of sites before commencement of installation of other areas as mentioned in Scope of Work of the RFP Volume II document.

12.29.2. The plan and design documents thus developed shall be submitted by the SI for approval by PCSCL.

12.29.4. After obtaining the approval from PCSCL, the SI shall commence the installation of the systems.

12.30. Management Phase

12.30.1. Governance

The review and management process of this Agreement shall be carried out in accordance with the Governance Schedule set out in Annex IV of this document and shall cover all the management aspects of the Project.

12.30.2. Use of Services

- a) PCSCL as the case may be or its nominated agencies, will undertake and use the Services in accordance with any instructions or procedures as per the acceptance criteria as set out in the SLA or this Agreement or any agreement that may be entered into between the Parties from time to time;
- b) PCSCL as the case may be or its nominated agencies shall be responsible for the operation and use of the Deliverables resulting from the Services

12.30.3. Changes

Unless expressly dealt with elsewhere in this Agreement, any changes under or to this Agreement or under or to the SLA shall be dealt with in accordance with the Change Control Schedule set out in Annex II of this Agreement.

12.30.4. Security and Safety

- a) The System Integrator shall comply with the technical requirements of the relevant security, safety and other requirements specified in the Information Technology Act or Telegraph Act including the regulations issued by dept. of telecom (wherever applicable), IT Security Manual of PCSCL as specifically stated in the RFP and follow the industry standards related to safety and security (including those as stated in the RFP), insofar as it applies to the provision of the Services.
- b) ~~Each Party to the SLA/Agreement shall also~~ comply with PCSCL or Government of India, and the respective State's security standards and policies in force from time to time at each location of which PCSCL or its nominated agencies make the System Integrator aware in writing insofar as the same apply to the provision of the Services.
- c) The Parties to the SLA/Agreement shall use reasonable endeavors to report forthwith in writing to each other all identified attempts (whether successful or not) by unauthorized persons (including unauthorized persons who are employees of any Party) either to gain access to or interfere with PCSCL as the case may be or any of their nominees data, facilities or Confidential Information.
- d) The System Integrator shall upon reasonable request by PCSCL as the case may be or their nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.
- e) As per the provisions of the SLA or this Agreement, the System Integrator shall promptly report in writing to PCSCL or its nominated agencies, any

act or omission which they are aware that could have an adverse effect on the proper conduct of safety and information technology security at the facilities of PCSCL as the case may be.

12.30.5. Co-operation

Except as otherwise provided elsewhere in this Agreement or the SLA, each Party (“Providing Party”) to this Agreement or to the SLA undertakes promptly to provide the other Party (“Receiving Party”) with all such information and co-operation which the Receiving Party reasonably requests, provided that such information and co-operation:

- a) does not require material expenditure by the Providing Party to provide the same;
- b) is reasonably required by the Receiving Party in order for it to comply with its obligations under this Agreement or the SLA;
- c) cannot be construed to be Confidential Information; and
- d) is capable of being provided by the Providing Party

Further, each Party agrees to co-operate with the contractors and subcontractors of the other Party as reasonably requested in order to accomplish the purposes of this Agreement.

12.31. Reporting Progress

12.31.1. the SI shall monitor progress of all the activities related to the execution of this contract and shall submit to PCSCL, progress reports with reference to all related work, milestones and their progress during the implementation phase.

12.31.2. Formats for all above mentioned reports and their dissemination mechanism shall be discussed and finalized along with project plan. PCSCL on mutual agreement between both parties may change the formats, periodicity and dissemination mechanism for such reports.

12.31.3. Periodic meetings shall be held between the representatives of PCSCL and the SI once in every fifteen (15) days during the implementation phase to discuss the progress of implementation. After the implementation phase is over, the meeting shall be held as an ongoing basis, as desired by PCSCL, to discuss the performance of the contract.

12.31.4. The SI shall ensure that the respective solution teams involved in the execution of work are part of such meetings.

12.31.5. Several review committees involving representatives of PCSCL and senior officials of the SI shall be formed for the purpose of this project. These committees shall meet

at intervals, as decided by PCSCL later, to oversee the progress of the implementation.

- 12.31.6. All the goods, services and manpower to be provided / deployed by the SI under the Contract and the manner and speed of execution and maintenance of the work and services are to be conducted in a manner to the satisfaction of PCSCL's representative in accordance with the Contract.
- 12.31.7. PCSCL reserves the right to inspect and monitor/ assess the progress/ performance of the work / services at any time during the course of the Contract. PCSCL may demand and upon such demand being made, the SI shall provide documents, data, material or any other information which PCSCL may require, to enable it to assess the progress/ performance of the work / service.
- 12.31.8. At any time during the course of the Contract, PCSCL shall also have the right to conduct, either itself or through another agency as it may deem fit, an audit to monitor the performance by the SI of its obligations/ functions in accordance with the standards committed to or required by PCSCL and the SI undertakes to cooperate with and provide to PCSCL/ any other agency appointed by PCSCL, all Documents and other details as may be required by them for this purpose. PCSCL at its discretion may appoint third party for auditing the activities of onsite services and operations of entire services provided by the SI. The same cost of the third party audit shall be borne by the SI.
- 12.31.9. Should the rate of progress of the works or any part of them at any time fall behind the stipulated time for completion or is found to be too slow to ensure completion of the works by the stipulated time, or is in deviation to Tender requirements/ standards, PCSCL's representative shall so notify the SI in writing.
- 12.31.10. The SI shall reply to the written notice giving details of the measures the SI proposes to take to expedite the progress to complete the works by the prescribed time or to ensure compliance to RFP requirements. The SI shall not be entitled to any additional payment for taking such steps. If at any time it shall appear to PCSCL or PCSCL's representative that the actual progress of work does not conform to the approved plan the SI shall produce at the request of PCSCL's representative a revised plan showing the modification to the approved plan necessary to ensure completion of the works within the time for completion or steps initiated to ensure compliance to the stipulated requirements
- 12.31.11. The submission seeking approval by PCSCL or PCSCL's representative of such plan shall not relieve the SI of any of his duties or responsibilities under the Contract.
- 12.31.12. In case during execution of works, the progress falls behind schedule or does not meet the Tender requirements, the SI shall deploy extra manpower / resources to make up the progress

or to meet the RFP requirements. Plan for deployment of extra manpower / resources shall be submitted to PCSCL for its review and approval. All time and cost effect in this respect shall be borne, by the SI within the contract value.

12.32. Project Plan

- 12.32.1. Within 15 calendar days of effective date of the contract, the SI shall submit to PCSCL for its approval a detailed Project Plan with details of the project showing the sequence, procedure and method in which the SI proposes to carry out the works. The Plan so submitted by the SI shall conform to the requirements and timelines specified in the Contract. PCSCL and the SI shall discuss and agree upon the work procedures to be followed for effective execution of the works, which the SI intends to deploy and shall be clearly specified. The Project Plan shall include but not limited to project organization, communication structure, proposed staffing, roles and responsibilities, processes and tool sets to be used for quality assurance, security and confidentiality practices in accordance with industry best practices, project plan and delivery schedule in accordance with the Contract. Approval by PCSCL's representative of the Project Plan shall not relieve the SI of any of his duties or responsibilities under this Contract.
- 12.32.2. If the SI's work plans necessitate a disruption/ shutdown in PCSCL's operation, the plan shall be mutually discussed and developed so as to keep such disruption/shutdown to the barest unavoidable minimum. Any time and cost arising due to failure of the SI to develop/adhere such a work plan shall be to the SI's account.

12.33. Adherence to safety procedures, rules regulations and restriction

- 12.33.1. The SI's Team shall comply with the provision of all applicable laws including labor laws, rules, regulations and notifications issued there under from time to time. All applicable safety and labor laws enforced by statutory agencies and by PCSCL shall be applicable in the performance of this Contract and the SI's Team shall abide by these laws.
- 12.33.2. Access to the Network Operations Center (NOC), Server Room, Command & Control Center and City Operation Center (COC) shall be strictly restricted. No access to any person except the essential members of the SI's Team who are authorized by PCSCL and are genuinely required for execution of work or for carrying out management/ maintenance shall be allowed entry. Even if allowed, access shall be restricted to the pertaining equipment of PCSCL only. The SI shall maintain a log of all activities carried out by each of its team personnel.
- 12.33.3. No access to any staff of the SI, except the essential staff who has genuine work-related need, shall be given. All such access shall be logged in a loss free manner

for permanent record with unique biometric identification of the staff to avoid misrepresentations or mistakes.

- 12.33.4. The SI shall take all necessary and proper measures to protect the personnel, work and facilities and shall observe all reasonable safety rules and instructions. The SI's Team shall adhere to all security requirement/ regulations of PCSCL during the execution of the work. PCSCL's employee also shall comply with safety procedures/ policy.
- 12.33.5. The SI shall report as soon as possible any evidence, which may indicate or is likely to lead to an abnormal or dangerous situation and shall take all necessary emergency control steps to avoid such abnormal situations.

12.34. Statutory Requirements

- 12.34.1. During the tenure of this Contract, nothing shall be done by the SI or his team including consortium in contravention of any law, act and/ or rules/regulations, there under or any amendment thereof governing inter-alia customs, stowaways, foreign exchange etc. and shall keep PCSCL indemnified in this regard.

13 PCSCL's Obligations

- 13.1.** PCSCL or his/her nominated representative shall act as the nodal point for implementation of the contract and for issuing necessary instructions, approvals, commissioning, acceptance certificates, payments etc. to the SI.
- 13.2.** PCSCL shall ensure that timely approval is provided to the SI as and when required, which may include approval of project plans, implementation methodology, design documents, specifications, or any other document necessary in fulfilment of this contract.
- 13.3.** PCSCL's representative shall interface with the SI, to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the Contract. PCSCL shall provide adequate cooperation in providing details, coordinating and obtaining of approvals from various governmental agencies, in cases, where the intervention of PCSCL is proper and necessary.
- 13.4.** PCSCL may provide on the SI's request, particulars / information / documentation that may be required by the SI for proper planning and execution of work and for providing services covered under this contract and for which the SI may have to coordinate with respective vendors.
- 13.5.** PCSCL shall provide to the SI only sitting space and basic infrastructure not including, stationery and other consumables at PCSCL's office locations.
- 13.6. Site Not Ready:** PCSCL hereby agrees to make the project sites ready as per the agreed specifications, within the agreed timelines. PCSCL agrees that the SI shall not

be in any manner liable for any delay arising out of PCSCL's failure to make the site ready within the stipulated period.

- 13.8.** To provide any support through personnel to test the system during the Term;
- 13.9.** To provide any support through personnel and/or test data during development, rollout, steady state operation, as well as, for any changes/enhancements in the system whenever required due to scope change that may arise due to business, delivery or statutory/regulatory reasons;
- 13.10.** PCSCL shall provide the data (including in electronic form wherever available) to be migrated.
- 13.11.** PCSCL shall authorize the System Integrator to interact for implementation of the Project with external entities and shall provide prompt Deliverable feedback, sign offs or its comments for changes.

14 Financial Matters

14.1. Terms of Payment

- a) In consideration of the Services and subject to the provisions of this Agreement and of the SLA, PCSCL shall pay the System Integrator for the Services rendered in pursuance of this agreement, in accordance with the Terms of Payment Schedule set out in this Agreement.
- b) Payments shall be subject to the application of liquidated damages if any (for period prior to "Go Live") or SLA penalties and its adjustments/corrections (for post "Go-Live") as may be provided for in the Agreement and the SLA from the relevant milestone(s).
- c) Save and except as otherwise provided for herein or as agreed between the Parties in writing, PCSCL shall not be required to make any payments in respect of the Services (or, without limitation to the foregoing, in respect of the System Integrator performance of any obligations under this Agreement or the SLA) other than those covered in this Agreement. For the avoidance of doubt, it is expressly clarified that the payments shall be deemed to include all ancillary and incidental costs and charges arising in the course of delivery of the Services including consultancy charges, infrastructure costs, project costs, implementation and management charges and all other related costs including taxes which are addressed in this Clause.
- d) Notwithstanding contained herein or elsewhere, any variation in applicable taxes, whether resulting into increase in rate of taxes or levy of new taxes or reduction in rate of taxes or abolition of existing taxes, shall be borne by PCSCL.

14.2. Invoicing & Settlement

- a) Subject to the specific terms of the Agreement and the SLA, the System Integrator shall submit its invoices in accordance with the following principles:
 - I. PCSCL shall be invoiced by the System Integrator for the Services. Generally and unless otherwise agreed in writing between the Parties or expressly set out in the SLA, the System Integrator shall raise an invoice as per the Payment Schedule of this Agreement; and
 - II. Any invoice presented in accordance with this Clause shall be in a form agreed with PCSCL
- b) The System Integrator alone shall invoice all payments after receiving due approval of completion of payment milestone from the competent authority. Such invoices shall be accurate with all adjustments or changes in the terms of payment as stated in Payment Schedule of this Agreement.
- c) Payment shall be made within Forty Five (45) working days of the receipt of invoice along with supporting documents by PCSCL subject to deduction of applicable liquidated damages (till "Go Live") or SLA penalties (post "Go Live"). The penalties are imposed on the vendor as per the SLA criteria specified in the SLA.
- d) PCSCL shall be entitled to delay or withhold payment of any invoice or part of it delivered by the System Integrator under Payment Schedule section of this Agreement where PCSCL disputes/withholds such invoice or part of it provided that such dispute is bonafide. The withheld amount shall be limited to that which is in dispute. The disputed / withheld amount shall be settled in accordance with the escalation procedure as set out in Payment Schedule sections of this Agreement. Any exercise by PCSCL under this Clause shall not entitle the System Integrator to delay or withhold provision of the Services.

14.3. Tax

- a) PCSCL or its nominated agencies shall be responsible for withholding taxes from the amounts due and payable to the System Integrator wherever applicable. The System Integrator shall pay for all other taxes in connection with this Agreement, SLA, scope of work and any other engagement required to be undertaken as a part of this Agreement, including, but not limited to, property, sales, use, excise, value-added, goods and services, consumption and other similar taxes or duties.
- b) PCSCL or its nominated agencies shall provide System Integrator with the original tax receipt of any withholding taxes paid by PCSCL or its nominated agencies on payments under this Agreement. The System Integrator agrees to reimburse and hold PCSCL or its nominated agencies harmless from any deficiency including

penalties and interest relating to taxes that are its responsibility under this paragraph. For purposes of this Agreement, taxes shall include taxes incurred on transactions between and among PCSCL or its nominated agencies, the System Integrator and third party subcontractors.

- c) If, after the date of this Agreement, there is any change of rate of levy under the existing applicable laws of India with respect to taxes and duties, which are directly payable by PCSCL for providing the goods and services i.e. GST or any such other applicable tax from time to time, which increase or decreases the cost incurred by the System Integrator in performing the Services, then the remuneration and reimbursable expense otherwise payable to the System Integrator under this Agreement shall be increased or decreased accordingly by correspondence between the Parties hereto, However, in case of any new or fresh tax or levy imposed after submission of the proposal the System Integrator shall be entitled to reimbursement on submission of proof of payment of such tax or levy.
- d) The Parties shall cooperate to enable each Party to accurately determine its own tax liability and to minimize such liability to the extent legally permissible. In connection therewith, the Parties shall provide each other with the following:
 - I. any resale certificates;
 - II. any relevant information regarding out-of-state or use of materials, equipment or services; and
 - III. any direct pay permits, exemption certificates or information reasonably requested by the other Party.
- e) The SI shall bear all personnel taxes levied or imposed on its personnel, or any other member of the SI's Team, etc. on account of payment received under this Contract. The SI shall bear all corporate taxes, levied or imposed on the SI on account of payments received by it from PCSCL for the work done under this Contract.
- f) the SI shall bear all taxes and duties etc. levied or imposed on the SI under the Contract including but not limited to GST, Sales Tax, Customs duty, Excise duty, Octroi, Service Tax, VAT, Works Contracts Tax and all Income Tax levied under Indian Income Tax Act – 1961 or any amendment thereof during the entire contract period, i.e., on account of material supplied and services rendered and payments received by him from PCSCL under the Contract. It shall be the responsibility of the SI to submit to the concerned Indian authorities the returns and all other connected documents required for this purpose. the SI shall also provide PCSCL such information, as it may be required in regard to the SI's details of payment made by PCSCL under the Contract for proper assessment of taxes and duties. The amount of tax withheld by PCSCL shall

- at all times be in accordance with Indian Tax Law and PCSCL shall promptly furnish to the SI original certificates for tax deduction at source and paid to the Tax Authorities.
- g) the SI agrees that he shall comply with the Indian Income Tax Act in force from time to time and pay Indian Income Tax, as may be imposed/ levied on them by the Indian Income Tax Authorities, for the payments received by them for the works under the Contract
 - h) The SI shall fully familiarize themselves about the applicable domestic taxes (such as GST, value added or sales tax, service tax, income taxes, duties, fees, levies, etc.) on amounts payable by PCSCL under the Contract. All such taxes must be included by the SI in the financial proposal. (The SI to find out applicable taxes for the components being proposed.)
 - i) Should the SI fail to submit returns/pay taxes in time as stipulated under applicable Indian/State Tax Laws and consequently any interest or penalty is imposed by the concerned authority, the SI shall pay the same. the SI shall indemnify PCSCL against any and all liabilities or claims arising out of this Contract for such taxes including interest and penalty by any such Tax Authority may assess or levy against PCSCL/the SI.
 - j) PCSCL shall if so required by applicable laws in force, at the time of payment, deduct income tax payable by the SI at the rates in force, from the amount due to the SI and pay to the concerned tax authority directly.

15 Audit, Access and Reporting

The System Integrator shall allow access to PCSCL or its nominated agencies to all information which is in the possession or control of the System Integrator and which relates to the provision of the Services as set out in the Audit, Access and Reporting Schedule and which is reasonably required by PCSCL to comply with the terms of the Audit, Access and Reporting Schedule set out as in Annex V of this agreement.

16 Intellectual Property Rights

16.1. Products and fixes:

All products and related solutions and fixes provided pursuant to this Agreement shall be licensed according to the terms of the license agreement packaged with or otherwise applicable to such product, the ownership of which shall continue to vest with the product owner. System Integrator would be responsible for arranging any licenses associated with products. “Product” means any computer code, web-based services, or materials comprising commercially released, pre-release or beta products (whether licensed for a fee or no charge) and any derivatives of the foregoing which are made available to PCSCL for license which is published by product owner or its

affiliates, or a third party. “Fixes” means product fixes that are either released generally (such as commercial product service packs) or that are provided to you when performing services (such as workarounds, patches, bug fixes, beta fixes and beta builds) and any derivatives of the foregoing.

16.2. Bespoke development:

Subject to the provisions of Clause 16.3 and 16.4 below, upon payment, the IPR rights for any bespoke development done during the implementation of the project will lie exclusively with PCSCL.

16.3. Pre-existing work:

All IPR including the source code and materials developed or otherwise obtained independently of the efforts of a Party under this Agreement (“pre-existing work”) including any enhancement or modification thereto shall remain the sole property of that Party. During the performance of the services for this agreement, each party grants to the other party (and their sub-contractors as necessary) a non-exclusive license to use, reproduce and modify any of its pre-existing work provided to the other party solely for the performance of such services for duration of the Term of this Agreement. Except as may be otherwise explicitly agreed to in a statement of services, upon payment in full, the System Integrator shall grant PCSCL a non-exclusive, perpetual, fully paid-up license to use the pre-existing work in the form delivered to PCSCL as part of the service or deliverables only for its internal business operations. Under such license, either of parties will have no right to sell the pre-existing work of the other party to a Third Party. PCSCL’s license to pre-existing work is conditioned upon its compliance with the terms of this Agreement and the perpetual license applies solely to the pre-existing work that bidder leaves with PCSCL at the conclusion of performance of the services.

16.4. Residuals:

In no event shall System Integrator be precluded from independently developing for itself, or for others, anything, whether in tangible or non-tangible form, which is competitive with, or similar to, the deliverables, set-out in this Agreement. In addition, subject to the confidentiality obligations, System Integrator shall be free to use its general knowledge, skills and experience, and any ideas, concepts, know-how, and techniques that are acquired or used in the course of providing the Services.

17 Representations & Warranties

17.1. Representations and warranties of the System Integrator

The System Integrator represents and warrants to PCSCL or its nominated agencies that:

- a) it is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and other agreements and to carry out the transactions contemplated hereby;
- b) it is a competent provider of a variety of information technology and business process management services;
- c) it has taken all necessary corporate and other actions under laws applicable to its business to authorize the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- d) from the Effective Date, it will have the financial standing and capacity to undertake the Project in accordance with the terms of this Agreement;
- e) in providing the Services, it shall use reasonable endeavors not to cause any unnecessary disruption to PCSCL's normal business operations
- f) this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms hereof;
- g) the information furnished in the System Integrator's response to the RFP and any subsequent clarification pertaining to the evaluation process, furnished on or before the date of this Agreement is to the best of its knowledge and belief true and accurate in all material respects as at the date of this Agreement;
- h) the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default by any of the terms of its Memorandum and Articles of Association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- i) there are no material actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its material obligations under this Agreement;
- j) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Instrumentality which may result in any Adverse Effect on its ability to perform its

obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;

- k) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have an Adverse Effect on its ability to perform its obligations under this Agreement;
- l) no representation or warranty by it contained herein or in any other document furnished by it to PCSCL or its nominated agencies in relation to the Required Consents contains or shall contain any untrue or misleading statement of material fact or omits or shall omit to state a material fact necessary to make such representation or warranty not misleading; and
- m) no sums, in cash or kind, have been paid or shall be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for entering into this Agreement or for influencing or attempting to influence any officer or employee of PCSCL or its nominated agencies in connection therewith.

17.2. Representations and warranties of PCSCL or its nominated agencies

PCSCL or its nominated agencies represent and warrant to the System Integrator that:

- a) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement and carry out the transactions contemplated hereby;
- b) it has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- c) it has the financial standing and capacity to perform its obligations under the Agreement;
- d) it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising thereunder including any obligation, liability or responsibility hereunder;
- e) this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms thereof;

- f) the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- g) there are no actions, suits or proceedings pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the default or breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform its material (including any payment) obligations under this Agreement;
- h) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any Adverse Effect on PCSCL or its nominated agencies ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- i) it has complied with Applicable Laws in all material respects;
- j) all information provided by it in the RFP in connection with the Project is, to the best of its knowledge and belief, true and accurate in all material respects; and
- k) upon the System Integrator performing the covenants herein, it shall not at any time during the term hereof, interfere with peaceful exercise of the rights and discharge of the obligations by the System Integrator, in accordance with this Agreement.

18 Term and Extension of the Contract

- 18.1.** The Contract period shall commence from the date of signing of contract and shall remain valid for sixty (60) months from the date of Go Live of the system
- 18.2.** If the delay occurs due to circumstances beyond control of the SI such as strikes, lockouts, fire, accident, defective materials, delay in approvals or any cause whatsoever beyond the reasonable control of the SI, a reasonable extension of time shall be granted by PCSCL.
- 18.3.** PCSCL shall reserve the sole right to grant any extension to the term abovementioned and shall notify in writing to the SI, at least three (3) months before the expiration of the Term hereof, whether it shall grant the SI an extension of the Term. The decision to grant or refuse the extension shall be at PCSCL's discretion and such extension of the contract, if any, shall be as per terms agreed mutually between PCSCL and the SI.

18.4. Where PCSCL is of the view that no further extension of the term be granted to the SI, PCSCL shall notify the SI of its decision at least three (3) months prior to the expiry of the Term. Upon receipt of such notice, the SI shall continue to perform all its obligations hereunder, until such reasonable time beyond the Term of the Contract within which, PCSCL shall either appoint an alternative agency/the SI or create its own infrastructure to operate such Services as are provided under this Contract.

19 Dispute Resolution

- a. **General:** If any dispute arises between the parties during the execution of a contract that shall be amicably settled by mutual discussions. However, if the dispute is not settled by mutual discussions, a written representation will be obtained from the the SI on the points of dispute. The representation so received shall be examined by PCSCL and may take legal advice of a counsel and then examine the representation. The the SI will also be given an opportunity of being heard. PCSCL will take a decision on the representation and convey it in writing to the the SI.
- b. In case of dispute arising amongst consortium members, beyond getting amicably settled by mutual discussion, and in the interest of project, PCSCL Board reserves the right to allow lead bidder for the change of consortium member as per RFP requirements and terms & conditions.
- c. **Arbitration**
In the event of unresolved dispute between the parties (PCSCL BoD fails to resolve), it shall be the subject matter of jurisdiction of Pune district court only.

20 Time is of the essence

20.1. Time shall be of the essence in respect of any date or period specified in this Contract or any notice, demand or other communication served under or pursuant to any provision of this Contract and in particular in respect of the completion of the activities by the SI by the specified completion date.

21 Conflict of interest

21.1. The the SI shall hold the Purchaser's interests paramount, without any consideration for future work, and strictly avoid conflict of interest with other assignments or their own corporate interests. If during the period of this contract,

a conflict of interest arises for any reasons, the the SI shall promptly disclose the same to the purchaser and seek its instructions.

- 21.2.** Prohibition of Conflicting Activities: The the SI shall not engage, either directly or indirectly, in any business or professional activities related to PCSCL's mentioned projects' Operations & Management that would conflict with the activities assigned to them under this Contract.
- 21.3.** the SI shall disclose to PCSCL in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the SI or the SI's Team) in the course of performing the Services as soon as practical after it becomes aware of that conflict.

22 Force Majeure

- 22.1.** Definition of Force Majeure:

"Force Majeure" shall mean any event beyond the reasonable control of PCSCL or of the the SI, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected.

- 22.2.** Force Majeure events

A Force Majeure shall include, without limitation, the following:

- a) War, hostilities, or warlike operations (whether a state of war be declared or not), invasion, act of foreign enemy, and civil war;
- b) Strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine, and plague;
- c) Earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves, or other natural or physical disaster;

- 22.3.** If either party is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances of the event of Force Majeure within fourteen (14) days after the occurrence of such event.

- 22.4.** The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered, or delayed. The time for achieving Final Acceptance shall be extended.

22.5. The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under Clause 37.

22.6. No delay or non-performance by either party to this Contract caused by the occurrence of any event of Force Majeure shall:

- a) constitute a default or breach of the Contract
- b) give rise to any claim for damages or additional cost or expense occasioned by the delay or non-performance
- c) if, and to the extent that, such delay or nonperformance is caused by the occurrence of an event of Force Majeure

22.7. If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than sixty (60) days on account of one or more events of Force Majeure during the time period covered by the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which, either party may terminate the Contract by giving a notice to the other.

22.8. In the event of termination pursuant to this Clause 22, the rights and obligations of PCSCL and the the SI shall be as specified in the clause titled Termination.

22.9. Notwithstanding Clause 22, Force Majeure shall not apply to any obligation of PCSCL to make payments to the the SI under this Contract.

22.10. For the avoidance of doubt, it is expressly clarified that the failure on the part of the System Integrator under this Agreement or the SLA to implement any disaster contingency planning and back-up and other data safeguards in accordance with the terms of this Agreement or the SLA against natural disaster, fire, sabotage or other similar occurrence shall not be deemed to be a Force Majeure event. For the avoidance of doubt, it is further clarified that any negligence in performance of Services, which directly causes any breach of security like hacking aren't the forces of nature and hence wouldn't be qualified under the definition of "Force Majeure". In so far as applicable to the performance of Services, Service Provider will be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes and technology to prevent any breach of security and any resulting liability therefrom (wherever applicable).

23 Delivery

- 23.1.** The SI shall bear the cost for packing, transport, insurance, storage and delivery of all the goods for “Selection of System Integrator for Supply, Installation, Testing, Commissioning and O&M for ICT led PCSCL Smart City Solutions” at all locations identified by PCSCL in Pimpri Chinchwad.
- 23.2.** The Goods and manpower supplied under this Contract shall conform to the standards mentioned in the RFP, and, when no applicable standard is mentioned, to the authoritative standards; such standard shall be approved by PCSCL.
- 23.3.** The SI shall only procure the hardware and software after approvals from a designated Committee/Authority.

24 Warranty & Maintenance

- 24.1. Standard:** The System Integrator warrants that the Project, including all the system(s), materials and goods supplied pursuant to the Agreement, shall be free from any defect or deficiency in the material, design, engineering, and workmanship that prevent the system and/or any of its systems(s) from fulfilling the technical requirements or that limit in a material fashion the performance, reliability, or extensibility of the system and/or any of its sub-system(s). Commercial warranty provisions of products supplied under the Agreement shall apply to the extent they do not conflict with the provisions of this Agreement.
- 24.2.** The SI also warrants that the products, materials and other goods supplied under the Agreement are new, unused and incorporate all recent improvements in design that materially affect the system's or subsystem's ability to fulfil the technical requirements specified in the RFP.
- 24.3.** In addition, the SI warrants that: (i) all Goods components to be incorporated into the System form part of the SI/OEM's and/or Subcontractor's current product lines.
- 24.4.** The warranty period shall commence from the date of Final Acceptance of the System (or of any major component or subsystem for which phased Go-Live is provided for in the Agreement) or on expiry of the products commercial warranty, whichever is earlier.
- 24.5.** If during the warranty period any defect or deficiency is found in the material, design and performance/workmanship of the Project and other Services provided by the System Integrator, the System Integrator shall promptly, in consultation and agreement with PCSCL, and at the System Integrator's sole cost repair, replace, or otherwise make good (as the System Integrator shall, at its discretion, determine) such default, defect or deficiency as well as any damage to the system caused by such default, defect or deficiency. Any defective component, excluding hard disks, that has been replaced by the System Integrator shall remain the property of the System Integrator.

- 24.6.** The SI may, with the consent of PCSCL, remove from the site any product and other goods that are defective, if the nature of the defect, and/or any damage to the System caused by the defect, is such that repairs cannot be expeditiously carried out at the site. If the repair, replacement, or making good is of such a character that it may affect the efficiency of the System, PCSCL may give the SI notice requiring that tests of the defective part be made by the SI immediately upon completion of such remedial work, whereupon the SI shall carry out such tests. If such part fails the tests, the SI shall carry out further repair, replacement, or making good (as the case may be) until that part of the System passes such tests. The tests shall be agreed upon by PCSCL and the SI.
- 24.7.** If the SI fails to commence the work necessary to remedy such defect or any damage to the System caused by such defect within a reasonable time period, PCSCL may, following notice to the SI, proceed to do such work or contract a third party (or parties) to do such work, and the reasonable costs incurred by PCSCL in connection with such work shall be paid to PCSCL by the SI or may be deducted by PCSCL from any amount due to the the SI.
- 24.8.** If the System or any of its sub-systems cannot be used by reason of such default, defect or deficiency and/or making good of such default, defect or deficiency, the warranty period for the Project shall be extended by a period equal to the period during, which the Project or any of its system could not be used by PCSCL because of such defect and/or making good of such default, defect or deficiency.
- 24.9.** Items substituted for defective parts of the System during the Warranty Period shall be covered by the Warranty for the remainder of the Warranty Period applicable for the part replaced or three (3) months, whichever is greater.
- 24.10.** The Implementing Agency shall have no liability in the case of breach of this warranty due to use of the deliverables on any environment (hardware or software) other than the environment recommended or approved by the Implementing Agency, (ii) the combination, operation, or use of some or all of the deliverables with information, software, specifications, instructions, data, or materials not approved by the Implementing Agency; (iii) the deliverables having been tampered with, altered or modified by PCSCL without the written permission of the Implementing Agency, or (iv) use of the deliverables otherwise than in terms of the relevant documentation.
- 24.11.** Implied Warranty: The warranties provided herein are in lieu of all other warranties, both express and implied, and all other warranties, including without limitation that of merchantability or fitness for intended purpose is specifically disclaimed.

25 Insurance

25.1. The Goods supplied under this Contract shall be comprehensively insured by the SI at his own cost, against any loss or damage, for the entire period of the contract. The SI shall submit to PCSCL, documentary evidence issued by the insurance company, indicating that such insurance has been taken.

25.2. The SI shall bear all the statutory levies like customs, insurance, freight, etc. applicable on the goods and also the charges like transportation charges, etc. that may be applicable till the goods are delivered at the respective sites of installation shall also be borne by the SI.

25.3. The SI shall take out and maintain at its own cost, on terms and conditions approved by the PCSCL, insurance against the risks, and for the coverages, as specified below:

- a) At PCSCL's request, shall provide evidence to PCSCL showing that such insurance has been taken out and maintained and that the current premiums therefor have been paid.
- b) Employer's liability and workers' compensation insurance in respect of the Personnel of the Company, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate

25.4. Obligation to maintain insurance in connection with the provision of the Services, the Service Provider must have and maintain:

- a) For the Agreement Period, valid and enforceable insurance coverage for:
 - i. Public liability;
 - ii. Either professional indemnity or errors and omissions;
 - iii. Product liability;
 - iv. Workers' compensation as required by law; and
 - v. Any additional types specified in Annex II
- b) For one year following the expiry or termination of the Agreement, valid and enforceable insurance policies (if relevant), in the amount not less than the Insurance Cover derived in this RFP

25.5. Certificates of Currency

25.5.1. The System Integrator must, on request by PCSCL, provide current relevant confirmation of insurance documentation from its insurance brokers certifying that it has insurance as required by this Clause 25. The Service Provider agrees to replace any coverage prior to the date of expiry/cancellation.

25.6. Non-compliance

- 25.6.1. PCSCL or its nominated agencies may, at its election, terminate this Agreement as per Clause 37.8, upon the failure of System Integrator or notification of such failure, to maintain the required insurance coverage. Inadequate insurance coverage for any reason shall not relieve System Integrator of its obligations under this Agreement.

26 Exit Management

26.1.1 Purpose

- 26.1.1. This Schedule sets out the provisions, which will apply on expiry or termination of the MSA, the Project Implementation, Operation and Management SLA.
- 26.1.2. In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
- 26.1.3. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management clause.

26.2. Transfer of Assets

- 26.2.1. PCSCL shall be entitled to serve notice in writing on the SI at any time during the exit management period as detailed hereinabove requiring the SI and/or its sub-contractors to provide PCSCL with a complete and up to date list of the Assets within thirty (30) days of such notice. PCSCL shall then be entitled to serve notice in writing on the SI at any time prior to the date that is thirty (30) days prior to the end of the exit management period requiring the SI to sell the Assets, if any, to be transferred to PCSCL or its nominated agencies at book value as determined as of the date of such notice in accordance with the provisions of relevant laws.
- 26.2.2. In case of contract being terminated by PCSCL, PCSCL reserves the right to ask the SI to continue running the project operations for a period of six (6) months after termination orders are issued.
- 26.2.3. Upon service of a notice under this Article the following provisions shall apply:
 - i. in the event, if the Assets to be transferred are mortgaged to any financial institutions by the SI, the SI shall ensure that all such liens and liabilities have been cleared beyond doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to PCSCL.

- ii. All risk in and title to the Assets to be transferred / to be purchased by PCSCL pursuant to this Article shall be transferred to PCSCL, on the last day of the exit management period.
- iii. PCSCL shall pay to the SI on the last day of the exit management period such sum representing the Net Block (procurement price less depreciation as per provisions of Companies Act) of the Assets to be transferred as stated in the Terms of Payment Schedule.
- iv. Payment to the outgoing SI shall be made to the tune of last set of completed services / deliverables, subject to SLA requirements.
- v. The outgoing SI will pass on to PCSCL and/or to the Replacement SI, the subsisting rights in any leased properties/ licensed products on terms not less favorable to PCSCL/ Replacement SI, than that enjoyed by the outgoing SI.

26.3. Cooperation and Provision of Information

During the exit management period:

- 26.3.1. The System Integrator will allow PCSCL or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable PCSCL to assess the existing services being delivered;
- 26.3.2. Promptly on reasonable request by PCSCL, the SI shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the System Integrator or sub-contractors appointed by the System Integrator). PCSCL shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The System Integrator shall permit PCSCL or its nominated agencies to have reasonable access to its employees and facilities as reasonably required by the Chairman, PIU to understand the methods of delivery of the services employed by the System Integrator and to assist appropriate knowledge transfer.

26.4. Confidential Information, Security and Data

- 26.4.1. The System Integrator will promptly on the commencement of the exit management period supply to PCSCL or its nominated agency the following:
 - i. Information relating to the current services rendered and customer and performance data relating to the performance of sub-contractors in relation to the services;

- ii. Documentation relating to Computerization Project's Intellectual Property Rights;
 - iii. Documentation relating to sub-contractors;
 - iv. All current and updated data as is reasonably required for purposes of PCSCL or its nominated agencies transitioning the services to its Replacement System Integrator in a readily available format nominated by PCSCL, its nominated agency;
 - v. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable PCSCL or its nominated agencies, or its Replacement System Integrator to carry out due diligence in order to transition the provision of the Services to PCSCL or its nominated agencies, or its Replacement System Integrator (as the case may be).
- 26.4.2. Before the expiry of the exit management period, the System Integrator shall deliver to PCSCL or its nominated agency all new or up-dated materials from the categories set out in this section above and shall not retain any copies thereof, except that the System Integrator shall be permitted to retain one copy of such materials for archival purposes only.
- 26.4.3. Before the expiry of the exit management period, unless otherwise provided under the MSA, PCSCL or its nominated agency shall deliver to the System Integrator all forms of System Integrator confidential information, which is in the possession or control of Chairperson, PIU or its users.

26.5. Employees

- 26.5.1. Promptly on reasonable request at any time during the exit management period, the System Integrator shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to PCSCL or its nominated agency a list of all employees (with job titles) of the System Integrator dedicated to providing the services at the commencement of the exit management period.
- 26.5.2. Where any national, regional law or regulation relating to the mandatory or automatic transfer of the contracts of employment from the System Integrator to PCSCL or its nominated agency, or a Replacement System Integrator ("Transfer

Regulation") applies to any or all of the employees of the System Integrator, then the Parties shall comply with their respective obligations under such Transfer Regulations.

26.6. Transfer of Certain Agreements

On request by PCSCL or its nominated agency, the System Integrator shall effect such assignments, transfers, licenses and sub-licenses as the Chairperson, PIU may require in favor of the Chairperson, PIU, or its Replacement System Integrator in relation to any equipment lease, maintenance or service provision agreement between System Integrator and third party lessors, vendors, and which are related to the services and reasonably necessary for the carrying out of replacement services by PCSCL or its nominated agency or its Replacement System Integrator.

26.7. Rights of Access to Premises

- 26.7.1. At any time during the exit management period, where Assets are located at the System Integrator's premises, the System Integrator will be obliged to give reasonable rights of access to (or, in the case of Assets located on a third party's premises, procure reasonable rights of access to) PCSCL or its nominated agency and/or any Replacement System Integrator in order to make an inventory of the Assets.
- 26.7.2. The System Integrator shall also give PCSCL or its nominated agency or its nominated agencies, or any Replacement System Integrator right of reasonable access to the System Integrator's premises and shall procure PCSCL or its nominated agency agencies and any Replacement System Integrator rights of access to relevant third party premises during the exit management period and for such period of time following termination or expiry of the MSA as is reasonably necessary to migrate the services to PCSCL or its nominated agency, or a Replacement System Integrator.

26.8. Exit Management Plan

- 26.8.1. The System Integrator shall provide PCSCL or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
 - i. A detailed program of the transfer process that could be used in conjunction with a Replacement System Integrator including details of the means to be

- used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
- ii. Plans for the communication with such of the System Integrator's subcontractors, staff, customers and any related third party as are necessary to avoid any material detrimental impact on PCSCL's operations as a result of undertaking the transfer;
 - iii. If applicable, proposed arrangements for the segregation of the System Integrator's networks from the networks employed by PCSCL and identification of specific security tasks necessary at termination;
 - iv. Plans for provision of contingent support to PCSCL, and Replacement System Integrator for a reasonable period after transfer.

- 26.8.2. The System Integrator shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
- 26.8.3. Each Exit Management Plan shall be presented by the System Integrator to and approved by PCSCL or its nominated agencies.
- 26.8.4. The terms of payment as stated in the Terms of Payment Schedule include the costs of the System Integrator complying with its obligations under this Schedule.
- 26.8.5. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.
- 26.8.6. During the exit management period, the System Integrator shall use its best efforts to deliver the services.
- 26.8.7. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
- 26.8.8. This Exit Management plan shall be furnished in writing to PCSCL or its nominated agencies within ninety (90) days from the Effective Date of this Agreement.

B. SPECIAL CONDITIONS OF CONTRACT (SCC)

27 Performance Security

- 27.1. The SI shall furnish Performance Security Deposit to PCSCL, in the form of Bank Guarantee (PBG), within fifteen (15) days of issuance of Letter of Intent (LoI) or Letter

of Award (LoA) for a value equivalent to 5% of the contract value. This PBG shall be valid up to One hundred and eighty (180) days beyond the term of the Contract (Contract Period+180 days) including any subsequent term extension. The SI shall be responsible for extending the validity date and claim period of the PBG as and when it is due on account of extension of contract and/or warranty period.

28 Liquidated Damages

- i. Except as provided under clause "Force Majeure", if the supplier/ selected bidder fails to deliver any or all of the items/goods or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in (d) below for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the bidding document and/ or contract. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to clause "Termination".
- b) The time specified for delivery and installation of the IT/non-IT Infra and software products licenses in the bidding document shall be deemed to be the essence of the contract and the supplier/ selected bidder shall arrange items/goods supply and related services within the specified period.
- c) Delivery and installation/ completion period may be extended with or without liquidated damages, if the delay in the supply of items/goods or service is on account of hindrances beyond the control of the supplier/ selected bidder.
 - i. The supplier/ selected bidder shall request in writing to the Purchaser giving reasons for extending the delivery period of service, if he finds himself unable to complete the supply of items/goods or service within the stipulated delivery period or is unable to maintain prorate progress in the supply of items/goods or service delivery. This request shall be submitted as soon as a hindrance in delivery of items/goods and service occurs or within fifteen (15) days from such occurrence but before expiry of stipulated period of completion of delivery of items / goods and service after which such request shall not be entertained.
 - ii. The Purchaser shall examine the justification of causes of hindrance in the delivery of items/goods and service and the period of delay occurred due to that and recommend the competent authority on the period of extension which shall be granted with or without liquidated damages.
 - iii. Normally, extension in delivery period of items/goods and service in following circumstances may be considered without liquidated damages:

- a. When delay has occurred due to delay in supply of drawings, designs, plans etc. if PCSCL was required to supply them to the supplier of items/goods or service provider as per terms of the contract.
 - b. When delay has occurred in supply of materials etc. if these were required to be supplied to the supplier or service provider by PCSCL as per terms of the contract.
 - iv. If the competent authority agrees to extend the delivery period/ schedule, an amendment to the contract with suitable denial clauses and with or without liquidated damages, as the case may be, shall be issued. The amendment letter shall mention that no extra price or additional cost for any reason, what so ever beyond the contracted cost shall be paid for the delayed supply of items/goods and service.
 - v. It shall be at the discretion of the concerned authority to accept or not to accept the supply of items/goods and/ or services rendered by the contractor after the expiry of the stipulated delivery period, if no formal extension in delivery period has been applied and granted. The competent authority shall have right to cancel the contract with respect to undelivered items/goods and/ or service.
 - vi. If PCSCL is in need of the items/goods and/ or service rendered after expiry of the stipulated delivery period, it may accept the services and issue a letter of extension in delivery period with usual liquidated damages and denial clauses to regularize the transaction.
- d) In case of extension in the delivery and installation/completion period is granted with full liquidated damages, the recovery shall be made on the basis of following percentages of value of items/goods and/ or service which the supplier/ selected bidder has failed to supply/ install/ complete :

Condition	LD%*
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<p>Time is the essence of the Agreement and the delivery dates are binding on the Implementation Agency. In the event of delay or any gross negligence in implementation of the project before Go-Live, for causes solely attributable to the Implementation Agency, in meeting the deliverables, the Purchaser shall be entitled at its option to recover from the Implementation Agency as agreed, liquidated damages, a sum of <0.5%> of the value of the deliverable which suffered delay or gross negligence for each completed week or part thereof subject to a limit of <10%> of the total contract value. This right to claim any liquidated damages shall be without prejudice to other rights and remedies available to Purchaser under the contract and law.</p>	<p>A sum of <0.5%> of the value of the deliverable which suffered delay or gross negligence for each completed week or part thereof subject to a limit of <10%> of the total contract value.</p>
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- I. Fraction of a day in reckoning period of delay in supplies, successful installation and completion of work shall be eliminated, if it is less than half a day.
- II. The maximum amount of liquidated damages shall be 10% of the contract value.
- III. *The percentage refers to the payment due for the associated deliverables/items/ goods/ service.

29 Indemnifications and Limitation of Liability:

29.1. Subject to Clause 29.5 below, System Integrator (the "Indemnifying Party") undertakes to indemnify, hold harmless PCSCL (the "Indemnified Party") from and against all claims, liabilities, losses, expenses (including reasonable attorneys' fees), fines, penalties, taxes or damages (Collectively "Loss") on account of bodily injury, death or damage to tangible personal property arising in favor of any person, corporation or other entity (including the Indemnified Party) attributable to the

Indemnifying Party's negligence or wilful default in performance or non-performance under this Agreement.

- 29.2.** If the Indemnified Party promptly notifies Indemnifying Party in writing of a third party claim against Indemnified Party that any Service provided by the Indemnifying Party infringes a copyright, trade secret or patents incorporated in India of any third party, Indemnifying Party will defend such claim at its expense and will pay any costs or damages, that may be finally awarded against Indemnified Party.
- 29.3.** Indemnifying Party will not indemnify the Indemnified Party, however, if the claim of infringement is caused by:
- Indemnified Party's misuse or modification of the Service;
 - Indemnified Party's failure to use corrections or enhancements made available by the Indemnifying Party;
 - Indemnified Party's use of the Service in combination with any product or information not owned or developed by Indemnifying Party;
- 29.4.** However, if any service, information, direction, specification or materials provided by Indemnified Party or any third party contracted to it, is or likely to be held to be infringing, Indemnifying Party shall at its expense and option either
- Procure the right for Indemnified Party to continue using it
 - Replace it with a non-infringing equivalent
 - Modify it to make it non-infringing

The foregoing remedies constitute Indemnified Party's sole and exclusive remedies and Indemnifying Party's entire liability with respect to infringement.

- 29.5.** The indemnities set out in Clause 29 shall be subject to the following conditions:
- 29.5.1. The Indemnified Party as promptly as practicable informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;
- 29.5.2. The Indemnified Party shall, at the cost of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the defence of such claim including reasonable access to all relevant information, documentation and personnel provided that the Indemnified Party may, at its sole cost and expense, reasonably participate, through its attorneys or otherwise, in such defence;
- 29.5.3. If the Indemnifying Party does not assume full control over the defence of a claim as provided in this Article, the Indemnifying Party may participate in such defence at its sole cost and expense, and the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be included in Losses;

- 29.5.4. The Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;
- 29.5.5. All settlements of claims subject to indemnification under this Clause will:
- i. Be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld and include an unconditional release to the Indemnified Party from the claimant or plaintiff for all liability in respect of such claim; and
 - ii. Include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement
- 29.5.6. The Indemnified Party shall account to the Indemnifying Party for all awards, settlements, damages and costs (if any) finally awarded in favor of the Indemnified Party which are to be paid to it in connection with any such claim or proceedings;
- 29.5.7. The Indemnified Party shall take steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings;
- 29.5.8. In the event that the Indemnifying Party is obligated to indemnify an Indemnified Party
- 29.5.9. pursuant to this Article, the Indemnifying Party will, upon payment of such indemnity in full, be subrogated to all rights and defences of the Indemnified Party with respect to the claims to which such indemnification relates; and
- 29.5.10. If a Party makes a claim under the indemnity set out under Clause 28 above in respect of any particular Loss or Losses, then that Party shall not be entitled to make any further claim in respect of that Loss or Losses (including any claim for damages).
- 29.6.** The liability of either Party (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any claim in any manner related to this Agreement, including the work, deliverables or Services covered by this Agreement, shall be the payment of direct damages only which shall in no event exceed one time the total contract value payable under this Agreement.
- 29.7.** In no event shall either party be liable for any consequential, incidental, indirect, special or punitive damage, loss or expenses (including but not limited to business interruption, lost business, lost profits, or lost savings) nor for any third party claims (other than those set-forth in Clause 29.1) even if it has been advised of their possible existence.
- 29.8.** The allocations of liability in this Clause 29 represent the agreed and bargained-for understanding of the parties and compensation for the Services reflects such allocations. Each Party has a duty to mitigate the damages and any amounts payable

under an indemnity that would otherwise be recoverable from the other Party pursuant to this Agreement by taking appropriate and commercially reasonable actions to reduce or limit the amount of such damages or amounts.

30 Ownership and Retention of Documents

- 30.1.** PCSCL shall own the Documents, prepared by or for the SI arising out of or in connection with the Contract.
- 30.2.** Forthwith upon expiry or earlier termination of this Contract and at any other time on demand by PCSCL, the SI shall deliver to PCSCL all documents provided by or originating from PCSCL and all documents produced by or for the SI in the course of performing the Services, unless otherwise directed in writing by PCSCL at no additional cost. The SI shall not, without prior written consent of PCSCL store, copy, distribute or retain any such documents.

31 Escrow Agreement

- 31.1.** System Integrator shall comply with the escrow provisions below for all Bespoke Development customized codes (including subcontractor-owned materials and other Third Party Material incorporated in System Integrator's Proprietary Material), except to the extent System Integrator demonstrates to the satisfaction of PCSCL that compliance is not permitted by the nature of System Integrator's limited rights in such material.
- 31.2.** Within ninety (90) days after PCSCL's acceptance of the Solution, the Parties shall enter into a software escrow agreement ("Escrow Agreement") with a reputable, independent, third party that provides software escrow services among its principal business offerings ("Escrow Agent"). The Escrow Agreement shall provide for the regular deposit into escrow of all source code (including without limitation all make files, configurationally files, data tables upon which execution is dependent, and the like, collectively the "Source Code"), object code, and documentation with respect to all Public Material and System Integrator's Proprietary Material (and cumulative updates thereof), together with (a) continually updated instructions as to the compilation, installation, configuration, deployment, and use of the Source Code, and (b) a list of all non-deposited third party software used in conjunction with the Source Code to provide the full functionality of the deposited materials. In the event of the termination or expiration of the initial Escrow Agreement or any successor agreement, with minimal delay the Parties shall enter into a substantially equivalent

agreement with a successor provider of software escrow services (who shall then be known as the “Escrow Agent”).

31.3. System Integrator will make its initial deposit of Source Code within fifteen (15) days after the effective date of the Escrow Agreement.

31.4. System Integrator shall periodically update the escrow deposit as the Parties shall agree in the Escrow Agreement. In addition to other usual and customary terms, the Escrow Agreement shall provide that PCSCL shall be entitled to obtain the deposited materials from escrow upon PCSCL’s making a proper claim for release from escrow in the event that (c) proper written notice is given to the Escrow Agent that release of the copy of the deposited materials is pursuant to applicable Central or PCSCL bankruptcy, insolvency, reorganization, or liquidation statute; (d) System Integrator files articles of dissolution (but not if System Integrator is consolidated or merged into another entity); (e) the Contract expires or terminates for Material Breach of System Integrator.

31.5. The release of deposited materials from escrow shall not confer upon PCSCL any right of ownership in the deposited materials or the underlying intellectual property embodied therein. In the event of the release of deposited materials to PCSCL from escrow, PCSCL shall use the deposited materials solely for the benefit of PCSCL and its constituents, consistently with the grants of license set forth in Clause 16 of this Agreement.

31.6. The release of materials from escrow, without more, shall not cause any further amounts to accrue as payable to System Integrator by PCSCL, and the term of PCSCL’s possessory and usage rights with respect to the released materials shall be perpetual.

31.7. The Escrow Agreement shall provide for its automatic termination upon the earlier of five (5) years after the expiration or termination of this Contract, or, release of all Source Code to PCSCL and PCSCL’s subsequent confirmation of compliance with the terms of the Escrow Agreement. System Integrator shall pay the escrow costs, as well as all costs associated with causing its subcontractors and other third parties to abide by the Escrow Agreement.

32 Information Security

- 32.1.** The SI shall not carry any written/printed document, layout diagrams, CD, hard disk, storage tapes, other storage devices or any other goods /material proprietary to PCSCL into / out of any location without written permission from PCSCL.
- 32.2.** The SI shall not destroy any unwanted documents, defective tapes/media present at any location on their own. All such documents, tapes/media shall be handed over to PCSCL.
- 32.3.** All documentation and media at any location shall be properly identified, labeled and numbered by the SI. The SI shall keep track of all such items and provide a summary report of these items to PCSCL whenever asked for.
- 32.4.** Access to PCSCL's data and systems, Internet facility by the SI at any location shall be in accordance with the written permission by PCSCL. PCSCL shall allow the SI to use facility in a limited manner subject to availability. It is the responsibility of the SI to prepare and equip himself in order to meet the requirements.
- 32.5.** The SI must acknowledge that PCSCL's business data and other PCSCL proprietary information or materials, whether developed by PCSCL or being used by PCSCL pursuant to a license agreement with a third party (the foregoing collectively referred to herein as "proprietary information") are confidential and proprietary to PCSCL; and the SI along with its team agrees to use reasonable care to safeguard the proprietary information and to prevent the unauthorized use or disclosure thereof, which care shall not be less than that used by the SI to protect its own proprietary information. The SI recognizes that the goodwill of PCSCL depends, among other things, upon the SI keeping such proprietary information confidential and that unauthorized disclosure of the same by the SI or its team could damage the goodwill of PCSCL, and that by reason of the SI's duties hereunder, the SI may come into possession of such proprietary information, even though the SI does not take any direct part in or furnish the services performed for the creation of said proprietary information and shall limit access thereto to employees with a need to such access to perform the services required by this Contract. the SI shall use such information only for the purpose of performing the said services.
- 32.6.** the SI shall, upon termination of this Contract for any reason, or upon demand by PCSCL, whichever is earliest, return any and all information provided to the SI by PCSCL, including any copies or reproductions, both hardcopy and electronic.
- 32.7.** By virtue of this Contract, the SI's team may have access to personal information of PCSCL and/or a third party. PCSCL has the sole ownership of and the right to use, all such data in perpetuity including any data or other information pertaining to the citizens that may be in the possession of the SI team in the course of performing the Services under the Contract.

33 Records of contract documents

- 33.1.** The SI shall at all-time make and keep sufficient copies of the process manuals, operating procedures, specifications, Contract documents and any other documentation for the SI to fulfil his duties under the Contract.
- 33.2.** The SI shall keep on the Site at least three copies of each and every specification and Contract Document, in excess of his own requirement and those copies shall be available at all times for use by PCSCL's Representative and by any other person authorized by PCSCL's Representative.

34 Security and Safety

- 34.1.** The SI shall comply with the directions issued from time to time by PCSCL and the standards related to the security and safety, insofar as it applies to the provision of the Services.
- 34.2.** The SI shall upon reasonable request by PCSCL, or its nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.

35 Confidentiality

- 35.1.** PCSCL or its nominated agencies shall allow the System Integrator to review and utilize highly confidential public records and the System Integrator shall maintain the highest level of secrecy, confidentiality and privacy with regard thereto.
- 35.2.** Additionally, the System Integrator shall keep confidential all the details and information with regard to the Project, including systems, facilities, operations, management and maintenance of the systems/facilities.
- 35.3.** PCSCL or its nominated agencies shall retain all rights to prevent, stop and if required take the necessary punitive action against the System Integrator regarding any forbidden disclosure.
- 35.4.** The System Integrator shall ensure that all its employees, agents and sub-contractors involved in the project, execute individual non-disclosure agreements, which have been duly approved by PCSCL with respect to this Project.
- 35.5.** For the avoidance of doubt, it is expressly clarified that the aforesaid provisions shall not apply to the following information:
 - 35.5.1. Information already available in the public domain;
 - 35.5.2. Information which has been developed independently by the System Integrator;
 - 35.5.3. Information which has been received from a third party who had the right to disclose the aforesaid information;
 - 35.5.4. Information which has been disclosed to the public pursuant to a court order
- 35.6.** To the extent the System Integrator shares its confidential or proprietary information with PCSCL for effective performance of the Services, the provisions of the Clause 35.1 to 35.3 shall apply mutatis mutandis on PCSCL or its nominated agencies

- 35.7.** Any handover of the confidential information needs to be maintained in a list, both by PCSCL

The SI, containing at the very minimum, the name of provider, recipient, date of generation of the data, date of handing over of data, mode of information, purpose and signatures of both parties.

- 35.8.** Notwithstanding anything to the contrary mentioned hereinabove, the System Integrator shall have the right to share the Letter of Intent / work order provided to it by PCSCL in relation to this Agreement, with its prospective PCSCLs solely for the purpose of and with the intent to evidence and support its work experience under this Agreement.

36 Events of Default by the SI

The failure on the part of the SI to perform any of its obligations or comply with any of the terms of this Contract shall constitute an Event of Default on the part of the SI. The events of default are but not limited to:

- 36.1.** The SI Team has failed to perform any instructions or directives issued by PCSCL which it deems proper and necessary to execute the scope of work or provide services under the Contract, or
- 36.2.** The SI Team has failed to confirm / adhere to any of the key performance indicators as laid down in the Key Performance Measures / Service Levels, or if the SI has fallen short of matching such standards / benchmarks / targets as PCSCL may have designated with respect to the system or any goods, task or service, necessary for the execution of the scope of work and performance of services under this Contract. The above mentioned failure on the part of the SI may be in terms of failure to adhere to performance, quality, timelines, specifications, requirements or any other criteria as defined by PCSCL;
- 36.3.** the SI has failed to remedy a defect or failure to perform its obligations in accordance with the specifications issued by PCSCL, despite being served with a default notice which laid down the specific deviance on the part of the SI/ the SI's Team to comply with any stipulations or standards as laid down by PCSCL; or
- 36.4.** The SI/ The SI's Team has failed to adhere to any amended direction, instruction, modification or clarification as issued by PCSCL during the term of this Contract and which PCSCL deems proper and necessary for the execution of the scope of work under this Contract
- 36.5.** The SI/ The SI's Team has failed to demonstrate or sustain any representation or warranty made by it in this Contract, with respect to any of the terms of its Bid, the RFP and this Contract

- 36.6.** There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to the SI.
- 36.7.** The SI Team has failed to comply with or is in breach or contravention of any applicable laws.
- 36.8.** Where there has been an occurrence of such defaults inter alia as stated above, PCSCL shall issue a notice of default to the SI, setting out specific defaults / deviances / omissions / non-compliances / non-performances and providing a notice of thirty (30) days to enable such defaulting party to remedy the default committed.
- 36.9.** Where despite the issuance of a default notice to the SI by PCSCL, the SI fails to remedy the default to the satisfaction of PCSCL, PCSCL may, where it deems fit, issue to the defaulting party another default notice or proceed to contract termination.

37 Termination

PCSCL may, terminate this Contract in whole or in part by giving the SI a prior 30 days written notice, indicating its intention to terminate the Contract under the following circumstances:

- 37.1.** Where PCSCL is of the opinion that there has been such Event of Default on the part of the SI / the SI's Team which would make it proper and necessary to terminate this Contract and may include failure on the part of the SI to respect any of its commitments with regard to any part of its obligations under its Bid, the RFP or under this Contract.
- 37.2.** Where it comes to PCSCL's attention that the SI (or the SI's Team) is in a position of actual conflict of interest with the interests of PCSCL, in relation to any of terms of the SI's Bid, the RFP or this Contract.
- 37.3.** Where the SI's ability to survive as an independent corporate entity is threatened or is lost owing to any reason whatsoever, including inter-alia the filing of any bankruptcy proceedings against the SI, any failure by the SI to pay any of its dues to its creditors, the institution of any winding up proceedings against the SI or the happening of any such events that are adverse to the commercial viability of the SI. In the event of the happening of any events of the above nature, PCSCL shall reserve the right to take any steps as may necessary, to ensure the effective transition of the sites, pilot site to a successor agency, and to ensure business continuity
- 37.4.** Termination for Insolvency: PCSCL may at any time terminate the Contract by giving written notice to the SI, without compensation to the SI, if the SI becomes bankrupt or otherwise insolvent, provided that such termination shall not prejudice or affect any right of action or remedy which has accrued or shall accrue thereafter to PCSCL.

37.5. The SI may, subject to approval by PCSCL, terminate this Contract before the expiry of the term by giving PCSCL a prior and written notice at least three (3) months in advance indicating its intention to terminate the Contract.

37.6. Termination for Material Breach

- I. In the event that either Party believes that the other Party is in Material Breach of its obligations under this Agreement, such aggrieved Party may terminate this Agreement upon giving a one month's notice for curing the Material Breach to the other Party. In case the Material Breach continues, after the notice period, PCSCL or System Integrator, as the case may be will have the option to terminate the Agreement.
- II. Any notice served pursuant to this Clause shall give reasonable details of the Material Breach, which could include the following events and the termination will become effective:
 - a. If the System Integrator is not able to deliver the services as per the SLAs defined in RFP which translates into Material Breach, then PCSCL may serve a thirty (30) days written notice for curing this Material Breach. In case the Material Breach continues, after the expiry of such notice period, PCSCL will have the option to terminate this Agreement. Further, PCSCL may after affording a reasonable opportunity to the System Integrator to explain the circumstances leading to such a breach.
 - b. If there is a Material Breach by PCSCL or its nominated agencies which results in not providing support for effecting data migration or not providing the certification of User Acceptance then the System Integrator will give a one month's notice for curing the Material Breach to PCSCL. After the expiry of such notice period, the System Integrator will have the option to terminate the Agreement.
- III. PCSCL may by giving a one month's written notice, terminate this Agreement if a change of control of the the SI has taken place. For the purposes of this Clause, in the case of the the SI, change of control shall mean the events stated in Clause 12.28, and such notice shall become effective at the end of the notice period as set out in Clause 12.28.
- IV. In the event that the SI undergoes such a change of control, PCSCL may, as an alternative to termination, require a full Performance Guarantee for the obligations of the SI by a guarantor acceptable to PCSCL or its nominated agencies. If such a guarantee is not furnished within thirty (30) days of PCSCL's demand, PCSCL may exercise its right to terminate this Agreement in accordance with this Clause by giving fifteen (15) days further written notice to the the SI.
- V. The termination provisions set out in this Clause shall apply mutatis mutandis to the SLA

37.7. Termination for Convenience

- I. PCSCL may at any time terminate the Contract for any reason by giving the the SI a notice of 30 days cure period for termination that refers to this clause.
- II. Upon receipt of the notice of termination under this clause, the the SI shall either as soon as reasonably practical or upon the date specified in the notice of termination:
 - a) cease all further work, except for such work as PCSCL may specify in the notice of termination for the sole purpose of protecting that part of the System already executed, or any work required to leave the site in a clean and safe condition;
 - b) terminate all subcontracts, except those to be assigned to PCSCL pursuant to Clause 37.7 (ii) (d) (ii) below;
 - c) remove all the SI's Equipment from the site, repatriate the the SI's and its Subcontractors' personnel from the site, remove from the site any wreckage, rubbish, and debris of any kind;
 - d) in addition, the the SI shall:
 - i. Deliver to PCSCL the parts of the System executed by the the SI up to the date of termination;
 - ii. To the extent legally possible, assign to PCSCL all right, title, and benefit of the the SI to the System, or Subsystem, as at the date of termination, and, as may be required by PCSCL, in any subcontracts concluded between the the SI and its Subcontractors;
 - iii. Deliver to PCSCL all non-proprietary drawings, specifications, and other documents prepared by the the SI or its Subcontractors as of the date of termination in connection with the System.

37.8. Termination of this Agreement due to bankruptcy of the SI

PCSCL may serve written notice on System Integrator at any time to terminate this Agreement with immediate effect in the event that the System Integrator reporting an apprehension of bankruptcy to PCSCL or its nominated agencies.

38 Effects of Termination

- I. In the event that PCSCL terminates this Agreement pursuant to failure on the part of the System Integrator to comply with the conditions as contained in this Clause and depending on the event of default, Performance Guarantee furnished by System Integrator may be forfeited.
- II. Upon termination of this Agreement, the Parties will comply with the Exit Management section set out in Clause 26 of this Agreement.

- III. In the event that PCSCL or the System Integrator terminates this Agreement, the compensation will be decided in accordance with the Terms of Payment Schedule set out as Payment Schedule section of this Agreement.

- IV. PCSCL agrees to pay System Integrator for
 - a. all charges for Services System Integrator provides and any Deliverables and/or system (or part thereof) System Integrator delivers through termination and any charges at the tendered rate, for extension period beyond termination as decided by the Nodal Agency, and
 - b. reimbursable expenses System Integrator incurs through termination.

- V. If PCSCL terminates without cause, PCSCL also agrees to pay any applicable adjustment expenses to System Integrator incurs as a result of such termination (which System Integrator will take reasonable steps to mitigate).

- VI. In the event of termination of the Contract under clause 37.7, PCSCL shall pay to the the SI the following amounts:
 - a. The Contract Price, properly attributable to the parts of the System executed by the the SI as of the date of termination;
 - b. The costs reasonably incurred by the the SI in the removal of the the SI's Equipment from the
 - c. Site and in the repatriation of the personnel of the SI and its Subcontractors;
 - d. Any amount to be paid by the SI to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges;
 - e. Costs incurred by the SI in protecting the System and leaving the site in a clean and safe condition pursuant to clause 37.7; and
 - f. The cost of satisfying all other obligations, commitments, and claims that the SI may in good faith have undertaken with third parties in connection with the Contract and that are not covered by clause 38 (iv) above.

39 Change Control Note (CCN)

- 39.1.** This applies to and describes the procedure to be followed in the event of any proposed change to contract, site Implementation, and Service levels. Such change shall include, but shall not be limited to, changes in the scope of services or products provided by the SI and changes to the terms of payment.

- 39.2.** Change requests in respect of the contract, the site implementation, or the Service levels shall emanate from the Parties' representative who shall be responsible for obtaining approval for the change and who shall act as its sponsor throughout the Change Control Process and shall complete Part A of the CCN (Annex I of this

Agreement). CCNs shall be presented to the other Party's representative who shall acknowledge receipt by signature of the authorized representative of PCSCL.

39.3. The SI and PCSCL while preparing the CCN, shall consider the change in the context of whether the change is beyond the scope of Services including ancillary and concomitant services required

39.4. The CCN shall be applicable for the items which are beyond the stated/implied scope of work as per the RFP document.

39.5. Additional payment due to change in location shall be considered only in those cases where any such change has been made after approval, by PCSCL, of the detailed locations plan prepared by the the SI based on actual ground survey and such change results in additional material and or efforts/labour cost.

39.6. Quotation

39.6.1. The SI shall assess the CCN and complete Part B of the CCN. In completing Part B of the

CCN, the SI shall provide as a minimum:

- a description of the change;
- a list of deliverables required for implementing the change;
- a timetable for implementation;
- an estimate of any proposed change;
- any relevant acceptance criteria;
- an assessment of the value of the proposed change;
- material evidence to prove that the proposed change is not already covered
- within the scope of the RFP, Contract and Service Levels.

39.6.2. Prior to submission of the completed CCN to PCSCL or its nominated agencies, the SI shall undertake its own internal review of the proposal and obtain all necessary internal approvals. As a part of this internal review process, the SI shall consider the materiality of the proposed change in the context of the Contract, the sites, Service levels affected by the change and the total effect that may arise from implementation of the change.

39.6.3. Each Party shall be responsible for its own costs incurred in the quotation, preparation of CCNs and in the completion of its obligations described in this process provided the SI meets the obligations as set in the CCN. In the event the SI is unable to meet the obligations as defined in the CCN then the cost of getting it done by third party shall be borne by the SI. Change requests and CCNs shall be reported monthly to each Party's representative who shall prioritize and review progress.

40 Project Implementation Timelines, Deliverables and Payment Terms

As per RFP Volume II or subsequent corrigendum/addendums

40.1. Project Deliverables, Milestones and Timelines

As per RFP Volume II or subsequent corrigendum/addendums

40.2. Payment Terms and Schedule

As per RFP Volume II or subsequent corrigendum/addendums

41 Miscellaneous

41.1 Personnel

- a. The personnel assigned by System Integrator to perform the Services shall be employees of System Integrator or its subcontractor(s), and under no circumstances shall such personnel be considered employees of PCSCL or its nominated agencies. The System Integrator shall have the sole responsibility for the supervision and control of the personnel deployed in the Project and for payment of such personnel's compensation, including salary, withholding of income taxes and social security taxes, worker's compensation, employee and disability benefits and the like and shall be responsible for all obligations of an employer subject to Applicable Law.
- b. The System Integrator shall use its best efforts to ensure that sufficient System Integrator personnel are assigned to perform the Services and that such personnel have appropriate qualifications to perform the Services. After discussion with System Integrator, PCSCL or its nominated agencies shall have the right to require the removal or replacement of any System Integrator personnel performing work under this Agreement based on bona fide reasons. In the event that PCSCL or its nominated agencies requests that any System Integrator personnel be replaced, the substitution of such personnel shall be accomplished pursuant to a mutually agreed upon schedule.
- c. In the event that PCSCL and System Integrator identify any personnel of System Integrator as "Key Personnel", then the System Integrator shall not remove such personnel from the Project without the prior written consent of PCSCL or its nominated agencies unless such removal is the result of an unavoidable circumstance including but not limited to resignation, termination, medical leave, etc.
- d. Except as stated in this Clause, nothing in this Agreement or the SLA will limit the ability of System Integrator to freely assign or reassign its employees; provided that System Integrator shall be responsible, at its expense, for transferring all appropriate knowledge from personnel being replaced to their replacements. PCSCL or its

nominated agencies shall have the right to review and approve System Integrator's plan for any such knowledge transfer. System Integrator shall maintain the same or higher standards for skills and professionalism among replacement personnel as in personnel being replaced.

- e. Each Party shall be responsible for the performance of all its obligations under this Agreement or the SLA as the case may be and shall be liable for the acts and omissions of its employees and agents in connection therewith.
- f. Neither Party will solicit for employment or knowingly hire an employee of the other Party with whom such Party has contact pursuant to project engagements under this Agreement. This restriction shall not apply to employees of either Party responding to advertisements in job fairs or news media circulated to the general public.

41.2. Independent Contractor

Nothing in this Agreement or the SLA shall be construed as establishing or implying any partnership or joint venture between the Parties to this Agreement or the SLA and, except as expressly stated in this Agreement or the SLA, nothing in this Agreement or the SLA shall be deemed to constitute any Parties as the agent of any other Party or authorizes either Party to:

- a) Incur any expenses on behalf of the other Party;
- b) Enter into any engagement or make any representation or warranty on behalf of the other Party;
- c) Pledge the credit of or otherwise bind or oblige the other Party; or
- d) Commit the other Party in any way whatsoever without in each case obtaining the other Party's prior written consent

41.3. Sub-contractors

System Integrator shall not subcontract any work related to Design, Development, Supply, Installation, Implementation and Operation & Maintenance of ICT led smart city solutions without PCSCL's prior written consent. However the System Integrator shall provide the list of all the other services planned to be sub contracted, within fifteen (15) days of signing the Agreement. It is clarified that the System Integrator shall be the principal employer for all claims arising from the liabilities statutory or otherwise, concerning the sub-contractors. The System Integrator undertakes to indemnify PCSCL or its nominated agencies from any claims on the grounds stated hereinabove.

41.4. Assignment

- a) All terms and provisions of this Agreement shall be binding on and shall inure to the benefit of PCSCL and their respective successors and permitted assigns
- b) The System Integrator shall not be permitted to assign its rights and obligations under this Agreement to any third party
- c) PCSCL may assign or novate all or any part of this Agreement and Schedules/Annexures, and the System Integrator shall be a party to such novation, to any third party contracted to provide outsourced services to PCSCL or any of its nominees

41.5. Trademarks, Publicity

Neither Party may use the trademarks of the other Party without the prior written consent of the other Party except that System Integrator may, upon completion, use the Project as a reference for credential purpose. Except as required by law or the rules and regulations of each stock exchange upon which the securities of one of the Parties is listed, neither Party shall publish or permit to be published either along or in conjunction with any other person any press release, information, article, photograph, illustration or any other material of whatever kind relating to this Agreement, the SLA or the business of the Parties without prior reference to and approval in writing from the other Party, such approval not to be unreasonably withheld or delayed provided however that System Integrator may include PCSCL or its client lists for reference to third parties subject to the prior written consent of PCSCL not to be unreasonably withheld or delayed. Such approval shall apply to each specific case and relate only to that case.

41.6. Notices

- a) Any notice or other document which may be given by either Party under this Agreement or under the SLA shall be given in writing in person or by pre-paid recorded delivery post, email or by facsimile transmission
- b) In relation to a notice given under this Agreement, any such notice or other document shall be addressed to the other Party's principal or registered office address as set out below:
 - a. PCSCL Address: *Pimpri Chinchwad Municipal Corporation, Mumbai-Pune Road, Pimpri,*
 - a. Pune-411018
 - b. Tel: +91-020-27425511/12/13/14/67333333
 - c. Fax:
 - d. Email: smartcity@pcmcindia.gov.in

- e. System Integrator:
 - f. Tel:
 - g. Fax:
 - h. Email:
 - i. Contact:
- c) In relation to a notice given under the MSA / SLA, a Party shall specify the Parties' address for service of notices, any such notice to be copied to the Parties at the addresses set out in this Clause
 - d) Any such notice or other document shall be deemed to have been given to the other Party (or, if relevant, its relevant associated company) when delivered (if delivered in person) if delivered between the hours of 9.00 am and 5.00 pm at the address of the other Party set forth above or if sent by fax, provided the copy fax is accompanied by a confirmation of transmission, or on the next working day thereafter if delivered outside such hours, and seven (7) days from the date of posting (if by letter)
 - e) Either Party to this Agreement or to the SLA may change its address, telephone number, facsimile number and nominated contact for notification purposes by giving the other reasonable prior written notice of the new information and its effective date

41.7. Variations and Further Assurance

- a) No amendment, variation or other change to this Agreement or the SLA shall be valid unless authorized in accordance with the change control procedure as set out in the Change Control Schedule set out in Annex II of this Agreement. Such amendment shall be made in writing and signed by the duly authorized representatives of the Parties to this Agreement or the SLA.
- b) Each Party to this Agreement or the SLA agrees to enter into or execute, without limitation, whatever other agreement, document, consent and waiver and to do all other things which shall or may be reasonably required to complete and deliver the obligations set out in this Agreement or the SLA.

41.8. Severability and Waiver

- a) If any provision of this Agreement or the SLA, or any part thereof, shall be found by any court or administrative body of competent jurisdiction to be illegal, invalid or unenforceable the illegality, invalidity or unenforceability of such provision or part provision shall not affect the other provisions of this Agreement or the SLA or the remainder of the provisions in question which shall remain in full force and effect. The relevant Parties shall negotiate in good faith in order to agree to substitute for

any illegal, invalid or unenforceable provision a valid and enforceable provision which achieves to the greatest extent possible the economic, legal and commercial objectives of the illegal, invalid or unenforceable provision or part provision.

- b) No failure to exercise or enforce and no delay in exercising or enforcing on the part of either Party to this Agreement or the SLA of any right, remedy or provision of this Agreement or the SLA shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of such right, remedy or provision or the exercise or enforcement of any other right, remedy or provision.

41.9. Compliance with Applicable Law

Each Party to this Agreement accepts that its individual conduct shall (to the extent applicable to its business like the Implementation Agency as an information technology service provider) at all times comply with all laws, rules and regulations of government and other bodies having jurisdiction over the area in which the Services are undertaken provided that changes in such laws, rules and regulations which result in a change to the Services shall be dealt with in accordance with the Change Control Schedule set out in Annex II of this Agreement.

41.10. Professional Fees

All expenses incurred by or on behalf of each Party to this Agreement and the SLA, including all fees of agents, legal advisors, accountants and actuaries employed by either of the Parties in connection with the negotiation, preparation and execution of this Agreement or the SLA shall be borne solely by the Party which incurred them.

41.11. Ethics

The System Integrator represents, warrants and covenants that it has given no commitments, payments, gifts, kickbacks, lavish or expensive entertainment, or other things of value to any employee or agent of PCSCL or its nominated agencies in connection with this agreement and acknowledges that the giving of any such payment, gifts, entertainment, or other things of value is strictly in violation of PCSCL standard policies and may result in cancellation of this Agreement, or the SLA.

41.12. Entire Agreement

This Agreement and the SLA with all schedules & annexures appended thereto and the contents and specifications of the RFP constitute the entire agreement between the Parties with respect to their subject matter, and as to all other representations, understandings or agreements which are not fully expressed herein, provided that

nothing in this Clause shall be interpreted so as to exclude any liability in respect of fraudulent misrepresentation.

41.13. Amendment

Any amendment to this Agreement shall be made in accordance with the Change Control Schedule set out in Annex II of this Agreement by mutual written consent of all the Parties.

C. SERVICE LEVELS

As per RFP Volume II

42 Reporting Procedures

- 42.1.** The SI representative shall prepare and distribute Service level performance reports in a mutually agreed format by the 5th working day of subsequent month. The reports shall include “actual versus target” Service Level Performance, a variance analysis and discussion of appropriate issues or significant events. Performance reports shall be distributed to PCSCL management personnel as directed by PCSCL.
- 42.2.** Also, the SI may be required to get the Service Level performance report audited by a third-party Auditor appointed by PCSCL.

43 Issue Management Procedures

43.1. General

This process provides an appropriate management structure for the orderly consideration and resolution of business and operational issues in the event that quick consensus is not reached between PCSCL and the SI.

Implementing such a process at the beginning of the outsourcing engagement significantly improves the probability of successful issue resolution. It is expected that this pre-defined process shall only be used on an exception basis if issues are not resolved at lower management levels.

43.2. Issue Management Process

- 43.2.1.** Either PCSCL or the SI may raise an issue by documenting the business or technical problem, which presents a reasonably objective summary of both points of view and identifies specific points of disagreement with possible solutions.

- 43.2.2. PCSCL and the the SI will determine which committee or executive level shall logically be involved in resolution
- 43.2.3. A meeting or a conference call will be conducted to resolve the issue in a timely manner. The documented issues will be distributed to the participants at least 24 hours priors to the discussion, if the issue is not an emergency requiring immediate attention.
- 43.2.4. PCSCL and the the SI shall develop an interim solution, if required, and subsequently the permanent solution for the issue at hand. The the SI will then communicate the resolution to all the interested parties.
- 43.2.5. Any unresolved issues shall first be referred in writing to the Project Monitoring Committee. If the Project Monitoring Committee is unable to resolve the issue referred to them within fifteen (15) days, the same shall be referred to Project Steering Committee.

44 Service Level Change Control

44.1. General

It is acknowledged that these **Service levels may change as PCSCL's business needs evolve over the course of the contract period**. As such, this document also defines the following management procedures:

- a. A process for negotiating changes to the Service Levels
 - b. An issue management process for documenting and resolving particularly difficult issues.
 - c. ~~Provision for amending the Service Levels by mutual agreement between the parties, provided that either party may request a change.~~
- 44.2. Service Level Change Process:** The parties may amend Service Level by mutual agreement in accordance. Changes can be proposed by either party .Unresolved issues shall also be addressed. the SI's representative shall maintain and distribute current copies of the Service Level document as directed by PCSCL. Additional copies of the current Service Levels shall be available at all times to authorized parties.
- 44.3. Version Control / Release Management:** All negotiated changes shall require changing the version control number. As appropriate, minor changes may be accumulated for periodic release or for release when a critical threshold of change has occurred.

45 Governance Law and Dispute Resolution

- 45.1.** This Agreement shall be governed by and construed in accordance with the laws of India, without giving effect to conflict of law rules. The parties expressly agree to

exclude the application of the U.N. Convention on Contracts for the International Sale of Goods (1980) to this Agreement and the performance of the parties contemplated under this Agreement, to the extent that such convention might otherwise be applicable.

45.2. Any dispute arising out of or in connection with this Agreement or the SLA shall in the first instance be dealt with in accordance with the escalation procedure as set out in the Governance Schedule set out in Annex IV of this Agreement.

45.3. In case the escalations do not help in resolution of the problem within 3 weeks of escalation, both the parties shall agree on a mediator for communication between the two parties.

45.4. The process of the mediation would be as follows:

45.4.1. Aggrieved party shall refer the dispute to the identified mediator in writing, with a copy to the other party. Such a reference shall contain a description of the nature of the dispute, the quantum in dispute (if any) and the relief or remedy sought suitable.

45.4.2. The mediator shall use his best endeavors to conclude the mediation within a certain number of days of his appointment.

45.4.3. If no resolution can be reached through mutual discussion or mediation within thirty(30) days then the matter shall be referred to Experts for advising on the issue.

45.5. In case the mediation does not help in resolution and it requires expertise to understand an issue, a neutral panel of 3 experts, agreeable to both parties shall be constituted. The process of the expert advisory would be as follows:

45.5.1. Aggrieved party shall write to the other party on the failure of previous alternate dispute resolution processes within the timeframe and requesting for expert advisory. This is to be sent with a copy to the mediator.

45.5.2. Both parties shall thereafter agree on the panel of experts who are well conversant with the issue under dispute

45.5.3. The expert panel shall use his best endeavors to provide a neutral position on the issue.

45.5.4. If no resolution can be reached through the above means within thirty (30) days then the matter shall be referred to Arbitration.

45.6. Compliance with laws: Each party will comply with all applicable export and import laws and regulations.

45.7. Risk of Loss: For each hardware item, System Integrator bears the risk of loss or damage up to the time it is delivered to the Implementation/PCSCL - designated carrier for shipment to PCSCL or PCSCL's designated location.

45.8. Third party components: System Integrator will provide all third party components solely on a pass-through basis in accordance with the relevant third party terms and conditions.

46 Jurisdiction

In the event of dispute, Pune District Courts shall have the exclusive jurisdiction.

IN WITNESS WHEREOF the Parties have by duly authorized

Representatives set their respective hands and seal on the date first above

Written in the presence of:

WITNESSES:

Signed by:

(Name and designation) **For and on behalf of**

PCSCL (FIRST PARTY)

Signed by:

(Name and designation)

SYSTEM INTEGRATOR

(SECOND PARTY)

(Name and designation) For and on behalf of System

Integrator Signed by:

Proforma A – Detailed Price Schedule

As per submitted and accepted Commercials

ANNEXURES

Annex I: Change Control Note

Change Control Note	CCN Number:
Part A: Initiation	
Title:	
Originator:	
Sponsor:	
Date of Initiation:	
Details of Proposed Change	
(To include reason for change and appropriate details/specifications. Identify any attachments as A1, A2 and A3 etc.)	
Authorized by PCSCL	Date:
Name:	
Signature:	
Received by the	Date:
Bidder	
Name:	
Signature:	
Change Control Note	CCN Number:
Part B : Evaluation	
(Identify any attachments as B1, B2, and B3 etc.)	
Changes to Services, payment terms, payment profile, documentation, training, service levels and component working arrangements and any other contractual issue.	
Brief Description of Solution:	
Impact:	
Deliverables:	
Timetable:	

Charges for Implementation: (including a schedule of payments)	
Other Relevant Information: (including value-added and acceptance criteria)	
Authorized by the Bidder	Date:
Name:	
Signature:	
Change Control Note	CCN Number :
Part C : Authority to Proceed	
Implementation of this CCN as submitted in Part A, in accordance with Part B is: (tick as appropriate)	
Approved	
Rejected	
Requires Further Information (as follows, or as Attachment 1 etc.)	
For PCSCL and its nominated agencies	For the SI
Signature	Signature
Name	Name
Title	Title
Date	Date

47 Annex II: Change Control Schedule

This Schedule describes the procedure to be followed in the event of any proposed change to the Master Service Agreement ("MSA"), Project Implementation Phase, SLA and Scope of Work and Functional Requirement Specifications. Such change shall include, but shall not be limited to, changes in the scope of services provided by the System Integrator and changes to the terms of payment as stated in the Terms of Payment Schedule.

PCSCL and the SI recognize that frequent change is an inevitable part of delivering services and that a significant element of this change can be accomplished by re-organizing processes and responsibilities without a material effect on the cost. The SI will endeavor, wherever reasonably practicable, to effect change without an increase in the terms of payment as stated in the Terms of Payment Schedule and PCSCL or its nominated agencies will work with the System Integrator to ensure that all changes are discussed and managed in a constructive manner. This Change Control Schedule sets out the provisions, which will apply to all the changes to this agreement and other documents except for the changes in SLAs for which a separate process has been laid out in the SLA.

This Change Control Schedule sets out the provisions, which will apply to changes to the MSA.

CHANGE MANAGEMENT PROCESS

a) CHANGE CONTROL NOTE ("CCN")

- a. Change requests in respect of the MSA, the Project Implementation, the operation, the SLA or Scope of work and Functional Requirement specifications will emanate from the Parties' respective Project Manager who will be responsible for obtaining approval for the change and who will act as its sponsor throughout the Change Control Process and will complete Part A of the CCN attached as Annex I hereto. CCNs will be presented to the other Party's Project Manager who will acknowledge receipt by signature of the CCN.
- b. The SI and PCSCL or its nominated agencies, during the Project Implementation Phase and PCSCL or its nominated agencies during the Operations and Management Phase and while preparing the CCN, shall consider the change in the context of the following parameter, namely whether the change is beyond the scope of Services including ancillary and concomitant services required and as detailed in the RFP and is suggested and applicable only after the testing, commissioning and certification of the Pilot Phase and the Project Implementation Phase as set out in this Agreement.
- c. It is hereby also clarified that any change of request suggested beyond 25% of the value of this Project will be beyond the scope of the change control process and will be considered as the subject matter for a separate bid process and a separate contract. It is hereby clarified that the 25% of the value of the Project as stated in herein above is

calculated on the basis of bid value submitted by the System Integrator and accepted by PCSCL or its nominated agencies or as decided and approved by PCSCL or its Nominated Agencies. For arriving at the cost / rate for change upto 25% of the project value, the payment terms and relevant rates as specified in Annex III shall apply.

b) Quotation

- a. The SI shall assess the CCN and complete Part B of the CCN, in completing the Part B of the CCN the SI shall provide as a minimum:
 - a) a description of the change
 - b) a list of deliverables required for implementing the change;
 - c) a time table for implementation;
 - d) an estimate of any proposed change
 - e) any relevant acceptance criteria
 - f) an assessment of the value of the proposed change;
 - g) material evidence to prove that the proposed change is not already covered within the Agreement and the scope of work
- b. Prior to submission of the completed CCN to PCSCL, or its nominated agencies, the Service Provider will undertake its own internal review of the proposal and obtain all necessary internal approvals.
- c. As a part of this internal review process, the SI shall consider the materiality of the proposed change in the context of the MSA and the Project Implementation affected by the change and the total effect that may arise from implementation of the change

c) Costs

Each Party shall be responsible for its own costs incurred in the quotation, preparation of CCNs and in the completion of its obligations described in this process provided the SI meets the obligations as set in the CCN. In case of recertification due to proposed changes, required cost will be borne by the party that initiated the change. In the event the SI is unable to meet the obligations as defined in the CCN then the cost of getting it done by third party will be borne by the SII.

d) Obligations

The SI shall be obliged to implement any proposed changes once approval in accordance with above provisions has been given, with effect from the date agreed for implementation and within an agreed timeframe. The SI will not be obligated to work on a change until the parties agree in writing upon its scope, price and/or schedule impact. The cost associated with any hardware/goods/License for COTS product shall not exceed the price quoted in the bidder's proposal. Any costs associated with changes

to Software specifications which cannot be arrived at on the basis of the SI's proposal shall be mutually agreed to between the SI and PCSCL.

48 Annex III: Form of Agreement

THIS Agreement made thedate of.....2018, between..... (hereinafter..... referred to as
the “SI”) of the one part and (hereinafter called the “PCSCL”) of the other part.

WHEREAS the SI has the required professional skills, personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract and is about to perform services as specified in this RFP(hereinafter called “works”) mentioned, enumerated or referred to in certain Contract conditions, specification, scope of work, other Sections of the RFP, covering letter and schedule of prices which, for the purpose of identification, have been signed by on behalf of the SI and(PCSCL) on behalf of PCSCL and all of which are deemed to form part of the Contract as though separately set out herein and are included in the expression “Contract” whenever herein used.

NOW, THEREFORE, IT IS HEREBY AGREED between the parties as follows:

- a. PCSCL has accepted the tender of the SI for the provision and execution of the said works for the sum ofupon the terms laid out in this RFP.
- b. The SI hereby agrees to provide Services to PCSCL, conforming to the specified Service Levels and conditions mentioned
- c. The following documents attached hereto shall be deemed to form an integral part of this Agreement:

Complete Request for Proposal (RFP) Document	<i>Volumes I, II and III of the RFP and corrigendum and addendum, if any</i>
Break-up of cost components	<i>Selected Bidder's Commercial bid</i>

- d. The mutual rights and obligations of the “PCSCL” and the SI shall be as set forth in the Agreement, in particular:
 - The SI shall carry out and complete the Services in accordance with the provisions of the Agreement; and
 - “PCSCL” shall make payments to the SI in accordance with the provisions of the Agreement.

NOW THESE PRESENTS WITNESS and the parties hereto hereby agree and declare as follows, that is to say, in consideration of the payments to be made to the SI by PCSCL as hereinafter mentioned,

the SI shall deliver the services for the said works and shall do and perform all other works and things in the Contract mentioned or described or which are implied there from or there in respectively or may be reasonably necessary for the completion of the said works within and at the times and in the manner and subject to the terms, conditions and stipulations mentioned in the said Contract.

AND in consideration of services and milestones, PCSCL shall pay to the SI the said sum ofor

such other sums as may become payable to the SI under the provisions of this Contract, such payments to be made at such time and in such manner as is provided by the Contract.

IN WITNESS WHEREOF the parties hereto have signed this deed hereunder on the dates respectively mentioned against the signature of each.

Signed

Signed

Name : _____

Name : _____

Designation : _____

Designation : _____

Date : _____

Date : _____

Place :

Place :

in the presence of :

Signed

Signed

Name : _____

Name : _____

Designatio

Designatio

n : _____

n : _____

Date : _____

Date : _____

Place : _____

Place : _____

in the presence of :

49 Annex IV: Governance Schedule

Purpose:

The purpose of this Schedule is to:

- i. establish and maintain the formal and informal processes for managing the relationship between PCSCL and the System Integrator (including the outputs from other Schedules to this Agreement);
- ii. define the principles that both Parties wish to follow to ensure the delivery of the Services;
- iii. ensure the continued alignment of the interests of the Parties;
- iv. ensure that the relationship is maintained at the correct level within each Party;
- v. create the flexibility to revise and maintain the relationship and this Agreement during the Term;
- vi. set out the procedure for escalating disagreements; and
- vii. enable contract administration and performance management

Governance Structure:

- i. Project Managers: The relationship under this Agreement will be managed by the Project Managers appointed by each Party, who will provide the interface between the executive management of the respective Parties.
- ii. Project Implementation Unit (PIU): Within seven (7) days following the Effective Date, PCSCL or its nominated agencies and the System Integrator shall each appoint a Project Manager.
- iii. In the event that either Party wishes to substitute its Project Manager, it will do so in a manner in which the original appointment is made and notify the other Party of such substitution as soon as reasonably practicable but at the latest within seven (7) days of the substitution.
- iv. The Project Managers shall have responsibility for maintaining the interface and communication between the Parties.
- v. The PIU will meet formally on a weekly/fortnightly / monthly / quarterly, as required, basis at a time and location to be agreed between them. These meetings will cover, as a minimum, the following agenda items: (i) consideration of Quarterly Performance Reports; (ii) consideration of matters arising out of the Change Control Schedule; (iii) issues escalated in accordance with the escalation procedure as set out in the Governance Schedule; (iv) matters to be brought before the PIU in accordance with the MSA and the Schedules; (v) any matter brought before the PIU by the System

Integrator under this Article; and (vi) any other issue which either Party wishes to add to the agenda.

- vi. In the event that there is any material factor which affects the delivery of the Services or the terms of payment as stated in the Terms of Payment Schedule, the Parties agree to discuss in the PIU any appropriate amendment to the Agreement or any Service Level Agreements or Statement of Works including any variation to the terms of payment as stated in the Terms of Payment Schedule. Any variation so agreed shall be implemented through the change control procedure as set out in the Change Control Schedule.

Governance Procedures:

- i. The System Integrator shall document the agreed structures in a procedures manual.
- ii. The agenda for each meeting of the PIU shall be set to reflect the discussion items referred to above and extraordinary items may be added either with the agreement of the Parties or at the request of either Party. Copies of the agenda for meetings of the PIU, along with relevant pre-reading material, shall be distributed at least one week in advance of the relevant meeting.
- iii. All meetings and proceedings will be documented such documents to be distributed to the Parties and copies shall be kept as a record. All actions, responsibilities and accountabilities arising out of any meeting shall be tracked and managed.
- iv. The Parties shall ensure as far as reasonably practicable that the PIU shall resolve the issues and resolve the objectives placed before them and that members representing that Party are empowered to make relevant decisions or have easy access to empowered individuals for decisions to be made to achieve this.
- v. In order formally to submit a Disputed Matter to the aforesaid for a, one Party ("Claimant") shall give a written notice ("Dispute Notice") to the other Party. The Dispute Notice shall be accompanied by (a) a statement by the Claimant describing the Disputed Matter in reasonable detail and (b) documentation, if any, supporting the Claimant's position on the Disputed Matter.
- vi. The other Party ("Respondent") shall have the right to respond to the Dispute Notice within seven (7) days after receipt of the Dispute Notice. In the event that the parties are unable to resolve the Disputed Matter within a further period of seven (7) days, it shall refer the disputed matter to next level of the dispute resolution for action
- vii. All negotiations, statements and / or documentation pursuant to these Articles shall be without prejudice and confidential (unless mutually agreed otherwise).
- viii. If the disputed matter is having a material effect on the operation of the services (or any of them or part of them) the parties will use all their respective reasonable endeavors to reduce the elapsed time in reaching a resolution of the disputed matter.

E. Annex V: Audit, Access and Reporting

1. PURPOSE

This Schedule details the audit, access and reporting rights and obligations of PCSCL or its nominated agency and the System Integrator.

2. AUDIT NOTICE AND TIMING

1. As soon as reasonably practicable after the Effective Date, the Parties shall use their best endeavors to agree to a timetable for routine audits during the Project Implementation Phase and the Operation and Management Phase. Such timetable during the Implementation Phase, PCSCL or its nominated agency and thereafter during the operation Phase, PCSCL or its nominated agency shall conduct routine audits in accordance with such agreed timetable and shall not be required to give the System Integrator any further notice of carrying out such audits.
2. PCSCL or its nominated agency may conduct non-timetabled audits at his/ her own discretion if it reasonably believes that such non-timetabled audits are necessary as a result of an act of fraud by the System Integrator, a security violation, or breach of confidentiality obligations by the System Integrator, provided that the requirement for such an audit is notified in writing to the System Integrator a reasonable period time prior to the audit (taking into account the circumstances giving rise to the reasonable belief) stating in a reasonable level of detail the reasons for the requirement and the alleged facts on which the requirement is based. If the System Integrator considers that the non-timetabled audit was not appropriate, the matter shall be referred to the escalation procedure as set out in the Governance Schedule.
3. The frequency of audits shall be a (maximum) half yearly, provided always that PCSCL or its nominated agency shall endeavor to conduct such audits with the lowest levels of inconvenience and disturbance practicable being caused to the System Integrator. Any such audit shall be conducted by with adequate notice of 2 weeks to the System Integrator.
4. PCSCL will ensure that any 3rd party agencies (except CAG) appointed to conduct the audit will not be the competitor of System Integrator and will be bound by confidentiality obligations.

3. ACCESS

1. The System Integrator shall provide to PCSCL or its nominated agency reasonable access to employees, subcontractors, the SIs, agents and third party facilities as detailed in the RFP, documents, records and systems reasonably required for audit and shall provide all such persons with routine assistance in connection with the audits and inspections. The Chairperson, PIU / Steering Committee shall have the right to copy and retain copies of any relevant records. The System Integrator shall make every reasonable effort to co-operate with them.

4. AUDIT RIGHTS

2. PCSCL or its nominated agency shall have the right to audit and inspect the SIs, agents and third party facilities (as detailed in the RFP), server room, documents, records, procedures

and systems relating to the provision of the services, but only to the extent that they relate to the provision of the services, as shall be reasonably necessary to verify:

- 1.1. The security, integrity and availability of all data processed, held or conveyed by the Partner on behalf of PCSCL and documentation related thereto;
- 1.2. That the actual level of performance of the services is the same as specified in the SLA;
- 1.3. That the System Integrator has complied with the relevant technical standards, and has adequate internal controls in place; and
- 1.4. The compliance of the System Integrator with any other obligation under the MSA and SLA.
- 1.5. Security audit and implementation audit of the system shall be done once each year, the cost of which shall be borne by the System Integrator.
- 1.6. For the avoidance of doubt the audit rights under this Schedule shall not include access to the System Integrator's profit margins or overheads, any confidential information relating to the System Integrator' employees, or (iii) minutes of its internal Board or Board committee meetings including internal audit, or (iv) such other information of commercial-in-confidence nature which are not relevant to the Services associated with any obligation under the MSA.

5. AUDIT RIGHTS OF SUB-CONTRACTORS, the SIs AND AGENTS

3. The System Integrator shall use reasonable endeavors to achieve the same audit and access provisions as defined in this Schedule with sub-contractors who supply labor, services in respect of the services. The System Integrator shall inform PCSCL or its nominated agency prior to concluding any sub-contract or supply agreement of any failure to achieve the same rights of audit or access.
4. REPORTING: The System Integrator will provide quarterly reports to the Chairperson, PIU / Steering committee regarding any specific aspects of the Project and in context of the audit and access information as required by PCSCL or its nominated agency.

6. ACTION AND REVIEW

5. Any change or amendment to the systems and procedures of the System Integrator, or sub-contractors, where applicable arising from the audit report shall be agreed within thirty (30) calendar days from the submission of the said report.
6. Any discrepancies identified by any audit pursuant to this Schedule shall be immediately notified to PCSCL or its nominated agency and the System Integrator Project Manager who shall determine what action shall be taken in respect of such discrepancies in accordance with the terms of the MSA.

7. TERMS OF PAYMENT

PCSCL shall bear the cost of any audits and inspections. The terms of payment are exclusive of any costs of the System Integrator and the sub-contractor, for all reasonable assistance and information provided under the MSA, the Project Implementation, Operation and Management SLA by the System Integrator pursuant to this Schedule.

8. RECORDS AND INFORMATION

For the purposes of audit in accordance with this Schedule, the System Integrator shall maintain true and accurate records in connection with the provision of the services and the System Integrator shall handover all the relevant records and documents upon the termination or expiry of the MSA.