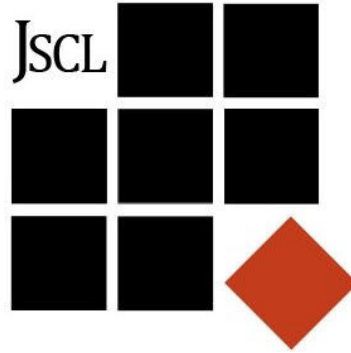


Jaipur Smart City Limited



INVITATION FOR BID

Bid Document for
**Selection of System Integrator for Designing,
Development, Implementation & Operation
and Maintenance of Smart Digital Solutions
for Integrated Solid Waste Management
Systems in Jaipur**

Bid Reference No: JSCL/Smart City Works/05/2017-18

August - 2017

Jaipur Smart City Limited

JMC Building, Pt. Deendayal Upadhyay Bhawan, LalKothi, Tonk Road, Jaipur-
302015, Phone No. 0141-2741346/2741347. E-Mail ID: jscljaipur@gmail.com

Bidding Document

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Jaipur Smart City Limited

JMC Building, Pt Deendayal Upadhyay Bhawan,
LalKothi, Tonk Road, Jaipur – 302016
E-Mail ID: jsljjaipur@gmail.com

NOTICE INVITING TENDER Bid Reference No. JSCL/Smart City Works/05 /2017-18

Jaipur Smart City Limited (JSCL), Jaipur invites online e-bids from reputed contracting firms who have experience in multidisciplinary urban Infrastructure Projects for the following work.

Sl. No.	Name of Work	Estimated Project Cost	Earnest Money deposit(Rs.)	Tender document Fee	Bid processing fee	Period of Completion
1	Pedestrianisation of Krishna Circuit Phase 1 at Jaipur	Rs.5.93 Crore (Rupees Five Crore and Ninety ThreeLakh Only)	Rs. 11.86 Lakh (Rupees Eleven Lakh and Eighty Six Thousand Only)	Rs. 20,000 (Rupees Twenty Thousand Only)	Rs. 1000 (Rupees One Thousand Only)	9 (Nine) Months
2	Selection of System Integrator for Designing, Development, Implementation & Operation and Maintenance of Smart Digital Solutions for Integrated Solid Waste Management Systems in Jaipur	Rs.22.38 Crore (Rupees Twenty Two Crore and Thirty Eight Lakh Only)	Rs. 44.76 Lakh (Rupees Forty Four Lakh and Seventy six Thousand only)	Rs. 20,000 (Rupees ten thousands only)	Rs. 1000 (Rupee One Thousand Only)	9 Months for installation and 60 Months for O&M (including AMC)

Salient dates

(i)	Bid document Downloading and Submission Start Date and time	10 th August, 2017 at 11:00 am
(ii)	Bid document Downloading End Date and time	11 th September, 2017 at 5 :00 PM
(iii)	Pre bid Meeting	18 th August, 2017 at 11:00 AM
(iv)	Venue of Pre bid meeting	Jaipur Smart City Limited JMC Building, Pt Deendayal Upadhyay Bhawan, Lal Kothi, Tonk Road, Jaipur – 302016
(v)	Last date and time of Online submission of technical proposal and financial proposal	12 th September 2017 at 5:00 PM
(vi)	Last date and time of Physical submission of EMD, Bid document fee Bid processing fee & Power of Attorney	13 th September, 2017,Upto 5:00 PM
(vii)	Opening of bid online (Technical proposal only)	14 th September,2017 at 3:00 PM

Terms:

- Demand draft of EMD and Bid Cost are to be submitted in favour of Chief Executive Officer, Jaipur Smart City Limited, Jaipur & Bid Processing fee in favour of Managing Director, RISL ,Jaipur.
- This notice and bid documents are available on following internet site address for e tender www.eproc.rajasthan.gov.in or <http://sppp.rajasthan.gov.in>
- A complete set of bid documents can be downloaded from above websites.
- Bids shall remain valid for 120 days (one hundred and twenty days) from the date of submission of the bid

- e. Any bid not accompanied by Bid document fee, Bid processing fee and Earnest Money as in the NIT will be rejected as nonresponsive.
- f. Complete e-Tender must be submitted on-line on www.eproc.rajasthan.gov.in
- g. Any addendum, clarification to the bidder's queries and corrigendum will be published on the www.eproc.rajasthan.gov.in or <http://sppp.rajasthan.gov.in> and will not be published in the Newspapers.

**Chief Executive Officer
Jaipur Smart City Limited**

SECTION-I: INSTRUCTION TO BIDDERS

SECTION-I: INSTRUCTION TO BIDDERS

Important Instruction: - The Law relating to procurement “The Rajasthan Transparency in Public Procurement Act, 2012” [hereinafter called the Act] and the “Rajasthan Public Procurement Rules, 2013” [hereinafter called the Rules] under the said Act have come into force which are available on the website of State Public Procurement Portal <http://sppp.raj.nic.in>. Therefore, the Bidders are advised to acquaint themselves with the provisions of the Act and the Rules before participating in the Bidding process. If there is any discrepancy between the provisions of the Act and the Rules in this Bidding Document, the provisions of the rule shall prevail.

1. General			
1.1	Scope of Bid	1.1.1	In support of the Invitation to Bid indicated in the Bid Data Sheet (BDS), the Procuring Entity as indicated in the BDS, issues this Bidding Document for the procurement of works as named in the BDS and as specified in Section V, Procuring Entity's Requirements.
1.2	Interpretation	1.2.1	Throughout this Bidding Document: The term “in writing” means communicated in written form through letter, fax, e-mail etc. with proof of receipt. If the context so requires, singular means plural and vice versa; and “Day” means calendar day.
1.3	Code of Integrity	1.3.1	Any person participating in the procurement process shall, - i. not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process; ii. not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation; iii. not indulge in any collusion, bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process; iv. not misuse any information shared between the Procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process; v. not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process; vi. not obstruct any investigation or audit of a procurement process; vii. disclose conflict of interest, if any; and viii. Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other Procuring Entity.
		1.3.2	Conflict of Interest: A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations. A Bidder may be considered to be in conflict of interest with one or more parties in this bidding process if, including but

			<p>not limited to:</p> <ul style="list-style-type: none"> i. have controlling partners/ shareholders in common; or ii. receive or have received any direct or in direct subsidy from any of them; or iii. have the same legal representative for purposes of this Bid; or iv. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Entity regarding this bidding process; or v. The Bidder participates in more than one Bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or vi. the Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of the Bid; or vii. The Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as Engineer-in-charge/ consultant for the Contract.
		1.3.3	The Bidder shall have to give a declaration regarding compliance of the Code of Integrity prescribed in the Act, the Rules and stated above in this Clause along with its Bid, in the format specified in Section IV, Bidding Forms.
		1.3.4	Breach of Code of Integrity by the Bidder: - Without prejudice to the provisions of Chapter IV of the Rajasthan Transparency in Public Procurement Act, in case of any breach of the Code of Integrity by a Bidder or prospective Bidder, as the case may be, the Procuring Entity may take appropriate action in accordance with the provisions of sub-section (3) of section 11 and section 46 of the Act.
1.4	Eligible Bidders	1.4.1	<p>A Bidder may be a natural person, private Entity, government-owned Entity or, where permitted in the Bidding documents, any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture [JV], Consortium or Association. In the case of a Joint Venture, Consortium or Association:-</p> <p>all parties to the Joint Venture, Consortium or Association shall sign the Bid and they shall be jointly and severally liable; and a Joint Venture, Consortium or Association shall nominate a representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the Joint Venture, Consortium or Association during the Bidding process. In the event the Bid of Joint Venture, Consortium or Association is accepted, either they shall form a registered Joint Venture, Consortium or Association as company/firm or otherwise all the parties to Joint Venture, Consortium or Association shall sign the Agreement.</p>

		1.4.2	A Bidder, and all parties constituting the Bidder, shall have the nationality of India. In case of International Competitive Bidding or Joint Venture, Consortium or Association [where permitted], the nationality of the Bidder and all parties constituting the Bidder shall be of India or an eligible country declared as such by Government of India. A Bidder shall be deemed to have nationality of a country if the Bidder is a citizen or constituted or incorporated, and operates in conformity with the provisions of the Laws of that country. This criterion shall also apply to the determination of the nationality of proposed Sub-Contractors or suppliers for any part of the Contract including related services.
		1.4.3	A Bidder should not have a conflict of interest in the procurement in question as stated in the Rule 81 and this Bidding document.
		1.4.4	A Bidder debarred under section 46 of the Act shall not be eligible to participate in any procurement process undertaken by any Procuring Entity, if debarred by the State Government; and a Procuring Entity, if debarred by such Procuring Entity.
		1.4.5	The Bidder must be a registered Contractor in appropriate class with the Department/ Organization. He shall furnish necessary proof for the same. PSU can participate in tender without registration.
		1.4.6	<ul style="list-style-type: none"> i Any change in the constitution of the firm, etc., shall be notified forth with by the Bidder in writing to the Procuring Entity and such change shall not relieve any former partner/ member of the firm, etc from any liability under the Contract. ii No new partner/partners shall be accepted in the firm by the Bidder in respect of the contract unless he/they agree to abide by all its terms, conditions and deposit with the Procuring Entity a written agreement to this effect. The Bidder's receipt for acknowledgement or that of any partners subsequently accepted as above shall bind all of them and will be sufficient discharge for any of the purpose of the Contract. iii The status of the lead partner/ representative of the Joint Venture, Consortium or Association as a major stake holder shall not change without the consent of the Procuring Entity. New major stake holder must agree to abide by all terms and conditions of the Contract.
		1.4.7	Bidders shall provide such evidence of their continued eligibility satisfactory to the Procuring Entity, should the Procuring Entity request.
		1.4.8	In case a prequalification or empanelment or registration process has been conducted prior to the bidding process, this bidding shall be open only to the pre-qualified, empaneled or registered Bidders.
		1.4.9	Each Bidder shall submit only one Bid except in case of alternative bids, if permitted.

		1.4.10	Bidder who is not registered under the Sales Tax Act prevalent in the State of Rajasthan can bid, however selected bidder shall have to be got registered with the Sales Tax department of the state government and submit the proof of registration before signing the Contract agreement. He is also required to provide proof of Permanent Account Number (PAN) given by Income Tax Department.
2. Contents of Bidding Document			
2.1	Sections of the Bidding Document	2.1.1	The Bidding Document consists of Parts I, II, and III, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB Clause 2.3 [Amendment of Bidding Document]. Part I: Bidding Procedures Section I. Instructions to Bidders (ITB) Section II. Bid Data Sheet (BDS) Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms Part II: Requirements Section V. Procuring Entity's Requirements. Part III: Contract Section VI A. General Conditions of Contract [GCC] Section VI B. Special Conditions of Contract [SCC] Section VI C. Contract Forms
		2.1.2	The Invitation for Bids (NIB) issued by the Procuring Entity is also part of the Bidding Document.
		2.1.3	The Bidding Document shall be uploaded on the e-procurement portal, eproc.raj.nic.in along with the Notice Inviting Bids. The complete Bidding Document shall also be placed on the State Public Procurement Portal, http://sppp.raj.nic.in . The prospective Bidders may download the bidding document from these portals. The price of the Bidding Document and processing fee of e-bid shall have to be paid to the Procuring Entity in the amount and manner as specified in Bid Data Sheet and e-procurement portal.
		2.1.4	The Procuring Entity is not responsible for the completeness of the Bidding Document and its addenda, if they were not downloaded correctly from the e-procurement portal or the State Public Procurement Portal.
		2.1.5	The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Document. Failure to furnish all information or authentic documentation required by the Bidding Document may result in the rejection of the Bid.
2.2	Clarification of Bidding Document and Pre-Bid Conference	2.2.1	The Bidder shall be deemed to have carefully examined the conditions, specifications, size, make and drawings, etc. of the Works and Related Services to be provided. If any Bidder has any doubts as to the meaning of any portion of the conditions or of the specifications, drawings etc., it shall, before submitting the Bid, refer the same to the Procuring Entity and get clarifications. A Bidder requiring any clarification of the Bidding Document shall contact the Procuring Entity in writing or e-mail at the Procuring Entity's address indicated in the BDS. The Procuring Entity will respond in writing or e-mail to any request for clarification, within seven days provided that such request is received no later than twenty-one (21) days prior to the deadline for

			submission of Bids as specified in ITB Sub-Clause 4.2.1[Deadline for Submission of Bids].The clarification issued, including a description of the inquiry but without identifying its source shall also be placed on the State Public Procurement Portal and should the Procuring Entity deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the procedure under ITB Clause 2.3 [Amendment of Bidding Document] through an addendum which shall form part of the Bidding Document..
		2.2.2	The Bidder or his authorized representative is invited to attend the Pre- Bid Conference, if provided for in the BDS. The purpose of the Pre- Bid Conference will be to clarify issues and to answer questions on any matter related to this procurement that may be raised at that stage. If required, a conducted site visit may be arranged by the Procuring Entity.
		2.2.3	The Bidder is requested, to submit questions in writing, to reach the Procuring Entity not later than one week before the date of Pre-Bid Conference.
		2.2.4	Minutes of the Pre-Bid Conference, including the text of the questions raised, and the responses given, without identifying the source, will be transmitted promptly to all Bidders who attended the Pre-Bid Conference and shall also be placed on the State Public Procurement Portal and the e-procurement portal. Any modification to the Bidding Document that may become necessary as a result of the Pre-Bid Conference shall be made by the Procuring Entity exclusively through the issue of an addendum (part of Bid document) and not through the minutes of the Pre-Bid Conference.
		2.2.5	At any time prior to the deadline for submission of the Bids, the Procuring Entity, suomotto, may also amend the Bidding Document, if required, by issuing an addenda which will form part of the Bidding Document.
		2.2.6	Non-attendance at the Pre-Bid Conference will not be a cause for disqualification of a Bidder.
2.3	Amendment of Bidding Document	2.3.1	Any addendum issued shall be part of the Bidding Document and shall be uploaded on the State Public Procurement Portal and the e-procurement portal.
		2.3.2	To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Procuring Entity may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB Sub-Clause 4.2 [Deadline for Submission of Bids], under due publication on the State Public Procurement Portal and the e-procurement portal and newspapers.
3. Preparation of Bids			
3.1	Cost of Bidding	3.1.1	The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Procuring Entity shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
		3.1.2	The Bidder shall furnish the scanned attested copies of following documents with its Bid: - i. Partnership Deed and valid registration certificate with the Registrar of Firms in case of Partnership Firms. Power of Attorney in favour of the partner signing/submitting the

			<p>Bid, authorizing him to represent all partners of the firm.</p> <p>ii. VAT/ Sales Tax registration certificate and VAT/Sales Tax clearance certificate from the concerned Commercial Taxes Officer and Permanent Account Number (PAN) given by the Income Tax Department.</p> <p>iii. Address of residence and office, telephone numbers e-mail address in case of sole Proprietorship.</p> <p>iv. Certificate of Registration and Memorandum of Association issued by Registrar of Companies in case of a registered company and in case of any other statutory or registered body, certificate of incorporation or registration issued by concerned authorities. Power of attorney in favour of the person signing the Bid.</p> <p>v. Where permitted to bid as Joint Venture, Consortium or Association, letter of formal intent to enter in to an agreement or an existing agreement in the form of a Joint Venture, Consortium or Association.</p>
3.2	Language of Bid	3.2.1	The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Procuring Entity, shall be written in English/ Hindi or a language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages duly accepted by the Bidder in English/ Hindi or the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.
3.3	Documents Comprising the Bid	3.3.1	<p>The Bid shall comprise of two covers, one containing the Technical Bid/ Proposal and the other the Financial or Price Bid/ Proposal.</p> <p>One more cover containing scanned copies of proof of payment in form specified in Bid Data Sheet, of the price of Bidding Document, processing fee and Bid Security/ Bid Securing Declaration shall be enclosed separately.</p>
		3.3.2	<p>The Technical Bid/ Proposal shall contain the following:</p> <p>i. Technical Bid/ Proposal Submission Sheet and Technical Bid containing the filled-up Bidding Forms and Declarations related to Technical Bid and Code of Integrity given in Section IV [Bidding Forms];</p> <p>ii. proof of payment of price of Bidding Document, processing fee, Bid Security, in accordance with ITB Clause 3.10;</p> <p>iii. written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 3.11;</p> <p>iv. documentary evidence in accordance with ITB Clause 3.7 establishing the Bidder's eligibility to bid;</p> <p>v. documentary evidence in accordance with ITB Clause 3.8 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;</p> <p>vi. Drawings/ designs in support of the Works to be executed;</p> <p>vii. the Notice Inviting Bids;</p> <p>viii. any other document required in the BDS; and</p> <p>ix. Others considered necessary to strengthen the Bid submitted.</p>

		3.3.3	The Financial Bid/ Price Proposal shall contain the following, Financial Bid/ Price Proposal Submission Sheet and the applicable Price Schedules, in accordance with ITB Clauses 3.4, 3.5; Any other document required in the BDS.
3.4	Bid Submission Sheets and Price Schedules	3.4.1	The Bidder shall submit the Technical Bid and Financial Bid using the Bid Submission Sheets provided in Section IV [Bidding Forms]. These forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
		3.4.2	The Bidder shall submit as part of the Financial Bid, the Price Schedules for Works, using the forms provided in Section IV [Bidding Forms].
3.5	Bid Prices	3.5.1	i. In case of Item Rate Contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Procuring Entity but will have to be executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities. ii. In case of Percentage Rate Contracts, combined single percentage above or below must be quoted by the Bidder for all items of the Bill of Quantities. iii. In case of Lump Sum Contracts, only Total Price which the Bidder wants to charge for the entire Works with all its contingencies in accordance with drawings and specifications shall be quoted by the Bidder. A Schedule of Rates shall be specified in the Bid Data Sheet in order to regulate the amount to be added to or deducted from the fixed sum on account of additions and alterations not covered by the Contract. Payments shall be linked to various stages of completion of the Works specified in Activity Schedule given in Bid Data Sheet.
		3.5.2	Prices quoted by the Bidder shall be fixed during the Bidder's Performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A Bid submitted with an adjustable price quotation shall be treated as non-responsive and shall be rejected, pursuant to ITB Clause 5.7 [Responsiveness of Bids]. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a Bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
		3.5.3	All duties, taxes and other levies payable by the Bidder under the contract, or for any other cause, shall be included in the rates and prices, and the total Bid Price submitted by the Bidder.
3.6	Currencies of Bid.	3.6.1	The unit rates and the prices shall be quoted by the Bidder entirely in Indian Rupees unless otherwise specified in BDS. All payments shall be made in Indian Rupees only, unless otherwise specified in the BDS.
3.7	Documents Establishing the Eligibility of the Bidder	3.7.1	To establish their eligibility in accordance with ITB Clause 1.4 [Eligible Bidders], Bidders shall: complete the eligibility declarations in the Bid Submission Sheet and Declaration Form included in Section IV [Bidding

			Forms]; if the Bidder is an existing or intended Joint Venture [JV], Consortium or Association in accordance with ITB Sub-Clause 1.4.1, shall submit a copy of the Agreement, or a letter of intent to enter into such Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or intended JV, Consortium or Association as appropriate; and the existing or intended JV shall authorize an individual/ partner in one of the firms as lead partner of the JV to act and commit all the partners of JV for the Bid.
3.8	Documents Establishing the Qualifications of the Bidder	3.8.1	To establish its qualifications to perform the Contract, the Bidder shall submit as part of its Technical Proposal the documentary evidence indicated for each qualification criteria specified in Section III, [Evaluation and Qualification Criteria].
3.9	Period of Validity of Bids	3.9.1	Bids shall remain valid for 90 days or the period specified in the BDS after the Bid submission deadline date as specified by the Procuring Entity. A Bid valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.
		3.9.2	In exceptional circumstances, prior to the expiration of the Bid validity period, the Procuring Entity may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. The Bid Security or a Bid Securing Declaration in accordance with ITB Clause 3.10 [Bid Security] shall also be got extended for thirty days beyond the dead line of the extended validity period. A Bidder may refuse the request without forfeiting its Bid Security or a Bid Securing Declaration. A Bidder granting the request shall not be permitted to modify its Bid.
3.10	Bid Security	3.10.1	Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, a Bid Security for the amount specified in the BDS.
		3.10.2	Bid Security shall be 2% of the value of the Works indicated in the NIB. For bidders registered with the Procuring Entity, the bid security shall be 0.5% of the value of works indicated in the NIB. The bid security shall be in Indian Rupees, if not otherwise specified in the BDS.
		3.10.3	The Bid Security may be given in the form of a banker's Cheque or demand draft or bank guarantee of a Scheduled Bank in India, in specified format, or deposited through eGRAS/ net banking, if permitted.
		3.10.4	In lieu of Bid Security, a Bid Securing Declaration shall be taken from Government Departments and State Government Public Sector Enterprises, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government, Public Sector Enterprises of Central Government. For the Bid Securing Declaration, the Bidder shall use the form included in Section IV [Bidding Forms].
		3.10.5	Scanned copy of Bid Security instrument or a Bid Securing Declaration shall necessarily accompany the sealed Bid. Any Bid not accompanied by Bid Security or Bid Securing Declaration, if not exempted, shall be liable to be rejected.

		3.10.6	Bid Security of a Bidder lying with the Procuring Entity in respect of other Bids awaiting decision shall not be adjusted towards Bid Security for the this Bid. The Bid Security originally deposited may, however be taken into consideration in case Bids are re-invited.
		3.10.7	The issuer of the Bid Security and the confirmer, if any, of the Bid Security, as well as the form and terms of the Bid Security, must be acceptable to the Procuring Entity.
		3.10.8	Prior to submitting its Bid, a Bidder may request the Procuring Entity to confirm the acceptability of a proposed issuer of a Bid Security or of a proposed confirmer, if different than as specified in ITB Clause 3.10.3. The Procuring Entity shall respond promptly to such a request.
		3.10.9	The bank guarantee presented as Bid Security shall be got confirmed from the concerned issuing bank. However, the confirmation of the acceptability of a proposed issuer or of any proposed confirmer does not preclude the Procuring Entity from rejecting the Bid Security on the ground that the issuer or the confirmer, as the case may be, has become insolvent or is under liquidation or has otherwise ceased to be creditworthy.
		3.10.10	The Bid Security of unsuccessful Bidders shall be refunded soon after final acceptance of successful Bid and signing of Contract Agreement and submitting Performance Security by successful Bidder pursuant to ITB Clause 6.4 [Performance Security].
		3.10.11	The Bid Security taken from a Bidder shall be forfeited in the following cases, namely: - i. when the Bidder withdraws or modifies his Bid after opening of Bids; or ii. when the Bidder does not execute the agreement in accordance with ITB Clause 6.3 [Signing of Contract] after issue of letter of acceptance/ placement of Work order within the specified time period; or iii. when the Bidder fails to commence the Works as per Work Order within the time specified; or iv. when the Bidder does not deposit the Performance Security in accordance with ITB Clause 6.4 [Performance Security]; in the prescribed time limit after the work order is placed; v. if the Bidder breaches any provision of the Code of Integrity prescribed for Bidders in the Act and Chapter VI of the Rules or as specified in ITB Clause 1.3 [Code of Integrity]; or vi. if the Bidder does not accept the correction of its Bid Price pursuant to ITB Sub-Clause 5.5 [Correction of Arithmetical Errors].
		3.10.12	In case of the successful bidder, the amount of Bid Security may be adjusted in arriving at the amount of the Performance Security, or refunded if the successful bidder furnishes the full amount of Performance Security. No interest will be paid by the Procuring Entity on the amount of Bid Security.

		3.10.13	The Procuring Entity shall promptly refund the Bid Security of the Bidders at the earliest of any of the following events, namely: - i. the expiry of validity of Bid Security; ii. the execution of agreement for procurement and Performance Security is furnished by the successful bidder; iii. the cancellation of the procurement process; or iv. the withdrawal of Bid prior to the deadline for presenting Bids, unless the Bidding Document stipulates that no such withdrawal is permitted.
		3.10.14	The Bid Security of a Joint Venture, Consortium or Association must be in the name of the Joint Venture, Consortium or Association that submits the Bid. If the Joint Venture, Consortium or Association has not been legally constituted at the time of Bidding, the members of the proposed consortium or JV shall enter in to an Agreement to form a legally constituted JV after the issue of Letter of Acceptance / Letter of Intent to them and also declare a partner as the lead partner in whose name the Bid Security may be submitted.
3.11	Format and Signing of Bid	3.11.1	All pages of the Technical and Financial Bid shall be digitally signed by the Bidder or authorized signatory on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. In case of a Joint Venture, Consortium or Association, if the Joint Venture, Consortium or Association has not been legally constituted at the time of Bidding, all the members of the proposed Joint Venture, Consortium or Association shall digitally sign the Bid.
4. Submission and Opening of Bids			
4.1	Sealing and Marking of Bids	4.1.1	Bidders shall submit their Bids to the Procuring Entity electronically only on the e-procurement portal, eproc.raj.nic.in. In submission of their Bids, the Bidders should follow the step by step instructions given on the e-procurement portal.
		4.1.2	The Bidder shall enclose the Technical Bid and the Financial Bid in separate covers. The proof of payment of price of Bidding Document, processing fee and Bid Security shall be enclosed in third cover. The price of Bidding Document and Bid Security shall be paid in the name of the Procuring Entity and the processing fee shall be paid in the name of RISL.
4.2	Deadline for Submission of Bids	4.2.1	Bids shall be submitted electronically only upto the time and date specified in the Notice Inviting Bids and BDS or an extension issued thereof.
4.3	Withdrawal, Substitution and Modification of Bids	4.3.1	A Bidder may withdraw, substitute or modify its Bid after it has been submitted by submitting electronically on the e-procurement portal a written Withdrawal/ Substitutions/ Modifications etc. Notice on the e-procurement portal, duly digitally signed by the Bidder or his authorized representative, and shall include a copy of the authorization in accordance with ITB Sub-Clause 3.11.1 [Format and Signing of Bid]. The corresponding Withdrawal, Substitution or Modification of the Bid must accompany the respective written Notice. All

			Notices must be received by the Procuring Entity on the e-procurement portal prior to the deadline specified for submission of Bids in accordance with ITB Sub-Clause 4.2. [Deadline for Submission of Bids].
		4.3.2	No Bid shall be withdrawn, substituted or modified in the interval between the deadline for submission of the Bid and the expiration of the period of Bid validity specified in ITB Clause 3.9.[Period of Validity of Bids] or any extension thereof.
4.4	Bid Opening	4.4.1	The electronic Technical Bids shall be opened by the Bids opening committee constituted by the Procuring Entity at the time, date and place specified in the Bid Data Sheet in the presence of the Bidders or their authorized representatives, who choose to be present.
		4.4.2	The Bids opening committee may co-opt experienced persons in the committee to conduct the process of Bid opening.
		4.4.3	The Bidders may choose to witness the electronic Bid opening procedure online.
		4.4.4	The Financial Bids shall be kept unopened until the time of opening of the Financial Bids. The date, time, and location of electronic opening of the Financial Bids shall be intimated to the bidders who are found qualified by the Procuring Entity in evaluation of their Technical Bids.
		4.4.5	The Bids opening committee shall prepare a list of the Bidders or their representatives attending the opening of Bids and obtain their signatures on the same. The list shall also contain the representative's name and telephone number and corresponding Bidders' names and addresses. The authority letters brought by the representatives shall be attached to the list. The list shall be signed by all the members of Bids opening committee with date and time of opening of the Bids.
		4.4.6	First, covers marked as "WITHDRAWAL" shall be opened, read out, and recorded and the covers containing the corresponding Technical Bids and Financial Bids shall not be opened. No Bid shall be permitted to be withdrawn unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is readout and recorded at Bid opening. If the withdrawal notice is not accompanied by the valid authorization, the withdrawal shall not be permitted and the corresponding Technical Bid shall be opened. Next, covers marked as "SUBSTITUTION Technical Bid" shall be opened, read out, recorded. The covers containing the Substitution Technical Bids and/ or Substitution Financial Bids shall be exchanged for the corresponding covers being substituted. Only the Substitution Technical Bids shall be opened, read out, and recorded. Substitution Financial Bids will remain unopened in accordance with ITB Sub-Clause 4.4.4. No Bid shall be substituted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at Bid opening. Covers marked as "MODIFICATION Technical Bid" shall be opened thereafter, read out and recorded with the corresponding Technical Bids. No Technical Bid and/ or

			Financial Bid shall be modified unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at opening of Technical Bids. Only the Technical Bids, both Original as well as Modification is to be opened, read out, and recorded at the opening. Financial Bids, both Original as well as Modification, will remain unopened in accordance with ITB Sub-Clause 4.4.4.
		4.4.7	<p>All other covers containing the Technical Bids shall be opened one at a time and the following read out and recorded-</p> <ul style="list-style-type: none"> i. the name of the Bidder; ii. whether there is a modification or substitution; iii. whether proof of payment of Bid Security or Bid Securing Declaration, if required, payment of price of the Bidding Document and processing fee have been enclosed; iv. Any other details as the Bids opening committee may consider appropriate. <p>After all the Bids have been opened, their hard copies shall be printed and shall be initialed and dated on the first page and other important papers of each Bid by the members of the Bids opening committee.</p>
		4.4.8	Only Technical Bids shall be read out and recorded at the bid opening and shall be considered for evaluation. No Bid shall be rejected at the time of opening of Technical Bids except Alternative Bids (if not permitted) and Bids not accompanied with the proof of payment of the required price of Bidding Document, processing fee and Bid Security.
		4.4.9	The Bids opening committee shall prepare a record of opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, modification, or alternative offer (if they were permitted), any conditions put by Bidder and the presence or absence of the price of Bidding Document, processing fee and Bid Security. The Bidders or their representatives, who are present, shall sign the record. The members of the Bids opening committee shall also sign the record with date.
		4.4.10	After completion of the evaluation of the Technical Bids, the Procuring Entity shall invite Bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified to attend the electronic opening of the Financial Bids. The date, time, and location of the opening of Financial Bids will be intimated in writing by the Procuring Entity. Bidders shall be given reasonable notice of the opening of Financial Bids.
		4.4.11	The Procuring Entity shall notify Bidders in writing whose Technical Bids have been rejected on the grounds of being substantially non-responsive and not qualified in accordance with the requirements of the Bidding Document.
		4.4.12	The Bids opening committee shall conduct the electronic opening of Financial Bids of all Bidders who submitted substantially responsive Technical Bids and have qualified in evaluation of Technical Bids, in the presence of Bidders or their representatives who choose to be present at the

			address, date and time specified by the Procuring Entity.
		4.4.13	<p>All covers containing the Financial Bids shall be opened one at a time and the following read out and recorded-</p> <ol style="list-style-type: none"> i. the name of the Bidder; ii. whether there is a modification or substitution; iii. the Bid Prices; iv. any other details as the Bids opening committee may consider appropriate. <p>After all the Bids have been opened, their hard copies shall be printed and shall be initialed and dated on the first page of the each Bid by the members of the Bids opening committee. All the pages of the Price Schedule and letters, Bill of Quantities attached shall be initialed and dated by the members of the committee. Key information such as prices, completion period, etc. shall be encircled and unfilled spaces in the Bids shall be marked and signed with date by the members of the Bids opening committee.</p>
		4.4.14	<p>The Bids opening committee shall prepare a record of opening of Financial Bids that shall include as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification, the Bid Price, any conditions, any discounts and alternative offers (if they were permitted). The Bidders or their representatives, who are present, shall sign the record. The members of the Bids opening committee shall also sign the record with date.</p>
5. Evaluation and Comparison of Bids			
5.1	Confidentiality	5.1.1	Information relating to the examination, evaluation, comparison, and post-qualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
		5.1.2	Any attempt by a Bidder to influence the Procuring Entity in its examination of qualification, evaluation, comparison of the Bids or Contract award decisions may be resulting in the rejection of its Bid, in addition to the legal action which may be taken by the Procuring Entity under the Act and the Rules.
		5.1.3	Notwithstanding ITB Sub-Clause 5.1.2 [Confidentiality], from the time of opening the Bid to the time of Contract award, if any Bidder wishes to contact the Procuring Entity on any matter related to the Bidding process, it shall do so in writing.
		5.1.4	In addition to the restrictions specified in section 49 of the Act, the Procuring Entity, while procuring a subject matter of such nature which requires the procuring Entity to maintain confidentiality, may impose condition for protecting confidentiality of such information.
5.2	Clarification of Technical or Financial Bids	5.2.1	To assist in the examination, evaluation, comparison and qualification of the Technical or Financial Bids, the Bid evaluation committee may, at its discretion, ask any Bidder for a clarification regarding his Bid. The committee's request for clarification and the response of the Bidder shall be in

			writing.
		5.2.2	Any clarification submitted by a Bidder with regard to his Bid that is not in response to a request by the Bid evaluation committee shall not be considered.
		5.2.3	No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetical errors discovered by the Bid evaluation committee in the evaluation of the financial Bids.
		5.2.4	No substantive change to qualification information or to a submission, including changes aimed at making an unqualified Bidder, qualified or an unresponsive submission, responsive shall be sought, offered or permitted.
5.3	Deviations, Reservations and Omissions in Technical or Financial Bids	5.3.1	During the evaluation of Technical or Financial Bids, the following definitions apply: i. "Deviation" is a departure from the requirements specified in the Bidding Document; ii. "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and iii. "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
5.4	Nonmaterial Non-conformities in Technical or Financial Bids	5.4.1	Provided that a Technical or Financial Bid is substantially responsive, the Procuring Entity may waive any nonconformities (with recorded reasons) in the Bid that do not constitute a material deviation, reservation or omission.
		5.4.2	Provided that a Technical or Financial Bid is substantially responsive, the Procuring Entity may request the Bidder to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Request for information or documentation on such nonconformities shall not be related to any aspect of the Financial Proposal of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
		5.4.3	* Provided that a Technical or Financial Bid is substantially responsive, the Procuring Entity will rectify nonmaterial nonconformities or omissions (with recorded reasons). To this effect, the Bid Price shall be adjusted during evaluation of Financial Proposals for comparison purposes only, to reflect the price of the missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section III, Evaluation and Qualification Criteria. <i>* [This ITB Sub-Clause should be kept only when considered necessary]</i>

5.5	Correction of Arithmetical Errors in Financial Bid	5.5.1	<p>Provided that a Financial Bid is substantially responsive, the Bid evaluation committee shall correct arithmetical errors during evaluation of Financial Bid on the following basis:</p> <ol style="list-style-type: none"> i. if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected; ii. if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and iii. if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.
		5.5.2	If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing Declaration shall be executed.
5.6	Preliminary Examination of Technical or Financial Bids	5.6.1	The Procuring Entity shall examine the Technical or Financial Bids to confirm that all documents and technical documentation requested in ITB Sub-Clause 3.3 [Documents Comprising the Bid] have been provided, and to determine the completeness of each document submitted.
		5.6.2	<p>The Procuring Entity shall confirm, following the opening of the Technical or Financial Bids, that the following documents and information have been provided:</p> <ol style="list-style-type: none"> i. Bid is signed, as per the requirements listed in the Bidding documents; ii. Bid has been sealed as per instructions provided in the Bidding documents; iii. Bid is valid for the period, specified in the Bidding documents; iv. Bid is accompanied by Bid Security or Bid securing declaration; v. Bid is unconditional and the Bidder has agreed to give the required performance Security; vi. Price Schedules in the Financial Bids are in accordance with ITB Clause 3.4 [Bid Submission Sheets and Price Schedules]; vii. written confirmation of authorization to commit the Bidder; viii. Declaration by the Bidder in compliance of Section 7 and 11 of the Act; and ix. Other conditions, as specified in the Bidding Document are fulfilled.
5.7	Responsiveness of Technical or Financial Bids	5.7.1	The Procuring Entity's determination of the responsiveness of a Technical or Financial Bid is to be based on the contents of the Bid itself, as defined in ITB Sub-Clause 3.3 [Documents Comprising the Bid].

		5.7.2	A substantially responsive Technical or Financial Bid is one that meets without material deviation, reservation, or omission to all the terms, conditions, and specifications of the Bidding Document. A material deviation, reservation, or omission is one that: (a) if accepted, would- i. affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in Section V, Schedule of Supply; or ii. limits in any substantial way, inconsistent with the Bidding Document, the Procuring Entity's rights or the Bidder's obligations under the proposed Contract; or (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.
		5.7.3	The Procuring Entity shall examine the technical aspects of the Bid in particular, to confirm that requirements of Section V, Procuring Entity's Requirements have been met without any material deviation, reservation, or omission.
		5.7.4	If a Technical or Financial Bid is not substantially responsive to the Bidding Document, it shall be rejected by the Procuring Entity and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.
5.8	Examination of Terms and Conditions of the Technical or Financial Bids	5.8.1	The Procuring Entity shall examine the Bids to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.
		5.8.2	The Procuring Entity shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clauses 3.3 [Documents Comprising the Bid] and to confirm that all requirements specified in Section V [Procuring Entity's Requirements] of the Bidding Document and all amendments or changes requested by the Procuring Entity in accordance with ITB Clause 2.3 [Amendment of Bidding Document] have been met without any material deviation or reservation.
5.9	Evaluation of Qualification of Bidders in Technical Bids	5.9.1	The determination of qualification of a Bidder in evaluation of Technical Bids shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 3.8 [Documents Establishing the Qualifications of the Bidder] and in accordance with the qualification criteria indicated in Section III [Evaluation and Qualification Criteria]. Factors not included in Section III, shall not be used in the evaluation of the Bidder's qualification.
5.10	Evaluation of Financial Bids	5.10.1	The Procuring Entity shall evaluate each Financial Bid, the corresponding Technical Bid of which has been determined to be substantially responsive
		5.10.2	To evaluate a Financial Bid, the Procuring Entity shall only use all the criteria and methodologies defined in this Clause and in Section III, Evaluation and Qualification Criteria. No other criteria or methodology shall be permitted.

		5.10.3	To evaluate a Financial Bid, the Procuring Entity shall consider the following: <ul style="list-style-type: none"> i. the Bid Price quoted in the Financial Bid; ii. price adjustment for correction of arithmetical errors in accordance with ITB Clause 5.5 [Correction of Arithmetical Errors]; iii. Adjustment of bid prices due to rectification of nonmaterial nonconformities or omissions in accordance with ITB Sub Clause 5.4.3 [Nonmaterial Nonconformities in Bids], if applicable.
		5.10.4	If the Bid, which results in the lowest evaluated Bid Price, is considered to be seriously unbalanced, or front loaded, in the opinion of the Procuring Entity, the Procuring Entity may require the Bidder to produce detailed rate analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those rates with the construction methods and schedule proposed. After evaluation of the rate analysis, taking into consideration, the schedule of estimated Contract payments, the Procuring Entity may require that the amount of the Performance security be increased at the cost of the Bidder to a level sufficient to protect the Procuring Entity against financial loss in the event of default of the successful Bidder under the Contract.
5.11	Comparison of Bids	5.11.1	The Procuring Entity shall compare all substantially responsive Financial Bids to determine the lowest-evaluated Financial Bid in accordance with ITB Sub-Clause 5.10 [Evaluation of Financial Bids].
5.12	Negotiations	5.12.1	To the extent possible, no negotiations shall be conducted after the pre-Bid stage. All clarifications needed to be sought shall be sought in the pre-Bid stage itself.
		5.12.2	Negotiations may, however, be undertaken only with the lowest Bidder under the following circumstances- <ul style="list-style-type: none"> i. when ring prices have been quoted by the Bidders for the subject matter of procurement; <p style="text-align: center;">or</p> <ul style="list-style-type: none"> ii. When the rates quoted vary considerably and considered much higher than the prevailing market rates.
		5.12.3	The Bid evaluation committee shall have full powers to undertake negotiations. Detailed reasons and results of negotiations shall be recorded in the proceedings.
		5.12.4	The lowest Bidder shall be informed about negotiations in writing either through messenger or by registered letter and e-mail (if available). A minimum time of seven days shall be given for calling negotiations. In case of urgency, the Bid evaluation committee, after recording reasons, may reduce the time, provided the lowest Bidder has received the intimation and consented to holding of negotiations.
		5.12.5	Negotiations shall not make the original offer made by the Bidder inoperative. The Bid evaluation committee shall have option to consider the original offer in case the Bidder decides to increase rates originally quoted or imposes any new terms or conditions.

		5.12.6	In case of non-satisfactory achievement of rates from lowest Bidder, the Bid evaluation committee may choose to make a written counter offer to the lowest Bidder and if this is not accepted by him, the committee may decide to reject and re-invite Bids or to make the same counter-offer first to the second lowest Bidder, then to the third lowest Bidder and so on in the order of their initial standing in the bid evaluation and work order be awarded to the Bidder who accepts the counter-offer.
		5.12.7	In case the rates even after the negotiations are considered very high, fresh Bids shall be invited.
5.13	Procuring Entity's Right to Accept Any Bid, and to Reject Any or All Bids	5.13.1	The Procuring Entity reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to Contract award without assigning any reasons thereof and without there by incurring any liability to the Bidders.
6. Award of Contract			
6.1	Procuring Entity's Right to Vary Quantities	6.1.1	If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Bidding Document.
		6.1.2	Order for additional quantity of an item of the Works upto 50 percent of the original quantity of that item in the Bill of Quantities and for extra items not provided for in the Bill of Quantities may be given but the amount of the additional quantities and extra items, taken together, shall not exceed 50 percent of the Contract Price.
6.2	Acceptance of the successful Bid and award of contract	6.2.1	The Procuring Entity after considering the recommendations of the Bid Evaluation Committee and the conditions of Bid, if any, financial implications, samples, test reports, etc., shall accept or reject the successful Bid.
		6.2.2	Before award of the Contract, the Procuring Entity shall ensure that the price of successful Bid is reasonable and consistent with the required specifications.
		6.2.3	A Bid shall be treated as successful only after the competent authority has approved the procurement in terms of that Bid.
		6.2.4	The Procuring Entity shall award the contract to the Bidder whose offer has been determined to be the lowest in accordance with the evaluation criteria set out in the Bidding Document if the Bidder has been determined to be qualified to perform the contract satisfactorily on the basis of qualification criteria fixed for the Bidders in the Bidding Document for the subject matter of procurement.
		6.2.5	Prior to the expiration of the period of validity of Bid, the Procuring Entity shall inform the successful Bidder in writing, by registered post or email, that its Bid has been accepted.
		6.2.6	If the issuance of formal letter of acceptance (LOA) is likely to take time, in the meanwhile a Letter of Intent (LOI) may be sent to the Bidder. The acceptance of an offer is complete as soon as the letter of acceptance or letter of intent is posted and/ or sent by email (if available) to the address of the Bidder

			given in the Bidding Document.
6.3	Signing of Contract	6.3.1	In the written intimation of acceptance of its Bid sent to the successful Bidder, it shall also be requested to execute an agreement in the format given in the Bidding Document on a non-judicial stamp of requisite value at his cost and deposit the Performance Security or a Performance Security Declaration, if applicable, within a period specified in the BDS or where the period is not specified in the BDS, then within fifteen days from the date on which the LOA or LOI is dispatched to the Bidder. In case the successful bidder is a JV still to be legally constituted, all parties to the JV shall sign the Agreement.
		6.3.2	If the Bidder, whose Bid has been accepted, fails to sign a written procurement contract or fails to furnish the required Performance Security or Performance Security Declaration within the specified time period, the Procuring Entity shall forfeit the Bid Security of the successful bidder / execute the Bid Securing Declaration and take required action against it as per the provisions of the Act and the Rules.
		6.3.3	The Bid Security, if any, of the Bidders whose Bids could not be accepted shall be refunded soon after the contract with the successful Bidder is signed and his Performance Security is obtained. Until a formal contract is executed, LOA or LOI shall constitute a binding contract.
6.4	Performance Security	6.4.1	Performance Security shall be solicited from the successful Bidder except State Govt. Departments and undertakings, corporations, autonomous bodies, registered societies, co-operative societies which are owned or controlled or managed by the State Government and undertakings of Central Government. However, a Performance Security Declaration shall be taken from them. The State Government may relax the provision of Performance Security in particular procurement.
		6.4.2	(i) The amount of Performance Security shall be ten percent, or as specified in the BDS, of the amount of the Work Order. The currency of Performance Security shall be Indian Rupees, if otherwise not specified in BDS. (ii) If the Bid, which results in the lowest evaluated bid price, is seriously unbalanced or front loaded in the opinion of the Procuring Entity, the Procuring Entity may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, taking into consideration the schedule of estimated Contract payments, the Procuring Entity may require that the amount of the performance security be increased (to a maximum of 20% of the bid value of such items) at the expense of the Bidder to a level sufficient to protect the Procuring Entity against financial loss in the event of default of the successful Bidder under the Contract.
		6.4.3	Performance Security shall be furnished in one of the following forms as applicable- (a) Deposit through eGRAS; or

			<p>(b) Bank Draft or Banker's Cheque of a Scheduled Bank in India; or</p> <p>(c) National Savings Certificates and any other script/instrument under National Savings Schemes for promotion of small savings issued by a Post Office in Rajasthan, if the same can be pledged under the relevant rules. They shall be accepted at their surrender value at the time of Bid and formally transferred in the name of the Procuring Entity with the approval of Head Post Master; or</p> <p>(d) Bank guarantee. It shall be got verified from the issuing bank. Other conditions regarding bank guarantee shall be same as specified in ITB Sub-Clause 3.10 [Bid Security]; or</p> <p>(e) Fixed Deposit Receipt (FDR) of a Scheduled Bank. It shall be in the name of the Procuring Entity on account of Bidder and discharged by the Bidder in advance. The Procuring Entity shall ensure before accepting the Fixed Deposit Receipt that the Bidder furnishes an undertaking from the bank to make payment/ premature payment of the Fixed Deposit Receipt on demand to the Procuring Entity without requirement of consent of the Bidder concerned. In the event of forfeiture of the Performance Security, the Fixed Deposit shall be forfeited along with interest earned on such Fixed Deposit.</p> <p>(f) The successful Bidder at the time of signing of the Contract agreement, may submit option for deduction of Performance Security from his each running and final bill @ 10% of the amount of the bill.</p>
		6.4.4	Performance Security furnished in the form of a document mentioned at options (a) to (e) of Sub-Clause 6.4.3 above, shall remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the Bidder, including operation and / or maintenance and defect liability period, if any.
		6.4.5	Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Procuring Entity may either cancel the procurement process or if deemed appropriate, award the Contract at the rates of the lowest Bidder, to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Procuring Entity to be qualified to perform the Contract satisfactorily.
		6.4.6	<p>Forfeiture of Performance Security: Amount of Performance Security in full or part may be forfeited in the following cases:-</p> <ol style="list-style-type: none"> i. when the Bidder does not execute the agreement in accordance with ITB Clause 6.3 [Signing of Contract] within the specified time; after issue of letter of acceptance; or ii. when the Bidder fails to commence the Works as per Work order within the time specified; or iii. when the Bidder fails to complete Contracted Works satisfactorily within the time specified; or

			<ul style="list-style-type: none"> iv. when any terms and conditions of the contract is breached; or v. to adjust any established dues against the Bidder from any other contract with the Procuring Entity; or vi. if the Bidder breaches any provision of the Code of Integrity prescribed for the Bidders specified in the Act, Chapter VI of the Rules and this Bidding Document. vii. Notice of reasonable time will be given in case of forfeiture of Performance Security. The decision of the Procuring Entity in this regard shall be final.
7. Redressal of Grievances during Procurement Process (Appeals)			
7	Grievance handling procedure during procurement process	7.1	Any grievance of a Bidder pertaining to the procurement process shall be by way of filing an appeal to the First or Second Appellate Authority, as the case may be, as specified in the BDS, in accordance with the provisions of chapter III of the Act and chapter VII of the Rules and as given in Appendix A to these ITB.

Appendix A: Grievance Handling Procedure during Procurement Process (Appeals)

- (1) Filing an appeal.-** If any Bidder or prospective Bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First or Second Appellate Authority, as the case may be, as may be designated for the purpose, within a period of ten days or such other period as may be specified in the pre-qualification documents, Bidder registration documents or Bidding documents, as the case may be, from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Bidder as successful in terms of section 27 of the Act, the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the technical Bid before the opening of the financial Bid, an appeal related to the matter of financial Bid may be filed only by a Bidder whose technical Bid is found to be acceptable.

- (2) Appeal not to lie in certain cases. -**No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

- a) determination of need of procurement;
- b) provisions limiting participation of Bidders in the Bid process;
- c) the decision of whether or not to enter into negotiations;
- d) cancellation of a procurement process;
- e) applicability of the provisions of confidentiality.

- (3) Form of Appeal.-**

- a) An appeal under sub-section (1) or (4) of section 38 shall be in the annexed Form along with as many copies as there are respondents in the appeal.
- b) Every appeal shall be accompanied by an order appealed against, if any affidavit verifying the facts stated in the appeal and proof of payment of fee.
- c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

- (4) Fee for filing appeal.-**

- a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.
- b) The fee shall be paid in the form of bank demand draft or banker's Cheque of a Scheduled Bank payable in the name of Appellate Authority concerned.

- (5) Procedure for disposal of appeals.-**

- a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.
- b) On the date fixed for hearing, the First Appellate Authority or Second Appellate

Authority, as the case may be, shall,-

- (i) hear all the parties to appeal present before him; and
 - (ii) peruse or inspect documents, relevant records or copies thereof relating to the matter.
- c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.
- d) The order passed under sub-clause (c) above shall be placed on the State Public Procurement Portal.

Annexure

FORM No. 1

[See rule 83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement Act, 2012

Appeal Noof

Before the (First / Second Appellate Authority)

1. Particulars of appellant:

(i) Name of the appellant:

(ii) Official address, if any:

(iii) Residential address:

2. Name and address of the respondent(s):

(1).

(2).

(3).

3. Number and date of the order appealed against and name and designation of the officer / authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:

5. Number of affidavits and documents enclosed with the appeal:

6. Grounds of appeal:

.....
.....(Supported by an affidavit)

7. Prayer:

.....

Place

Date.....

Appellant's Signature

SECTION-II: BIDDING DATA SHEET

SECTION-II: BIDDING DATA SHEET

The following specific data for the works shall complement, amend, or supplement the provisions in Instructions to Bidders – Section I. Whenever there is a conflict, the provisions herein shall prevail over those in the Instructions to Bidders.

Instructions to Bidders Clause Reference**A. Introduction**

ITB. 1.1.1	The Number of the Invitation for Bids(NIT) is: JSCL/Smart City Works/05/2017-18 The Procuring Entity is: Jaipur Smart City limited, Rajasthan Name of Work: Development, Operation and Maintenance of Smart Digital Solutions for Solid Waste Management Systems in Jaipur (Detailed Scope of work has been defined in Section V.)
1.1.2	Period of Completion: The Physical Works shall be completed in its entirety within 9 Months for installation including commissioning from the Start Date, which shall be the date of issue of the Notice to proceed or such other Start Date as may be specified in the Notice to proceed. The Operation & Maintenance period shall be of 5 years (60 Months including defect liability period) and shall commence after completion of successful Commissioning. Defect liability period of one year will start after successful Commissioning.
1.1.3	Estimated Cost of work is: Rs. 22.38 Crores
ITB 1.4.1	Joint Ventures are permitted comprising not more than 3 (three) firms/companies. The minimum equity under JV/Consortium of lead firm should be minimum of 51% and other firm should be minimum 20%. Bidders (Partners of all JV / Consortium) have to demonstrate their qualification by providing necessary documents along with the bids. A bidder who has not submitted the qualification particulars will be considered as non responsive and disqualified.
ITB 1.4.2	“Bidders of Indian Nationality” are permissible.
ITB 1.4.5	Registration as contractor is not mandatory.
ITB 1.4.8	The bidding process is open to bidders who fulfil the prescribed eligibility criteria.
ITB 1.4.9	Each bidder shall upload on-line / submit only one bid for one work. A bidder who submits or participates in more than one bid for the particular Works will be disqualified.

B. Bidding Documents

ITB 2.1.3	This is an “on-line tender”. Therefore, tender documents in physical form shall not be available for sale but can be downloaded from the website and pay cost (Rs 20,000/-) while submitting the filled-up Bidding document to the Procuring Entity along with the processing fee of Rs 1,000/- separately in favour of Managing Director, RISL, Jaipur
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	The bidder should submit, by date & time specified in bid document, in original, hard copies of (i) cost of bid document as Rs. 20,000/- for each work in the form of DD/Banker's Cheque of a scheduled bank in India or eGRAS in the name of Chief Executive Officer, Jaipur Smart City Limited payable at Jaipur; (ii) Bid processing fee of Rs. 1,000/- for each work in the form of DD in the name of Managing Director, RISL, Jaipur payable at Jaipur; (iii) Bid Security (EMD) as per NIT; (iv) Letter of Technical Bid; (v) Power of Attorney; and (vi) Joint Venture Agreement, if applicable. The bidder should upload scanned copies of these documents on e-procurement web-site along with their technical bids.
ITB 2.2.1	For Clarification purposes only, the Procuring Entity's address is : OFFICE OF THE CHIEF EXECUTIVE OFFICER Jaipur Smart City Limited. JMC Building, Pt Deendayal Upadhyay Bhawan Lalkothi, Tonk Road, Jaipur-302015 Phone No. 0141-2741346/2741347 , E-Mail ID: jscljaipur@gmail.com
ITB 2.2.2	A Pre-bid Meeting will take place at the Manthan, JSCL, JMC Building, Pt Deendayal Upadhyay Bhawan, Lalkothi, Tonk Road, Jaipur-302015.on: Date: 18.08.2017 Time: 11.00 AM No Site visit shall be organised by the procuring entity. However, bidders are advised to visit the sites at their own expenses and if any support is required, shall be provided by the Executive Officer/Engineer.
ITB 2.2.3	The Bidders are requested, to submit questions in writing, to reach the Procuring Entity preferably not later than one week before the Pre-bid Meeting. However, Department may also consider questions / queries raised in writing only, during the Pre-bid Meeting.
ITB 2.3.1	Any addendum issued shall be part of the Bidding Document and shall be uploaded on the State Public Procurement Portals http://sppp.rajasthan.gov.in/ and http://eproc.rajasthan.gov.in
ITB 2.3.2	To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Procuring Entity may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB Sub-Clause 4.2 [Deadline for Submission of Bids], under due intimation to the Bidders by uploading it on the State Public Procurement Portal and its e-procurement portal.

C. Preparation of Bids

ITB 3.2.1	The language of the bid shall be: English
ITB 3.3.1	The online Bid shall comprise of two parts submitted simultaneously, one containing the Technical Bid/ Proposal and the other the Financial or Price Bid/ Proposal.
ITB 3.3.2	The Bidder shall submit the forms, declarations and documents, as specified in section IV of Bid Document, with the Technical Bid:
ITB 3.3.3	The Bidder shall upload the following documents with its Financial Bid:

	<p>a) Financial Proposal Submission in Excel Sheet.</p> <p>b) BoQ</p> <p>c) And other details as mentioned in Sec IV</p>
ITB 3.5.1	<p>Add following:</p> <p>a) The type of Contract: Lump-sum basis for Development, Operation and Maintenance of Smart Digital Solutions for Solid Waste Management Systems in Jaipur.</p> <p>b) Contract Price should be sum of capital cost + Operation & Maintenance cost</p> <p>c) The first year, after completion of all physical works and issue of taking over certificate shall be the Defects Liability Period. The O&M period of all the works under this contract shall be of 5 years including the one year defect liability period.</p>
ITB 3.5.2	The Prices quoted by the Bidder shall be fixed for lump sum items and adjustable for remaining items. Provision of Price escalation shall be as per Conditions of Contract.
ITB 3.5.3	In case of changes in rates of taxes and duties, as decreed by a change/amendment in any applicable Law of the land, after the bid submission date till issuance of Completion Certificate, only the change in rates will be borne by the Purchaser.
ITB 3.9.1	The Bid validity period shall be 120 (One hundred and twenty days) days from deadline for submission of bids.
ITB 3.10.2	<p>Add following:</p> <p>Bid security (EMD) shall be of the value Rs.44.76 Lakhs (Rupees forty-four lakhs and seventy six thousand)as indicated in NIT for all bidders.</p>
ITB 3.10.3	A Bid Security (EMD) shall be provided as a part of the bid in the form of a Banker's Cheque or Demand Draft or Bank Guarantee of a Scheduled Bank in India, in specified format which shall remain valid for a period of 45 (Forty Five) days beyond the validity of the bid.
ITB 3.11.1	Only Digital signed copy shall be submitted through e-procurement website.
ITB 3.11.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Power of Attorney

D. Submission and Opening of Bids

ITB 4.1.1	<p>For bid submission purposes only, the Procuring Entity's address is :</p> <p>The Chief Executive Officer, Office of the Jaipur Smart City Limited.</p> <p>JMC Building, Pt Deendayal Upadhyay Bhawan, LalKothi, Tonk Road,Jaipur-302015</p> <p>Phone No. 0141-2741346/2741347E-Mail ID: jscljaipur@gmail.com</p> <p>Bidders shall submit their Bids electronically only.</p> <p>The Bidders shall submit the Bid online with all pages numbered serially and by</p>
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	<p>giving an index of submissions. Each page of the submission shall be initialled by the Authorised Representative of the Bidder as per the terms of the tender. The Bidder shall be responsible for documents accuracy and correctness as per the version uploaded by the Procuring Entity and shall ensure that there are no changes caused in the content of the downloaded document. The bidder shall follow the following instructions for online submission:</p> <ul style="list-style-type: none"> • Bidder who wants to participate in bidding will have to procure digital certificate as per IT Act to sign their electronic bids. Offers which are not digitally signed will not be accepted. Bidder shall submit their offer in electronic format on above mentioned website after digitally signing the same. • Cost of bid document is Rs.20,000/- per tender should be deposited by Non Refundable Demand Draft drawn in favor of Chief Executive Officer, Jaipur Smart City Limited, Jaipur payable at Jaipur, whereas the Processing fee Rs. 1,000/- should be deposited by Non-Refundable Demand Draft drawn in favor of Managing Director, RISL, Jaipur payable at Jaipur. Original documents along with above mentioned fees and other documents as per bid conditions, has to be deposited up to 05.00PM on 13.09.2017. • The Procuring Entity will not be responsible for any mistake occurred at the time of uploading of bid or thereafter. • If holiday is declared on submission & opening date of tender the scheduled activity will take place on next working day.
ITB 4.1.2	Bids are required to be submitted in Electronic Format, it shall be submitted on the e-procurement portal: http://eproc.rajasthan.gov.in
ITB 4.2.1	The Deadline for electronic Bid submission is Date: 12.09.2017 Time: 05:00 PM
ITB 4.4.1, 4.4.5	The online Bid opening shall take place at: OFFICE OF THE CHIEF EXECUTIVE OFFICER Jaipur Smart City Limited. JMC Building, Pt Deendayal Upadhyay Bhawan LalKothi, Tonk Road, Jaipur-302015 Phone No. 0141-2741346/2741347E-Mail ID: jscljaipur@gmail.com The tendering process shall be conducted online only; DD/BC tender fee, processing fee and Bid Security shall be submitted physically up to deadline described in tender document.
ITB 4.4.13, 4.4.15	The Procuring Entity will open the Financial proposal as per e-tendering procedure.

E. Award of Contract

ITB 6.3.1	The period within which the Performance Security is to be submitted by the successful Bidder and the Contract Agreement is to be signed by him from the date of issue of Letter of Acceptance is 15 Days.
ITB 6.3.3	The procuring entity shall promptly return the bid security after the earliest of the following events, namely:

	<ol style="list-style-type: none"> 1. The expiry of validity of bid security 2. The execution of agreement for procurement and performance security is furnished by the successful bidder; 3. The cancellation of the procurement process; or 4. The withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted.
<p>ITB 6.4.2, 6.4.3, 6.4.4</p> <p>Replace with following</p>	<p>Performance Security amounting to total 10% of contract value (but excluding O&M cost and provisional sum) shall be submitted / deducted as follows:</p> <ol style="list-style-type: none"> (i) Contractor shall submit Performance Security @ 10% of the contract value in advance at the time of signing of agreement in form of Bank Guarantee as per latest rules under RTPP act. The Bank Guarantee should be issued by any nationalized/ schedule bank and shall remain valid up to 60 days beyond defect liability period. Bank Guarantee submitted against the performance guarantee, shall be unconditional and en-cashable/invokable at Town for which tenders are invited or at Jaipur. (ii) If there is no reason to retain the Performance Security, it shall be returned back to the contractor within 60 days after the satisfactory completion of the defect liability period, subject to submission of fresh Performance Security valid for 60 days beyond the O&M period of Five (5) years, of an amount 10% of total contract value of Operation and Maintenance Phase of Five Years.
7.1	<ul style="list-style-type: none"> • First Appellate Authority shall be: Dy. Secretary/Joint secretary, LSGD, Rajasthan • Second Appellate Authority shall be: Secretary/Principal Secretary, LSGD, Rajasthan.

SECTION III:

EVALUATION AND QUALIFICATION CRITERIA

SECTION III: EVALUATION AND QUALIFICATION CRITERIA

A. Evaluation Criteria

JSCCL will carry out evaluation of the Eligibility Criteria and confirm through the documents submitted whether the bidder (If Consortium then Lead Bidder) meets the Eligibility Criteria or not. On successful qualification, the bidder will become eligible for being considered for further evaluation.

Selection of the bidder for this project will be on Least Cost Selection (LCS) method. Qualified bidders would have to mandatorily qualify all the points in the technical criteria to qualify for consideration of the financial bid.

.1 The evaluation will consist of the following phases:

Phase I: Evaluation of Eligibility/ qualification Criteria set in the document.

Phase II: Evaluation of Technical Bids (of eligible Bidders)

Phase III: Evaluation of Financial Bids (of technically qualified Bidders)

.2 **Phase I: Evaluation of Eligibility criteria:** In this part the Bidders will be evaluated specified in the Eligibility criteria mentioned for the fulfillment of the conditions. It is clearly specified that, unless otherwise specifically mentioned, the eligibility criteria of only the prime / lead bidder will be considered during the pre-qualification stage but the technical evaluation will consider the cumulative experience and expertise of the JV / consortium, if any.

.3 **Phase II: Evaluation of Technical Bids:** In this part the technical bid of only those Bidders who have qualified the Phase I Eligibility criteria will be evaluated. The technical bid will be evaluated on the parameters described below.

I. Analysis of technical bid

- a) The technical Bid should contain a detailed description of how the Bidder will provide the required services outlined in this Bid. It should articulate in detail, as to how the Bidder's Technical Solution meets the requirements specified in the Bid.
- b) The Technical Bid must not contain any pricing information.
- c) Any information submitted which is additional to the required response should be marked as 'Supplementary' and shall be furnished as a separate section, linking it to the relevant section of the Bid.
- d) If the Bidder wishes to propose additional services (or enhanced levels of services) beyond the scope of this Bid, the proposal must include a description of such services as a separate attachment to the Bid. However, this additional information will not entail the Bidder to claim higher marking/ ranking, unless all the other Bidders submit similar information. The decision of the department/ tender evaluation committee in this regards will be final and binding. JSCCL may however ask this particular Bidder to supply these features, in case this Bidder becomes the selected Bidder, at no extra cost.
- e) The Technical Bid should detail the tasks to be performed as per detailed scope of work and technical specifications given in the Bid covering the following at the minimum:
 - (i) Overview of the Proposed Solution that meets the requirements specified in the Bid
 - (ii) Detail of ready to deploy (after customization) product, if any

- (iii) Operational environment
- (iv) Implementation methodology, project plan and implementation schedule.
- (v) Project team structure, Size and capability/ qualifications (Total Staffing plan including numbers)
- (vi) Quality standards and assurance process proposed to be followed.
- (vii) Risk Identification/Mitigation Strategies.
- (viii) Training & Change Management Strategies, If any.
- (ix) Key Deliverables along with examples and proof of concept.

e) Bidders are advised to describe proposed solution on above points in detail. Incomplete or poorly described technical proposal will be considered as irresponsible bid submission and may lead to disqualification. Jaipur Smart City Limited reserves the right to take appropriate action in this regard.

Mandatory Technical Eligibility Criteria

Sl. No	Criteria	Compliance (Yes/No)	Documents Reference
1	The Bidder or the Prime Bidder Or the consortium partner (in case of consortium) should have Designed, Developed & Implemented ICT solution for Solid Waste Management system in last three financial years. Copy of the agreements as a proof has to be attached		
2	The Bidder or the Prime Bidder Or the consortium partner (in case of consortium) should have implemented GPS/Rfid based Vehicle Tracking System for at least 500 vehicles, of which at least one system has tracking of 300 vehicles. Copy of the agreements as a proof has to be attached		
3	The Bidder or the Prime Bidder Or the consortium partner (in case of consortium) should have implemented GPS/Rfid based Vehicle Tracking System with supply/integration of Hardware (like Servers, Desktops, Network equipment, connectivity etc.) Copy of the agreements as a proof has to be attached		
4	The Bidder or the Prime Bidder Or the consortium partner (in case of consortium) should have implemented GPS based Mobile Application on Android/Windows for Vehicle Tracking OR SWM project. Copy of the agreements as a proof has to be attached		
5	Must have executed Orders of Design & Development of Integration of digital solution application software for Internet / Network Operation Centre supported by the solution proposed. Documentary proofs with customer references should be submitted		
6	The Bidder need to possess CMMI Level 3		

	Certification		
7	The Bidder need to possess any one of the following Certifications at the time of bidding. 1) ISO 9001:2008: Certification for System Integration 2) ISO 27000; 2013 3) ISO 20000 Documentary proofs with references should be submitted for certifications.		
8	The bidder should not have been blacklisted by Central Government or any State Government organization / department in India at the time of submission of the Bid. Declaration letter by bidder to be submitted		

Note: The Technical Evaluation shall be in the format shown above. The information furnished by the bidders in the technical bid as well as the presentation (if any) shall be the basis for this evaluation. In case any of the information is not made available the Committee will assign zero marks to that item.

g) The bidder has to satisfy all the above six points to qualify for participation in the financial bid.

- If required JSCL may seek specific clarifications from any or all Bidders at this stage. JSCL shall determine the Bidder that qualifies for the next phase after reviewing the clarifications provided by the Bidders.

II. Economic Criteria

1. Adjustment for Deviations from the Terms of Payment

Deviations from the Terms of Payment as specified in Special Conditions of Contract, are not permitted.

2. Adjustment for Deviations in the Delivery and Completion Schedule

Deviations from the Delivery and Completion Schedule specified in Section 5, Schedule of Supply (BoM), are not permitted.

3. Operating and Maintenance Costs

The total cost including Operating and Maintenance costs (O&M) **will be** taken into account for bid evaluation purposes;

4. Operation for 5 (Five) years after Completion of all the works for the Sub Project:

The sub project envisages development and Commissioning of ICT infrastructure including hardware, software, data base, training, etc all of which will be operational within 9 months of award of the contract. The successful supplier of Goods for this bid will also have to Operate and Maintain the facilities including AMC, for a duration of 5 (Five) years, as a business venture, as required by the Purchaser.

All bidders are therefore required to provide a detailed Approach, Methodology, Organ gram, SLA approach and estimated Annual Operation and Maintenance cost of the facilities.

.4 Phase III: Evaluation of Financial Bids:

The Bidder with LOWEST TOTAL COST will be declared as the preferred bidder.

In determining the lowest evaluated price, the following factors shall be considered, namely:-

- The quoted price shall be corrected for arithmetical errors;
- In case of discrepancy between the prices quoted in words and in figures, the price mentioned in words will be considered;
- Adjustments to the price quoted shall be made for deviations in the commercial conditions such as the delivery schedules and minor variations in the payment terms which are quantifiable but deemed to be non-material in the context of the particular Bid;
- The total cost including capital cost and O & M cost will be taken into account for Bid evaluation Purposes.
- JSCL may award the Contract to the successful Bidder whose bid has been determined as the most responsive bid.
- JSCL shall have the right to negotiate with the successful Bidder.
- JSCL shall have the right to make changes to the BOQ to the extent of +/- 25% of the BOQ.
- The System Integrator is obliged to include all other related items/accessories in the BOQ proposed to implement the hardware and software solutions, irrespective of the BOQ as mentioned in this document. JSCL will not pay any additional cost for this.
- The decision of JSCL shall be final and binding on all the Bidders.

.5 Quantifiable Nonconformities, Errors and Omissions.

The evaluated cost of quantifiable non conformities, errors and/or omissions is determined as follows:

“Pursuant to ITB Clause 5.4, the cost of all quantifiable nonmaterial nonconformities or omissions shall be evaluated. The Procuring Entity will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of bids.”

[For guidance: The cost of minor omissions or missing items should be added to the Bid Price to allow for bid comparison on an equal basis. The price adjustment should be based on a reasonable estimate of the cost by the executing agency, engineer, consultant or bid evaluation committee, taking into consideration the corresponding quoted prices from other conforming bids. The price adjustment may be based on the price of the item quoted by the next lowest qualified bidder].

B. Qualification Criteria:-

1. Eligibility:

	Criteria	Compliance Requirements	
		Single	Joint Venture /Consortium

	Requirement	Entity	All Partners Combined	Each Partner	One partner
i) Nationality	National / International firm	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement
ii) Conflict of Interest	No conflicts of interest in accordance with ITB Sub-clause 1.4.3	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement
iii) Debarment/ Transgression by any Procuring Entity.	Must declare	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement

2. Pending Litigation:

Pending Litigation	All pending litigation shall be treated as resolved against the Bidder and so shall in total not represent more than 50 percent of the Bidder's net worth.	Must meet requirement by itself	N/A	Must meet requirement by itself	N/A
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NOTE: CA certificate clearly mention with calculation that pending litigation in total not more than 50% of Bidder's net worth.

3. Experience:

The bidder should have experience of the following in last three financial years **(2014-15 to 2016-17)**; experience in current year shall also be counted up to deadline for submission of bid:

Criteria	Compliance Requirements			
	Single Entity	Joint Venture (permitted)		
		All Partners Combined	Each Partner	One partner
Requirement				
Sole Bidder or Consortium members should have successfully completed (as per definition given below) minimum of three projects with O & M (Completed or ongoing) in	Must meet requirement	Must meet requirement	NA	NA

<p>business area given below, at least one each from “Specific Business area” (1) and (2) AND at least one from either of business area (3) or (4);</p> <ol style="list-style-type: none"> 1) Implemented Solid waste management projects (Vehicle Tracking System/ RFID/Bin Management solution, waste management, weigh bridge management etc.) for any municipal corporation / ULBs / Govt. Departments. 2) IT Application Solutions design / API Interface design / IT implementation (Vehicle Tracking system with Route optimization & scheduling, GPS, Attendance Management, Asset Management etc) 3) Command & Control Centre / Central Operations Centre / data Centre with experience of O&M, monitoring systems with dashboard and MIS report system including its analytics. 4) E-governance (Mobile App, Solution design, Grievance management centre for e-governance & Program Management) 				
<p>Sole Bidder or Consortium members should have successfully completed projects with following cost.</p> <ol style="list-style-type: none"> 1. Implemented Solid waste management projects (Vehicle Tracking System/ RFID/Bin Management solution, waste management, weigh bridge management etc.) for any municipal corporation / ULBs / Govt. Departments of an amount of Rs.4.7 crores (single project) or Rs. 3.7 crores (Two projects) with O&M Cost. <p>AND</p> <ol style="list-style-type: none"> 2. IT Applications Solutions and API Interface design / implementation (Vehicle Tracking system with Route optimization & scheduling, GPS, Attendance Management, Asset 	<p>Must meet requirement</p>	<p>Must meet requirement</p>	<p>NA</p>	<p>NA</p>

Management etc); of an amount of Rs.5.9 crores (single project) or Rs. 4.7 crores (Two projects)				
3. Command & Control Centre / Central Operations Centre / data Centre with experience of O & M, monitoring systems with dashboard and MIS report system including its analytics. of an amount of Rs. 4.3 crores (single project) or Rs. 3.5 crores (Two project)				
4. E-governance (Mobile App, Solution design for e-governance & Program Management) ; of an amount of Rs. 1.9 crores (single project) or Rs. 1.5 crores (Two project)				

Successfully completed means-

The Bidder should furnish the following documents to substantiate his bid;

- i) *The Bidder shall submit copies of Work Orders, Completion and satisfactory performance Certificates in support of their experience claims.*
- ii) *The works which have been completed during the period mentioned above, though may have commenced earlier shall be considered for experience purposes.*

4. A. Experience in Key Activities in last three years (2014-15 to 2016-17)

Criteria	Compliance Requirements			
	Single Entity	Joint Venture (permitted)		
Requirement			All Partners Combined	Each Partner
Should have completed (as per definition given below) at least one single work order of providing end to end solution with GPS / RFID reader based vehicle tracking system <i>(including Web based software application & associated any hardwares supplied for the project including O&M)</i> with at least 500 Vehicles to Govt. / PSU/ Reputed Private sector Organization OR Should have completed (as	Must meet requirement	Must meet requirement	not applicable	not applicable

per definition given below) at least Two works of single work order of providing end to end solution with GPS / RFID reader based vehicle tracking system (including Web based software application & associated any hardwares supplied for the project including O&M) with at least 300 Vehicles to Govt. / PSU/ Reputed Private sector Organization				
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Note:

- i) The Bidder shall submit copies of Work Orders, Completion and satisfactory performance Certificates in support of their experience claims.
- ii) The works which have been completed during the period mentioned above, though may have commenced earlier, shall be considered for experience purposes.
- iii) For considering experience of the bidder, out of its experience as JV/consortium, its own works in the JV/consortium shall be considered with relevant evidence/certificates.
- iv) JV/consortium shall comprise of not more than three firms/companies. The minimum equity under JV/consortium of lead firm must be 51% and that of other firm must 20% minimum.

5. Financial: Historical Financial Performance

Criteria	Compliance Requirements			
	Single Entity	Joint Venture (permitted)		
Requirement			All Partners Combined	Lead Partner
5.1 Net Worth				
Net Worth for the Financial Year 2016-17 (from latest audited balance sheet) should be positive. (Certificate of Chartered Accountant showing calculation of Net Worth must be enclosed).	Must meet requirement	Must meet requirement	Must meet requirement	Must meet requirement
5.2 Turnover				
Average Annual Turnover from IT & ICT business for last three years (Financial Year 2014-15 to 2016-17) of sole bidder / lead partner of the JV / Consortium should be equal to or more than (1.5x cost of work/time period in years i.e. (Rs. 26 Cr) . Audited Balance Sheets	Must meet requirement	Must meet requirement	Must meet 51percent of the requirement	Must meet 20percent of the requirement

<p>of all the three financial years must be submitted in support. The calculation sheet for annual average construction turnover shall be certified by a Chartered Accountant.</p>				
<p>5.3 BID CAPACITY:</p>				
<p>Bid Capacity: The bid capacity of the bidder shall not be less than the estimated cost of the bid. The formula for calculating Bid capacity is given here</p> <p>Bid Capacity=(2xAxN)-B Where A= Maximum value of Annual Turnover from in any one year during the last four years (2012-13,13-14,14-15,15-16,16-17) (updated to present price level)</p> <p>N=Prescribed completion period of the work for which bids are invited in years,</p> <p>B= Value at present price level (2016-17) of existing commitments and ongoing works to be completed during N period i.e., the period of completion of works for which bids are invited.</p>	<p>Must meet requirement</p>	<p>Must meet requirement</p>	<p>Must meet 51percent of the requirement</p>	<p>Must meet 20 percent of the requirement</p>

NOTE:

The certificate of CA regarding Bid Capacity must be submitted otherwise bid shall not be considered. The certificate should clearly show the calculation how the Bid Capacity is calculated as per formula given in tender. The contractor should submit an undertaking on stamp paper of Rs. 500 that he has mentioned all projects necessary for calculation of B value for the calculation of Bid Capacity.

The present price level for turnover and cost of completed work of similar nature, the previous year's value shall be given weight age of 10% per year as follows:

Sr. No	Financial Year	Weight age
(i)	2016-17	1.00
(ii)	2015-16	1.00
(iii)	2014-15	1.10
(iv)	2013-14	1.21
(v)	2012-13	1.33

SECTION IV: BIDDING FORMS

Section IV: Bidding Forms

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4.9	Joint Venture Agreement
4.10	Statement for work in hand

4.1 TECHNICAL PROPOSAL [WITH REFERENCE TO SECTION III] CHECK LIST

In addition to the forms given in this section, a Technical Proposal must necessarily contain the following; otherwise the bid shall be considered incomplete and may lead to non- responsive.:

1. Notice Inviting Tender
2. CA's certificates
3. Bank's letter as required in Tender Document (if applicable).
4. Sales Tax Registration in State of Rajasthan (Optional),
5. VAT / Sales Tax Clearance Certificate
6. Service Tax Registration, if required as per law
7. Proof of payment of Bid Security
8. Proof of Cost of bidding document or receipt of such cost.
9. Proof of Bid processing fee as specified.
10. Bid capacity stipulations as required in Tender Document.
11. Completion Certificates of works which have been cited in support of fulfillment of eligibility criteria as specified in Tender Document.
12. Work orders of works which have been cited in support of fulfillment of eligibility criteria as specified in Tender Document.
13. Drawings / designs / technical documents (if required) in support of works to be executed
14. Any modifications or withdrawal.
15. Other documents considered necessary to strengthen the bid.
16. JV/consortium agreement against which experience for eligibility is claimed to demonstrate clearly the JV/ consortium members work in that JV/ consortium.
17. Check Points and Self appraisal sheet

4.2 Letter of Technical Bid

Technical Bid Submission Sheet

Date: _____ NIT No.: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No. _____
- (b) We offer to execute in conformity with the Bidding Document the following Works: _____
- (c) Our Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of _____ percent of the Contract Price or Performance Security Declaration, as the case may be, for the due performance of the Contract;
- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the eligible countries;
- (f) We are not participating, as Bidder, in more than one Bid in this bidding process, other than alternative offers, if permitted, in the Bidding Document;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers has not been debarred by the State Government or the Procuring Entity;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed;
- (i) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (j) We agree to permit Government of Rajasthan or the Procuring Entity or their representatives to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Procuring Entity;
- (k) We have paid, or will pay the following commissions, gratuities, or fees, if any, with respect to the bidding process for execution of the Contract:

Name of Recipient	Address	Reason	Amount

- (l) We declare that we have complied with and shall continue to comply with the provisions of the Code of Integrity including Conflict of Interest as specified for Bidders in the Rajasthan Transparency in Public Procurement Act, 2012, the Rajasthan Transparency in Public Procurement Rules, 2013 and this Bidding Document during this procurement process and execution of the Works as per the Contract;
- (m) Other comments, if any:

Name/ address: _____

In the capacity of: _____

Signed: _____

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

Date: _____

Tel: _____ Fax: _____

E-mail: _____

4.3 Price Schedules

The detailed BOQ is given for bidders to quote. Together the Bidder have to provide the following details as a part of the financial bid as an Annexure,

BoQ - 1

SR. No.	Item Description	Qty	Unit Base Price (Rs.)	Equipment		Installation Cost (Rs.)	Installation (Rs.)		Total Extended Price (In Rs)
				GST %	GST in Rs.		GST %	GST in Rs.	
1.01	GPRS enabled QR Code Attendance Android Device with Internet (as per specifications provided in Section V - Clause 2.1) with inclusive of all taxes complete at final installation location	91 Nos.							
1.02	Wall mounted GPS enabled Biometric Device for attendance recording with Internet and storage facility with accessories and software (as per specifications provided in Section V - Clause 2.2) with inclusive of all taxes complete at final installation location	104 Nos.							
1.03	CCTV with 2 dome & 2 Bullet Cameras, DVR, Harddisk, LED Monitors & accessories (as per specifications provided in Section V - Clause 2.3) with inclusive of all taxes complete at final installation location	36 Nos.							
1.04	UHF RFID Handheld Readers with Android Smart phone facility with internet Card (as per specifications provided in Section V - Clause 2.4) with inclusive of all taxes complete at final installation location	140 Nos.							
1.05	GPS enabled Fixed RFID readers with internet with mounting clamps and accessories + Poles for RFID Reader + UHF ID Antenna + Controller for UHF ID for Antenna(as per specifications provided in Section V - Clause 2.5) with inclusive of all taxes complete at final installation location	20 Nos.							

1.06	GPS Devices in IP 66/67 Cabinet for mounting in Vehicles for VTS (as per specifications provided in Section V - Clause 2.6) with inclusive of all taxes complete at final installation location	1146 Nos.							
1.07	Bin Level Sensors (as per specifications provided in Section V - Clause 2.7) with inclusive of all taxes complete at final installation location	172 Nos.							
1.08	PTZ Camera + Installations, cable and Accessories + Broadband Internet+ External Power Module (as per specifications provided in Section V - Clause 2.8) with inclusive of all taxes complete at final installation location	8 Sets							
1.09	Passive RFID Tag (UHF Tag) for various Vehicles, Bins, Rickshaw, tricycle, pushcart, etc for all other municipal assets for SWM (as per specifications provided in Section V - Clause 2.9) with inclusive of all taxes complete at final installation location	4150 Nos.							
1.10	Smart Android Phones with internet for vehicles to get various data/information for effective waste management (as per specifications provided in Section V - Clause 2.10) with inclusive of all taxes complete at final installation location	1000 Nos.							
1.11	Hardware for Automated Weigh Bridge Controller , along with Automatic Boom Barrier + Traffic Lights with controller + 1 CCTV Pole Mounted Camera to be connected to Central NVR through Broadband internet, (as per specifications provided in Section V - Clause 2.11) with inclusive of all taxes complete at final installation location	12 Sets							
1.12	Computer + Printer + UPS + Broadband Internet (as per specifications provided in Section V - Clause 2.12) with inclusive of all taxes complete at final installation location	108 sets							
1.13	Dash Board /Smart LED Display of 55" with cables, cabling and accessories (as per specifications provided in Section V - Clause 2.13) with inclusive of all taxes complete at final installation location	36 sets							
1.14	8 Port Video Wall Controller with cables and other accessories with Video conferencing facility (as per specifications provided in Section V - Clause 2.14) with inclusive of all taxes complete at final installation location	1 no.							
1.15	Supply, installation and commissioning of UPS and battery set for 4 Displays of 1-hour backup	1 set							
1.16	ID Card Printer (as per specifications provided in Section V - Clause 2.16) with inclusive of all taxes complete at final installation location	2 Nos							
1.17	RFID based Smart ID cards for SWM staff, NGOs , etc.	19400 Nos							

1.18	16 Port Industrial 100/1000Mbps Managed switch with two Nos. of 10G uplink ports and associated data and power cabling (Make MOXA/Rugged.com/Perle/Siemens/Schneider)	2 Nos.								
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BoQ -2

SR. No.	Item Description	Qty	Unit Base Price (Rs.)	Equipment		Installation Cost (Rs.)	Installation		Total extended price (Rs.)
				GST %	GST in Rs.		GST %	GST in Rs.	
1.21	Architect, Design, and document the overall SWM System Requirement Specifications(SRS), reports, dashboards, workflow, dataflow and access control requirements	1 No							
1.22	Design, Implement Fleet management solution with GPS, integrated with the existing VTS and create the necessary reports and dashboards	1 No							
1.23	Design and implement Weight Bridge Automation systems for multiple locations	1 No							
1.24	Design and implement VTS Route optimization application integrating inputs from Bin Level Sensors and VTS/GPS with the route available through Mobile Apps for Vehicle drivers.	1 No							

1.25	Design and Implement an RFID/GPS based asset management solution	1 No							
1.26	Design, develop, supply, installation application software for Workforce / Biometric Attendance for about 8000 persons.	1 No							
1.27	Development of SWM Mobile App and Web portal for (i) Citizens/ NGOs/RWA's for (ii) Field staff	1 No							
1.28	Development of an Integrated Call center /Grievance Management application for 8 agents	1 No							
1.29	Survey and Map Digitization of all bin locations, plants, treatment center, weighbridge, dump yard and Other SWM related point of interests	1 No							

BoQ – 3

SR. No.	Item Description	Qty	Unit Base Price (Rs.)	Equipment		Installation Cost (Rs.)	Installation		Total extended price (Rs.)
				GS T %	GS T in Rs.		GS T %	GS T in Rs.	
1.30	Integration of CCTV data with Functional Dashboard for users including application for video streaming, photo/frame transmission, storage, archival and retrieval.	1 No							
1.31	Installation of the OS, application and database software in the Servers.	1 No							
1.32	Integration of the various applications in the Central operations center with the Command and Control Centre through APIs	1 No							
1.33	Customized functional Dashboards for each ward/zone/group/executives and senior management.	1 No							
1.34	Customization of the reports required for each of the above applications, listed in the Architecture, SRS and Tender Document	1 No							
1.35	Documentation of each application software Code, workflow, SOP, Processes, SWM policies, deliverables, DFD, etc	1 No							
1.36	Operation & Maintenance Support for five years for entire SWM system including all Manpower, transportation, mobilization, and OPE.	1 No							

1.37	1yr Warranty +4 year AMC for all hardware, software, firmware, database, tools, manpower, installation, all-inclusive with taxes	1 No							
------	--	---------	--	--	--	--	--	--	--

4.3.1 Bid Security (Bank Guarantee Unconditional)*

Form of Bid Security

[insert Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: [Chief Executive Officer, JSCL, RAJSATHAN]

Date: [insert date]

BID GUARANTEE No.: [insert number]

We have been informed that **[insert name of the Bidder]** (here in after called " the Bidder") has submitted to you its bid dated **[insert date]** (herein after called" the Bid") for the execution of **[insert name of contract]** under Notice Inviting Tender No. **[insert NIT number]** ("the NIT").

Furthermore, we understand that, according to your conditions ,bids must be supported by a bid guarantee. At the request of the Bidder, we **[insert name of Bank]** here by irrevocably undertake to pay you any sum or sums not exceeding in total an amount of -----**[insert amount in figures][insert amount in words]** upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bid under is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) Has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letter of Technical Bid; or
- (b) having been notified the acceptance of its Bid by the *Procuring Entity* during the period of bid validity,
 - (i) fails or refuses to execute the Contract Agreement,
 - (ii) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders (here in after "the ITB"),
- (c) has not accepted the correction of mathematical errors in accordance with the ITB, or
- (d) has breached a provision of the Code of Integrity specified in the TB;

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

Signed: _____

[Insert signature of person whose name and capacity are shown]

NOTE: * - Scheduled Bank Only

Name: _____

[insert complete name of person signing the Bid Security]

In the capacity of: _____

[insert legal capacity of person signing the Bid Security]

Duly authorized to sign the Bid Security for and on behalf of _____

[insert name of the Bank]

Dated on _____ day of _____,

[insert date of signing]

Bank's Seal _____

[affix seal of the Bank]

[Note: In case of a Joint Venture, the Bid-Security must be in the name of all partners to the Joint Venture/Lead bidder that submits the bid.]

4.3.2 Bid Securing Declaration

Form of Bid Securing Declaration

Date: *[insert date (as day, month and year)]*

Bid No.: *[insert number of bidding process]*

Alternative No, if permitted: *[insert identification No if this is a Bid for an alternative]*

To: ***[Chief Executive Officer, JSCL, JAIPUR RAJASTHAN]***

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with you, the Procuring Entity for the period of time of ***[insert number of months or years, as required by the Procuring Entity]*** starting on ***[insert date]***, if we are in breach of our obligation(s) under the bid conditions, because we:

- (a) withdraw our Bid during the period of bid validity specified in the Letter of Bid; or
- (b) do not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of our Bid by you, the Procuring Entity, during the period of bid validity, (i) fail or refuse to sign the Contract, if required, or (ii) fail or refuse to furnish the Performance Security Declaration, in accordance with the ITB; or
- (d) breach any provisions of the Code of Integrity as specified in the ITB;

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) thirty days after the expiration of our Bid.

Signed: _____
[insert signature of person whose name and capacity are shown]

Name: _____
[insert complete name of person signing the Bid-Securing Declaration]

In the capacity of: _____
[insert legal capacity of person signing the Bid-Securing Declaration]

Duly authorized to sign the bid for and on behalf of: _____
[insert complete name of Bidder]

Dated on day of ,
[insert date of signing]

Corporate Seal _____
[affix corporate seal of the bidder]

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all partners to the Joint Venture/ Lead bidder that submits the bid.]

4.4.1 Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

4.4.1(a) Form ELI - 1: Bidder's Information Sheet

BIDDER'S INFORMATION	
Bidder's legal name	
In case of JV/ Consortium , legal name of each partner	
Bidder's /all JV/Consortium partners country of constitution.	
Bidder's /all JV/Consortium partners year of constitution	
Bidder's /all JV/Consortium partners legal address in country of constitution	
Bidder's /all JV/Consortium partners authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
<p>Attached are self attested copies of the following original documents:</p> <ol style="list-style-type: none"> 1. In case of single entity, certificate of registration/ incorporation and memorandum of association or constitution of the legal entity named above. 2. Authorization to represent the firm or JV named in above. 3. In case of JV, letter of intent to form JV or JV agreement. 4. In case of Consortium, letter of intent to form consortium. 	

4.4.2 Form ELI – 2: JV Information Sheet

Attach the Letter of Intent to form JV or certificate of registration/ incorporation and memorandum of association or constitution of the legal entity, if JV is already in existence.

Each member of a JV / consortium must fill in this form

JV /consortium/ SPECIALIST CONTRACTOR'S INFORMATION	
Bidder's legal name	
JV /consortium Partner's or Subcontractor's legal name	
JV /consortium Partner's financial share in the JV	
JV /consortium Partner's or Subcontractor's country of constitution	
JV /consortium Partner's or Subcontractor's year of constitution	
JV /consortium Partner's or Subcontractor's legal address in country of constitution	
JV /consortium Partner's or Subcontractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are attested copies of the following original documents:	
<ol style="list-style-type: none"> 1. Certificate of registration/ incorporation and memorandum of association or constitution of the legal entity named above. 2. Authorization to represent the firm named above. 	

4.4.3 Form LIT 1- Pending Litigation

Each Bidder or member of a JV / must fill in this form

Pending Litigation			
<ul style="list-style-type: none"> ○ No pending litigation in accordance with Section III (Evaluation and Qualification Criteria). ○ Pending litigation in accordance with Section III (Evaluation and Qualification Criteria) 			
Year	Matter in Dispute	Value of Pending Claim in INR	Value of Pending Claim as a Percentage of Net Worth

4.4.4 Form EXP – 1: General Experience

Each Bidder or member of a JV must fill in this form

GENERAL EXPERIENCE				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name Name and Address of Procuring Entity Brief Description of the Works Executed by the Bidder	Role of Bidder

Bidder Must

Enclose:

1. Certificate of CA mentioning the construction turnover as per relevant clause.

4.4.5 Form EXP - 2: Experience in Key Activities

Fill up one (1) form per contract

Contract with Similar Key Activities			
Contract No.of.		Contract Identification	
Award Date		Completion Date	
Total Contract Amount	-----Equivalent INR -----		
If partner in a JV or subcontractor, specify participation of total contract amount	Percent of Total	Amount	
Employer’s Name Address Telephone Number Fax Number E-mail			
Description of the key activities in accordance with Criteria.			

<p>1) Should have substantially completed (as per definition given below) completed or currently in operation at least one single work order of providing end to end solution with GPS / RFID reader based vehicle tracking system <i>(including Web based software application & any associated hardwares supplied for the project including O&M)</i> with at least 500 Vehicles to Govt. / PSU/ Reputed Private sector Organization</p> <p style="text-align: center;">OR</p> <p>Should have substantially completed (as per definition given below) completed or currently in operation at least Two works of single work order of providing end to end solution with GPS / RFID reader based vehicle tracking system <i>(including Web based software application & any associated hardwares supplied for the project including O&M)</i> with at least 300 Vehicles to Govt. / PSU/ Reputed Private sector Organization</p>	
<p>2. Should have substantially completed (as per definition given below) operated and maintained a Command & Control Centre / Central Operations Centre / data Centre with experience of monitoring systems with dashboard and MIS report system including its Analytics.</p>	
<p>Reference page No., copy of work order and completion & commissioning certificate in support of above experience:</p>	

4.4.6 Form EXP – 2(a): Specific Experience

Note: Please fill up one sheet per contract

CONTRACT OF SIMILAR SIZE AND NATURE		
Contract No.of.	Contract Identification	
Award Date		Completion Date
Role in Contract	Contractor / Management Contractor / Subcontractor	
Total Contract Amount	INR	
If partner in a JV or subcontractor, specify participation of total contract amount	Percent of Total	Amount
Procuring Entity's Name, Address, Telephone Number, Fax Number, E-mail address		

Bidder Must Enclose:
1. Work order.

2. Experience certificate as per relevant clause from an officer not below the rank of executive Engineer or Equivalent.

4.4.7 Form: Format for Assured Revolving Line of Credit Facility

(To be submitted by a Scheduled Bank on the Bank's Letter head)

Date: (Insert Date)

To: Chief Executive Officer,
JSCL, JMC Building, Pt Deendayal Upadhyay Bhawan
LalKothi, Tonk Road, Jaipur-302015

Subject: Letter of Assurance for Revolving line of credit facility for INR ----

Dear Sir,

WHEREAS _____ [name and address of Bidder] (hereinafter called the "Bidder") intends to submit a bid for----- (name of contract package) -----" under the Jaipur Smart City Limited (JSCL) (hereinafter called the "Employer") in response to the Invitation for Bids issued by the JSCL through NIB no. -----; and

WHEREAS the Bidder has requested that an assured revolving line of credit be provided to it for executing the ----- (name of contract package) -----In the event that the Contract is awarded to it; then

KNOW ALL THESE PEOPLE by these presents that We _____ [name of Bank] of _____ [name of Country] having our registered office at _____ [address of registered office] are willing to provide to _____ (the Bidder) a sum of up to _____ [amount of guarantee in figures and words] as an assured revolving line of credit for executing the Works under --- (name of contract package) -----should the Bidder be awarded the contract based on its tendered prices.

We understand that this assurance may be taken into consideration by the Employer during evaluation of the Bidder's financial capabilities, and further assure that we intend to maintain this revolving line of credit until such time as the Works are completed and taken over by the Employer.

SEALED with the Common Seal of the said Bank on the ____ day of _____, 2015 / 2016.

Date: _____ Signature of the Bank: _____

Witness: _____ Seal: _____

[Signature, name and address]

4.5 Declaration by the Bidder in compliance of Section 7 & 11 of the Act**Declaration by the Bidder/ JV**

In relation to our Bid submitted to *[enter designation and address of the procuring entity]* for procurement of *[insert name of the Works]* in response to their Notice Inviting Bids No..... Dated we hereby declare under Section 7 and 11 of the Rajasthan Transparency in Public Procurement Act, 2012, that;

1. We possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
2. We have fulfilled our obligation to pay such of the taxes payable to the Central Government or the State Government or any local authority, as specified in the Bidding Document;
3. We are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and are not the subject of legal proceedings for any of the foregoing reasons;
4. We do not have, and our directors and officers not have, been convicted of any criminal offence related to our professional conduct or the making of false statements or misrepresentations as to our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
5. We do not have a conflict of interest as specified in the Rajasthan Transparency in Public Procurement Act, the Rajasthan Transparency in Public Procurement Rules and this Bidding Document, which materially affects fair competition;
6. We have complied and shall continue to comply with the Code of Integrity as specified in the Rajasthan Transparency in Public Procurement Act, the Rajasthan Transparency in Public Procurement Rules and this Bidding Document, till completion of all our obligations under the Contract.

Date:
Place:
Designation:
Address:

Signature of Bidder
Name:

4.6 Letter of Financial Bid

Financial Bid Submission Sheet

Date: _____ NIT No.: _____

To: _____

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda No.: -

- (b) We offer to execute in conformity with the Bidding Document the following Works:

- (c) The total Price for our Bid, excluding any discount so offered, if permitted, in item below is:

- (d) The discount so offered, if permitted, and the methodologies for their application are:

- (e) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
- (f) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (g) Other comments, if any:

Name/ address: _____

In the capacity of: _____

Signed: _____

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

Date: _____

Tel: _____ Fax: _____

E-mail: _____

4.7. POWER OF ATTORNEY

Power of Attorney for Authorized Representative

The firm M/s.....authorize the following Representative to sign and submit the tender document, negotiate terms and conditions for the contract, to sign the contract, to deal with the _____, to issue and receive correspondence related to all matters of the tender "-----". We / M/s _____ undertake the responsibility due to any act of the representative appointed hear by.

For Partnership Firm's

S. No.	Name of the All Partner	Signature of Partner with Seal
1.		
2.		
3.		
4.	Name and Designation of the person Authorized	
5.	Attested Signature of the Authorized Representative	

For Limited Firm's

Name and Designation of the person Authorized	
Firm	
Address	
Telephone No.	
Fax No.	
Telex No.	
Authority By which the Powers is delegated	
Attested Signature of the Authorized Representative	
Name and Designation of person attesting the signatures	

4.9: Joint Venture Agreement (Among Two Firms)**(On Rs 1000/- Non-judicial Stamp Paper)****Memorandum of Understanding for****JOINT VENTURE**

This Memorandum of Understanding (hereinafter referred to as "MOU") is made and entered into this ----- ("Effective Date").

BETWEEN

M/s. _____, a company incorporated, and having its registered office at _____.
(Hereinafter referred to as the "**First Party**"/ "**One Partner**");

M/s. _____) a company incorporated, and having Registered office at _____.
(Hereinafter referred to as the "**Second Party**"/ "**Each Partner**");

Hereinafter jointly referred to as the "**Parties**" and individually as "**Each Party**" or "**a Party**" as the case may be.

WHEREAS,

A) JAIPUR SMART CITY LIMITED. Jaipur Rajasthan (hereinafter referred to as the JSCL or procuring entity) invited bid for

(B) The Parties hereto formed a Joint Venture or will form a joint venture (hereinafter referred to as the "**JV**") to jointly execute the above project in all respect

NOW THEREFORE IT IS HERE BY AGREED as follows

ARTICLE 1: JOINT VENTURE:

1.1. The Parties hereto agree to form the Joint Venture with _____ designated as the **One Partner and First Partner**.

1.2. _____ shall be the **Second Member – or Second Partner**

1.3. _____ shall be the **Third Member – or Third Partner** (*insert more lines if more partners*)

ARTICLE 2: JOINT VENTURE NAME:

2. The JV shall do business in the name of “ _____ **Joint Venture**”.

ARTICLE 3: JOINT AND SEVERAL LIABILITY:

3. The **Parties** hereto shall, for the above-referred **Projects**, be jointly and severally liable to the **Employer** for the execution of the **Projects** in accordance with the **Contract** till the actual completion of **Contract** including defect liability period and operation & maintenance as per bid conditions.

ARTICLE 4: PROPORTIONATE SHARE:

4.1 Each member of the Joint Venture agrees to place at the disposal of the Joint Venture, the benefit of all its experience, technical knowledge and skill, and shall in all respects bear its share of responsibility and burden of completing the contract. The parties herein shall be responsible for physical and financial distribution of work as under.

Lead Partner: Financial responsibility: -----
Physical responsibility: -----

Other Partners: Financial responsibility: -----
Physical responsibility: -----

Other Partners: Financial responsibility: -----
Physical responsibility: -----

4.2 All rights, interests, liabilities, obligations, risks, costs, expenses and pecuniary obligations and all net profits or net losses arising out of the **Contract** shall be shared or borne by the **Parties** in the above **Proportions**.

4.3 The members in the proportion as mention in article 4.1, shall contribute sufficient Initial fixed capital for timely execution of the project including commissioning & operating period as per the contract.

ARTICLE 5: JOINT EFFORT AND MANAGEMENT:

5.1 The **Parties** shall participate as a **JV** in the submission of bids and further negotiations with the **Employer** and shall co-operate and contribute their respective expertise and resources to secure and execute the **Projects**.

5.2 On award of **Projects**, the **First Partner** in consultation with the other members of **JV** will decide on the final management structure for the successful execution of the **Projects** as per the terms of **Contract**.

5.3 All the **Parties** hereby agree to pool in their financial, administrative, managerial, technical and material resources for execution of the **Projects**, including commissioning & operation for the period as stipulated in the contract. The share of interest of the **JV** shall be as per the mutual understanding for the successful completion of the project.

ARTICLE 6: EXCLUSIVITY:

6.1 The co-operation between the **Parties** hereto shall be mutually exclusive i.e. none of them shall without the other **Party's** consent & prior approval of **JSCL**, approach or cooperate with any other parties in respect of the **Project**.

6.2 In the course of working as associates, the parties to the **JV** will be sharing information with each other which may be proprietary /confidential information /knowledge acquired by each other. It is hereby agreed that the parties will maintain complete secrecy regarding such information / knowledge and will not divulge to any party for any other purpose except for the success of the joint execution of the contract. All parties will also indemnify each other against any claim that may arise out of using information, which are being claimed

proprietary.

ARTICLE 7: Memorandum of Understanding:

7.1 This **Memorandum of Understanding** shall be terminated:-

- a. if the **Parties** mutually confirm that the **JV's** bid proposal has not been finally accepted by **Employer** and all rights and obligations of the **Parties** under or in connection with this **Memorandum of Understanding** have ceased, or
- b. after successful completion of the project including commissioning & operation and defect liability period from the date of this **Memorandum of Understanding** unless extended for a further period on demand of **JSCl** & mutual consent of the Parties, or

7.2 The **Memorandum of Understanding** can be modified by mutual consent of the Parties to suit the efficient and expeditious execution of Projects including commissioning & operation of Plant or to make this agreement more meaningful to suit the requirements of Employer **after the consent of the Employer**.

ARTICLE 8: ARBITRATION:

8.1 Any dispute resulting from this Agreement shall be settled amicably by mutual Consultation by the Managing Directors/Chairman of _____ & _____. In the event that an amicable settlement is not reached within 60 days in any particular case, the dispute shall be referred to arbitration and shall be resolved in accordance with and subject to the provisions of the _____ and any statutory modifications and enactment hereof for the time being in force. The decision of the arbitrators shall be final and binding upon both parties. The venue of arbitration will be _____.

ARTICLE 9: GOVERNING LAWS:

9.1 This Agreement shall in all respects be governed by and interpreted in accordance with the _____ Laws.

ARTICLE 10: CONFIDENTIALITY:

10.1 No Party hereto shall disclose to any other party any information of a confidential nature including but not limited to trade secrets, know-how acquired from any Party in connection with the subject matter of this Agreement.

ARTICLE 11: ADDRESS OF CONSORTIUM:

Any and all correspondence from the Employer to the **JV** shall be addressed to **(name of JV)** at the address stated herein below—(any one of the partners). The address of the Consortium office of the partner companies will be deemed to be the address for the purpose of communication.

The notice, if any required to be served on the party by the other party, will be deemed to be served, if the said notice / communication is delivered by Registered Post at the respective address **(name of JV)**

ARTICLE 12: Authorized Representative:

The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.

Authorized Representative of JV: _____

ARTICLE 13: ASSIGN ABILITY:

13.1 The interests and rights of a Party in the Contract and as a Party of the Joint Venture shall not be transferable or assignable without the written consent of the Employer & other party.

ARTICLE 14: INTERPRETATION OF HEADINGS:

14. The headings of each of the Articles herein contained are inserted merely for convenience of reference and shall be ignored in the interpretation and construction of any of the provisions herein contained.

ARTICLE 15: OTHERS

15.1 Any other matters not contained in this Agreement shall be discussed and amicably agreed upon by the Parties in the spirit of mutual trust and cooperation for timely completion of project including commissioning & operation of project. Notwithstanding anything above all the Parties are severally and jointly responsible to the Employer for execution of the Contract:

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be executed by each of the duly authorized representatives as appearing below:-

Signed by)
For and on behalf of)

_____)

in the presence of:)

Name:
Designation:

Signed by)
For and on behalf of)

_____)

in the presence of:)
_____)

Name:
Designation:

Name:
Designation:

Name:
Designation:

- Similar agreement shall be done for consortium

4.10 Bidding Capacity = $2 * A * N - B$

4.10.1 STATEMENT FOR WORK IN HAND (for calculation of value of B)

This is to certify that the status of the present works in hand as on **date of publication of NIT** of order value more than Rs. 10.00 lacs for which either order are received or the work is under execution but which are still not completed is as under:

Amount in Lacs of Rupees.

S. No	Brief Description of Work	Stipulated Date of Start	Stipulated Date of Completion	Time left for execution after date of publication of NIT , in months	Cost of awarded work	Cost of work executed up to date of publication of NIT	Balance Cost of un-executed work as on date of publication of NIT in 30 month from and date of submission
1	2	3	4	5	6	7	8=6-7

1. If the value of Balance work goes beyond 30 months from the date of bid submission then client certificate mentioning the amount of work to be executed beyond 30 months, otherwise full balance work shall be accounted for calculation of 'B' value.

2. This is certified that this is true in all respect and can be used for calculation of the bidding capacity as per the formula given in ITB. This is also certified that other orders under execution by the firm shall not materially affect the bidding capacity of the firm as required in this tender. (Format should be on Rs 500/= stamp paper)

Signatures With Seal of Authorized Signatory for tender

Section-V:

Procuring Entity's Requirements

1. Development, Operation & Maintenance of Smart Digital solutions for Solid Waste Management Systems in Pan City area of Jaipur

1.1 Project Background

The Jaipur Smart City proposal on Digital solution for Solid Waste Management was reviewed by the PMC and the detailed technical solutions and scope of work is prepared and presented to Jaipur Municipal Corporation (JMC) officials. The recommendations of JMC are incorporated in the final RFP. The proposed Digital solution on SWM covers for entire Pancity area of Jaipur. These solutions are integrated to improve the Swachh Survekshan ranking of Jaipur. This document underlines all ICT and IT related requirements to achieve effective SWM monitoring systems through a highly automated, effective and stable solution for Jaipur City.

1.2 Need for the Project

Jaipur Municipal Region had a population of 30.73 lakhs in 2011 which is projected to grow to 81.1 lakhs in 2031. Presently Jaipur city generates about 1340 Tons per day of garbage and only 1300 TPD are being collected at present. 600 TPD waste are being processed and 700 TPD are directly being disposed at open dumpsite. Jaipur ranks 215 out of 434 cities on Swachh Survekshan 2017 ranking. 58% of International Tourists surveyed reported Jaipur as dirty (2011). 13.76% of Jaipur people reported that Jaipur has SWM issues during citizen engagement during preparation of Smart city project proposal. The current challenges in addressing SWM issues in Jaipur are furnished below;

1. Difficulty in monitoring actual pick up of waste from bins
2. Scheduling of vehicles for clearance of bins
3. Scheduling of vehicles for pickup of waste from filled up/overflowing bins
4. No control whether collected garbage is properly transferred to transfer point and to weighbridge for ascertaining the weight of waste collected
5. No visibility on bin overflow
6. No information of weight of garbage transferred
7. Tracking attendance of drivers / field staff on duty on a particular day
8. Coordination among stakeholders for bin clearing & garbage disposal priorities
9. Inadequate Complaints management system , Help desk and Grievance redressal.

Therefore the need of the project is well justified to achieve “Zero Waste City” by

- Ensuring 100% coverage of Primary waste collection activity through Door to Door Collection system,
- Instill operational discipline through monitoring / digital solutions
- Enhance service standards
- Involve citizens in the monitoring process and empower them to do so by digital solutions
- Improving Jaipur’s image to achieve top ranking (Swachh Surveykshan) by making public spaces clean and hygienic

Presently Jaipur Nagar Nigam (JNN) is managing various SWM activities. JNN had initiated positive steps by privatisation of Door to Door Collection system for garbage collection by engaging M/s BVG, Pune. Also, Vehicle Tracking system (VTS) is implemented in all vehicles. Compost Plant is being operated by M/s ILFS, RDF plant is being operated by M/s Ultratech and tenders have been awarded for Waste to Energy and construction/rehabilitation of Landfill. JMC has further shown interest to manage SWM in a more transparent way. Therefore the current project titled “Smart Digital Solution for SWM in Pan City areas of Jaipur” is required to meet JMC’s vision to achieve Zero Waste City.

1.3 Objective of the Project

The broad objective of this project is to improve the efficiency of Solid waste management for Jaipur by implementation of reliable Smart digital solutions to monitor, track, operate and manage various SWM tasks through citizen empowerment in segregation and Door to Door collection thereby reduce/.resolve the customer complaints with positive feedback mechanism.

The objective is focused to achieve Digitization of Solid Waste management by

- Ensuring 100% coverage of Primary waste collection activity through Door to Door Collection system,
- Segregation of waste at source,
- Increasing recyclability and end of pipe treatment capability
- Instill operational discipline through monitoring / digital solutions
- Enhance service standards
- Involve citizens in the monitoring process and empower them to do so by digital solutions
- Improve Jaipur's image by making public spaces clean and hygienic
- Provide adequate waste processing system in place and
- Scientific disposal facility.

1.3.1 Ensuring 100 % Coverage of Door to Door Collection System

Jaipur Municipal Corporation has engaged M/s BVG, Pune for Door to Door Collection and has commenced in eight wards. This initiative is planned to achieve “Zero Waste City” by ensuring 100% coverage of Primary waste collection activity. This Door to Door Collection system being part of Convergence program of Jaipur Smart City Project and further extends its focus in building an effective monitoring system by incorporating digital solutions. Therefore the following interventions are proposed by JMC in the Smart City Project.

1.3.2 Implementation of efficient monitoring systems for waste collection and street cleaning operations:

The JMC's Vision under Smart City project shall ensure 100% of wards equipped with biometric attendance system for field staff. The Smart City shall empower citizens through digital solutions & Mohalla Nigrani Samithi for effective garbage collection system. The Smart City project shall formalize informal sector of rag-pickers, kabaddiwallas, and recyclers to promote waste segregation at source.

1.3.3 Implementation of fleet& asset management system

The Smart City project shall integrate existing vehicle tracking systems, Vehicle scheduling, depot asset management.

1.3.4 Deployment of SWM operations centre systems & asset management systems

The Smart City project shall ensure integration of various SWM systems by operationalizing, monitoring and coordination with multiple SWM agencies through Command and Control system indicating SLBs, KPI's and Swachh Sarvekshan Ranking (MoUD's Guide Book on Swachh Sarvekshan 2017) parameters on daily basis for SWM vehicles, bins, weigh- scales compost plant, RDF plant, landfill, Collection / Transport operators.

1.4 Key Performance Improvements Expected

- To manage routes of vehicles dynamically through an automated VTS system.
- Real time information of missed garbage collection points.
- Real time monitoring and prompt management of waste collection bins.
- Route optimization can be done which will help in reduction of trip time, fuel saving and serving more locations.
- To reduce the human intervention in monitoring process.
- To keep history of vehicle routes, attended sites and other details.
- To integrate the dumping ground and transfer station facilities with the centralized locations.
- To ensure complete coverage of door to door and community collections.
- Reporting of vehicles, garbage collected and other details to higher authorities from any location at any time through BI tools.
- Making waste collection within city seamless and more efficient (safer, less polluting, economical, better informed travel)
- Improved and scientific decision making
- Deliver accurate real time information about services
- Integration with existing systems VTS and infrastructure
- Improved communication between operations staff and management resulting in coordinated and managed service environment

1.5 Benefits expected from the Digitization process

- Improve per vehicle productivity & reduce noncompliance through monitoring of the vehicle in real time
- Capturing exact current location through data on latitudes, longitudes of Stoppages, Routes and parking yards
- Geocoding and Geo-fencing of Stoppages, Routes and parking yards
- Route optimization and planning of garbage trucks.
- Quick maintenance of vehicles under breakdown and maintenance.
- Efficient monitoring and clearance of waste bins.
- Reduction of human factor from SWM process starting from collection to billing and disposal.
- Prevention & control of the misuse of manual system and Induction of transparency and accountability in operations.
- Reduction of trip time, fuel saving and serving more locations through route optimization

- Monitoring and quick decision making through MIS generated by the data
- Empowering the end beneficiary through use of Mobile applications, complaint and grievance cell
- Centralized Command and Control Center for waste collection and transportation.

1.6 Scope of Work for SWM Digital Solution:

The scope of work for proposed Smart SWM Digital solutions for Jaipur shall address various challenges/issues by the selected SI. The broad solutions include fleet management, asset management, attendance management, monitoring of level sensor bins and monitoring of Door to Door collection spread across the city of Jaipur. The broad scope of work are as follows;

- (1) Supplying, installing, commissioning of various hardware, devices, equipment's for smart Solid Waste Management (SWM) digital solutions
- (2) Design, development, supply, integration and installation of various application software for total SWM digital solution for Jaipur
- (3) Establishment and operation of NOC.
- (4) Operation & Maintenance of SWM Control Cell for five years
- (5) Annual Maintenance Contract (1-yearWarranty +4 yrs. AMC).

The SI shall design, supply, install and implement Web based tracking and monitoring system of GPS and RFID system combined with existing VTS and integration with Central Command & Control Center. The SI shall deliver the post implementation support for Operation and Maintenance of sensors, software, hardware and networks components required for providing the services. The scope is defined with following SWM digital applications broad capabilities;

- Real Time Fleet Operation Monitoring is possible
- Reduction in complaint being registered through monitoring and managing overlooked garbage collection points
- Reduction in intentional route duplication attempts
- Real time garbage collection information for each route as well as each vehicle
- Live Monitoring and control of Complaints being served
- Fleet Service Management and Optimization of planning level
- Increase in Service Reliability, Accuracy and Safety
- Higher visibility over garbage collection operations
- Increase in Citizen satisfaction by efficient garbage collection process
- Contractor Performance Evaluation can be done
- Elimination of contractor's fake billing payments issues / Billing verification has become possible.

The Smart Digital solutions include following layers; Hardware Layer, Services Layer,

Software Platform Layer, Reporting and Analytics Layer The primary scope of work will include End-to-End Solution to implement and to provide Support Services & Maintenance.

1. SI to carryout implementation of Geocoding of Point of Interest (POI) in consultation with Stakeholders for tracking Door to Door Collection system, open garbage points and community Bins.
2. Supply and installation of GPS Tracking units, RFID tags and reader for Vehicle and Asset Monitoring System.
3. Implementation of “Bin Level Sensors and Bin Monitoring System”
4. Implementation of Weight Automation System
5. Implementation of Workforce Management system through Biometric and QR code attendance
6. Supply of necessary hardware / software and their installation, configuration Implementation of the IT solution
7. Sizing of Hardware, software and network devices required in the data Centers for using the Integrated SWM. Optionally hosting of application on Cloud with associated costs should be provided
8. Design, Development, Supply, and Deployment & Implementation of Web Based Application software integrated with GPS, RFID devices, weighbridge application, VTMS, Treatment & disposal facilities, and complaint management modules.
9. Testing and commissioning of the solution or necessary hardware
10. Monitoring of the usage, comprehensive maintenance for the period of 5 years post successful Go Live, SI shall maintain the sufficient spares to ensure 24 x 7 uptime.
11. Maintenance of all devices and after warranty period including the replacement of devices in cases of damage, new vehicle or any other change.
12. Maintenance of web based application for Integrated SWM., during and after warranty period.
13. Imparting Training & Capacity Building Programs/ Workshops for all staff regarding operation of new digital devices and its features for speedy actions in SWM processes. The Training Team shall
14. Development of Mobile Application for workforce and citizens in both language (Hindi & English) versions as per the requirements of JMC.
15. Vehicle maintenance (preventive and breakdown) history management.

The Digital solution should use latest GPS & RFID technology for real time tracking and monitoring of operational vehicles at garbage collection process throughout city.

1. Design and document the overall operational architecture of the Solid Waste Management showing the data flow from various sensors and devices to the application servers , database and subsequently to the display subsystems and operations consoles .
2. Integrate the GPS data from the JMC VTS application with the BVG VTS application to provide a seamless VTS solution for monitoring the entire fleet of

- vehicles with. Integrate this VTS system with the available Map and GIS Map if provided by RISL
3. Install the RFID tags and Readers, Level sensors, handheld bio-metric readers with GPRS with the supporting accessories in the designated locations as per the design document . The GPS units for vehicle tracking should operate in GPRS , but should be able to fall back to the SMS Mode in case GPRS fails .
 4. Discuss and finalize the application system requirement specifications with the stake holders for the following application subsystems :
 - a. Vehicle Tracking System application, Web Portal
 - b. Attendance recording application
 - c. Weighbridge Integration and related application
 - d. Map Integration software application
 - e. Business intelligence application(optional)
 - f. Mobile application Citizen and Field personnel for integrating the above applications
 5. Customize the applications to take care of the Function Requirement Specification (FRS) and System Requirement Specifications (SRS) if the application is already available as a package including their integration.
 6. Install the application and database software in the Servers allotted for the same in the data center of DoIT, configure the same to suit the needs of the stake holders.
 7. The bidder should be responsible for integrating this application with the Smart Command and Control Centre through appropriate APIs (Application Programming Interfaces)
 8. Demonstrate the accuracy, completeness and authenticity of real time operations and tracking for all the applications listed above.
 9. Customize the reports required for each of the above applications, listed later in this document and those identified during the implementation phase. The SI shall develop any other format identified by JSCL/JMC during the implementation phase. The changes if any required in the format shall be approved/provided by the JSCL during O & M phase.
 10. Do necessary documentation for the application, prepare operational RUN books and Standard operating process for the entire operations management. Operational Acceptance shall commence on the system, once the system is commissioned to a period of maximum 30 days. Operational Acceptance will only be provided after the following activities are completed:

- Verification of installation & commissioning of devices (RFID Readers, RFID Tags, BLS).
 - Verification of all the number of bins and its unique RFID tag been read by all the trucks having handheld RFID readers.
 - Verification of all the data feeds from weigh bridge (waste to energy plant)
 - Staff attendance reports
 - The service provider will have to facilitate the operational acceptance tests. Operational acceptance tests will be performed by JSCL;
 - After the Operational Acceptance has occurred, the implementing agency may give a notice to CEO,/Project Engineer of JSCL concerned departments requesting the issue of an Operational Acceptance Certificate. Within 30 days after receipt of the implementing agency's notice, the CEO shall issue an Operational Acceptance Certificate; or notify the implementing agency in writing of any deficiencies or other reason for the failure of the Operational Acceptance Tests;
11. Provide necessary manpower to administer, support staff, to maintain and support, update the applications 24x7 (2 shifts) for a period of 5 years from Final Acceptance of the integrated system.
12. Provide O & M support for all Waste Management Components, sensors , applications and operations for a period of 5 years post the Final acceptance test . All GPRS and SMS costs should be borne by the System Integrator.
13. Providing Citizen Grievance Redressal Management System, website and mobile application. To set up a single access point for replying citizen's grievances received through any of the communication mode viz. online portal, mobile application, E-mail, Manually on paper, social media and on call center number. This grievance system will act as a Centralized Citizen's Grievance Redressal Management System for all the grievances

The systems implemented should be capable of supporting the following activities:

Door to Door Collection	<input type="checkbox"/> Visual monitoring of routes being followed by vehicles <input type="checkbox"/> Report in case of points missed and area served <input type="checkbox"/> Tracking route repetition <input type="checkbox"/> Unwanted Idle time/Stoppage monitoring
Storage Bin Collection	<input type="checkbox"/> Efficient monitoring and management of waste collection bins <input type="checkbox"/> Identify deviations in operations
Other Municipal Services related Collection	<ul style="list-style-type: none"> • Monitoring of C & D waste collection vehicles, • Monitoring of Shifting of live and dead animals lifting Vehicles,
Fleet Status Monitoring	<input type="checkbox"/> Vehicle travel history record <input type="checkbox"/> Monitoring& Control of route violation <input type="checkbox"/> Elimination of Manual, error-prone data collection process

	<input type="checkbox"/> Need for real-time verification of what/when/where of the service has been stopped <input type="checkbox"/> Transparency in Association of Zone-Ward and Zone-Vehicles
Real time management of missed collection points	<input type="checkbox"/> Monitor and map all vehicles with real time recording of data. <input type="checkbox"/> Alert in case of missed points <input type="checkbox"/> Generate an alert if unauthorized movement occurs
Integration with Weighing System	<input type="checkbox"/> Real-time weighing details from transfer station, waste processing/treatment and disposal site <input type="checkbox"/> Per vehicle garbage collection details
Contractor Payment Issues for rented fleet	<input type="checkbox"/> Vehicle wise distance travelled <input type="checkbox"/> Weight of garbage collected per vehicle at every turn/trip <input type="checkbox"/> Optimize Capability of determining the real cost of waste transporting and disposal <input type="checkbox"/> Automatic Billing system for vendors.
Mandatory H/W for Real time monitoring of Solid Waste Collection Process	<input type="checkbox"/> All garbage collecting & transferring vehicles need to be fitted with GPS devices and RFID Tags. <input type="checkbox"/> All Container Bins need to be fitted with RFID Tags. <input type="checkbox"/> RFID Readers at strategic location such as Key Entry/Exit Points, Parking Areas, Waste Transfer Stations, Regional/Zonal Offices, Weighbridges, Dump Site and Waste Recycling Plants.

1.7 Summary of Hardware and Application Software under the Scope of Work

Sl. No.	Item Description (Hardware items)	Quantity	Location
1.01	GPRS enabled QR Code Attendance Android Device with SIM (as per specifications provided in Section V - Clause 2.1) with inclusive of all taxes complete at final installation location	91 Nos.	For field staff attendance by the Sanitary Supervisor in all 91 Ward
1.02	Wall mounted GPS enabled Biometric Device for attendance recording with SIM and storage accessories with software (as per specifications provided in Section V - Clause 2.2) with inclusive of all taxes complete at final installation location	104 Nos.	For Attendance at all ward office , Garage/Transfer Stations/All Treatment Plant , Disposal site
1.03	CCTV Bullet Cameras (as per specifications provided in Section V - Clause 2.3) with inclusive of all taxes complete at final installation location	36 Nos.	Garage/Transfer Stations/All waste Treatment plants and processing Plants , Disposal site
1.04	UHF RFID Handheld Readers with Android Smart phone facility with SIM Card (as per specifications provided in Section V - Clause 2.4) with inclusive of all taxes complete at final installation location	140 Nos.	For Larger Vehicles Refuse Compactor Vehicles / Trucks which receives
1.05	GPS enabled Fixed RFID readers with SIM with mounting clamps and accessories + Poles for RFID Reader + UHF ID Antenna + Controller for UHF ID for Antenna(as per specifications provided in Section V - Clause 2.5) with inclusive of all taxes complete at final installation location	20 Nos.	Garage/Transfer Stations/All Treatment Plant , Disposal site, All sanitation vehicles of JMC

1.06	GPS Devices in IP 66/67 Cabinet for mounting in Vehicles for VTS (as per specifications provided in Section V - Clause 2.6) with inclusive of all taxes complete at final installation location	1146 Nos.	For all the vehicles JNN and Private
1.07	Bin Level Sensors (as per specifications provided in Section V - Clause 2.7) with inclusive of all taxes complete at final installation location	172 Nos.	JNN's Metallic Containers /Bins in the ABD area
1.08	PTZ Camera + Installations, cable and Accessories + Broadband Internet+ External Power Module (as per specifications provided in Section V - Clause 2.8) with inclusive of all taxes complete at final installation location	8 Sets	All Weigh Bridge locations
1.09	RFID Tag (UHF Tag) for various Vehicles, Bins, Rickshaw, tricycle, pushcart, etc for all other municipal assets for SWM (as per specifications provided in Section V - Clause 2.9) with inclusive of all taxes complete at final installation location	4150 Nos.	All Municipal assets are RFID tagged and registered
1.10	Smart Android Phones with SIM for vehicles to get various data/information for effective waste management (as per specifications provided in Section V - Clause 2.10) with inclusive of all taxes complete at final installation location	1000 Nos.	For All Sanitation vehicles and Selected NGOs
1.11	Hardware for Automated Weigh Bridge Controller , along with Automatic Boom Barrier + Traffic Lights with controller + 1 CCTV Pole Mounted Camera to be connected to Central NVR through Broadband internet, (as per specifications provided in Section V - Clause 2.11) with inclusive of all taxes complete at final installation location	12 Sets	All Weigh Bridge Locations
1.12	Computer + Printer + UPS + Broadband Internet (as per specifications provided in Section V - Clause 2.12) with inclusive of all taxes complete at final installation location	108 sets	All Ward Offices, SWM Control Room, Garage, Transfer Station
1.13	Dash Board /Smart of 55" LED Display with cables, cabling and accessories (as per specifications provided in Section V - Clause 2.13) with inclusive of all taxes complete at final installation location	36 sets	Commissioner, Deputy Commissioners (Health), CE/SE/EE (Five Garages), All eight Zones of JMC, SWM Control Center / Smart City Project Office.
1.14	8 Port Video Wall Controller with cables and other accessories with Video conferencing facility (as per specifications provided in Section V - Clause 2.14) with inclusive of all taxes complete at final installation location	1 no.	For SWM Control Room
1.15	Supply, installation and commissioning of UPS and battery set for 4 Displays of 1 hour backup	1 set	For SWM Control Room
1.16	ID Card Printer(as per specifications provided in Section V - Clause 2.16) with inclusive of all taxes complete at final installation location	10 Nos	For printing of ID cards of employees. at JNN office

1.17	RFID based Smart ID cards for SWM staff , NGOs , etc.	19400 Nos	Issuing ID cards to all Sanitation Staffs (JMC & Private), Resident Welfare Committee / Mohalla Nigrani Samithi and NGOs
1.18	16 Port Industrial 100/1000Mbps Managed switch with two nos of 10G uplink ports and associated data and power cabling (Make MOXA/Rugged.com/Perle/Siemens/Schneider)	2 Nos.	
1.19	Broadband Routers 802.1 a/b/g/n with Dual antenna n 4 nos unmanaged switch ports operating at 2,4Ghz , with associated data and power cabling	100 nos.	
1.20	Fixing of Dashboard, Wall mounted Biometric system, etc. with clamps, fixtures, and power connection switches, cabling, data cabling, etc. as required to deliver the complete solution, with the required functionality , performance and accuracy .	305 Nos.	Commissioner, Deputy Commissioners (Health), CE/SE/EE (Five Garages), All eight Zones of JMC, SWM Control Center / Smart City Project Office, Ward Offices

1.21	Architect, Design, and document the overall SWM System requirement Specifications(SRS), reports, dashboards, workflow, dataflow and access control requirements	1	No
1.22	Design, Implement Fleet management solution with GPS, integrated with the existing VTS and create the necessary reports and dashboards	1	No
1.23	Design and implement Weight Bridge Automation systems for multiple locations	1	No
1.24	Design and implement VTS Route optimisation application integrating inputs from Bin Level Sensors and VTS/GPS with the route available through Mobile Apps for Vehicle drivers .	1	No
1.25	Design and Implement an RFID/GPS based asset management solution	1	No
1.26	Design, develop, supply, installation application software for Workforce / Biometric Attendance for about 8000 persons.	1	No
1.27	Development of SWM Mobile App and Web portal for (i) Citizens/ NGOs/RWA's for (ii) Field staff	1	No
1.28	Development of an Integrated Call centre /Grievance Management application for 8 agents	1	No

1.29	Survey and Map Digitization of all bin locations, plants, treatment centre, weighbridge, dump yard and Other SWM related point of interests	1	No
1.30	Integration of CCTV data with Functional Dashboard for users including application for video streaming, photo/frame transmission, storage, archival and retrieval .	1	No
1.31	Installation of the OS , application and database software in the Servers.	1	No
1.32	Integration of the various applications in the Central operations centre with the Command and Control Centre through APIs	1	No
1.33	Customized functional Dashboards for each ward/zone/group/excecutive and senior management .	1	No
1.34	Customization of the reports required for each of the above applications, listed in the Architecture, SRS and Tender Document	1	No
1.35	Documentation of each application software Code, workflow, SOP , Processes, SWM policies, deliverables, DFD , etc	1	No
1.36	Operation & Maintenance Support for five years for entire SWM system including all Manpower , transportation , mobilization, and OPE.	1	No
1.37	1yr Warranty +4 year AMC for all hardware, software, firmware, database, tools , manpower, installation , all inclusive with taxes	1	No

NOTE (2): All the software applications for SWM will be hosted in a facility where all the IT infrastructure will be provided by the State Government of Rajasthan. These software's and applications will not be hosted in a cloud and the bid should not include the cost of cloud hosting.

1.8 Dashboard

The System Integrator shall supply and install 36 numbers of commercial Smart 55 inch LED TV/Dash board. The SI shall design Dashboard Module which provides a quick and easy view of following information;

- The dashboard to provide data on workforce management through biometric attendance of Street sweeping employees/Drivers/Helpers/Supervisors/ Inspectors etc. (both Contract/ Permanent) .For field based employees, an ICT system wherein attendance can be recorded remotely shall be deployed. The attendance system shall also be linked to the time sheets of the employees.
- Street Sweeping status shall be available in real-time on dashboard.
- The dashboard to provide data on overall fleet status on real time basis (delay/right time). There shall be provision to see a particular vehicle on map.
- Feeder Point/Bins clearance reporting shall be available in real-time on dashboard.
- The dashboard to provide data on total quantity of garbage transported to various treatment and disposal sites, waste to energy plant as well as energy produced by the waste.
- Creating buffers along the emergency site, working site.
- Dash board to provide Area information (Zone / Ward / Colony / Society), Population details , Volume of the Solid waste which includes Wet & Dry waste (Recycled & Non Recycled)
- Citizen complaint data shall be available to city municipal stakeholders and citizens transparently through a web dashboard.
- Dashboard to indicate all KPIs/ SLAs
- The dashboard to provide data on Ward/Zone wise area coverage of Door to Door households collections shall be available in real-time with percentage coverage on Daily, weekly, monthly with Target, Achieved and Balance (TAB) mode.
- The dashboard to provide data on Ward/Zone wise collection efficiency of Door to Door households collections shall be available in real-time with percentage of households covered on Daily, weekly, monthly with Target, Achieved and Balance (TAB) mode.
- The dashboard to provide data on Ward/Zone wise percentage of Waste segregation shall be available in real-time with percentage of households on Daily, weekly, monthly with Target, Achieved and Balance (TAB) mode.
- The dashboard to provide data on Ward/Zone wise waste recovery of recyclable waste shall be available in real-time with percentage of recovery on Daily, weekly, monthly with Target, Achieved and Balance (TAB) mode.
- The dashboard to provide data on Scientific disposal, efficiency in grievance redressal, cost recovery of all operating expenses, efficiency in collection of user charges to meet MoUD's SLBs and Swachh Survekshan Guidelines
- Dash board to remind/ indicate on resources required for achieving the set target.
- To generate crux & summaries report (efficient dash board/top most defaulters/best performer/deviations etc.) and also report for group of machines, categorized.

1.9 Workforce Management

The JMC's Vision under Smart City project shall ensure 100% of wards equipped with biometric attendance system for field staff and other staff by recording about 8000 persons. The scope of work of SI shall include supply, Install, Operation and Maintenance of GPS/GPRS enabled

(1) Handheld QR Code Scanner Device – 91 nos. and

(2) Wall mounted Biometric Device – 104 nos. for field staff monitoring of SWM Work force Management

- including battery backup of at least 8 hours must be provided,
- data connectivity through GSM/GPRS,

in case of network failure of GPRS option to communicate through GSM shall be provided for JMC's Supervisor (Jamadaar). The SI shall Design, develop, supply, install of an application software for Workforce / Biometric Attendance recording system covering about 8000 persons with various bifurcations of Street sweeping employees/Drivers/Helpers/ Supervisors / Inspectors etc. (both Contract/ Permanent) . For field based employees, an ICT system wherein attendance can be recorded remotely shall be deployed. The attendance system shall also be linked to the time sheets of the employees. The software solution shall provide flexibility for changes if any made during operation.

1.10 RFID based Waste Collection System

The Door to Door waste collection vehicles and other vehicles shall be provided with RFID tags. RFID readers installed on large vehicles like compactors, big truck, large loaders will identify the RFID tags installed in the each of the collection vehicles and Bins and read the details. The information pertaining to the collection of the garbage and the garbage bins being covered will be sent to the central server for creating the reports about the bins covered by the garbage collection vehicles giving the identification code of each bin being covered. The SI shall design, develop, install, commission and operate **GPS/GPRS enabled RFID based Automatic Vehicle Tracking System solution for real time Vehicle Monitoring, Route tracking for both Garbage Vehicles and Level Sensor Bins Monitoring** services with necessary Software and hardware. The System Integrator (SI) shall provide end-to-end solution including supply of RFID Readers mounted over large vehicles and mounted on poles for fixed location. The RFID readers shall be tamper proof. The reader shall also generate notifications in case of any tampering activity. The readers shall be installed in the vehicle such that the garbage bins are at the minimum distance at the time of garbage lifting. The location of the fitting of RFID readers shall be finalized only after consultation and proper approval of the JMC officials. The SI shall design, develop GPS Based Application software (Vehicle Tracking System) integrated with existing GPS, and proposed RFID devices on server side for monitoring of Vehicle movement, route tracking and generation of GIS based MIS reports as per formats requested by the authorities.

1.11 RFID based Municipal Asset Tracking

The various municipal assets are RFID tagged and registered to identify each object associated with the tag. Each tag will contain a unique identification code. This will help in the tracking of the bins individually. The SI shall Supply, Install, Operation and Maintenance of 4150 numbers of RFID Tags for Asset Tracking system for all Municipal assets namely various types of Bins, various types of vehicles, etc. The SI shall Design, develop, supply, install of an application software for Asset tracking & Management systems. The software solution shall provide flexibility for changes if any made during operation. The RFID tags shall be installed on the bins with screw rivets or any other equivalent strong method without damaging the garbage bin. However other suggestions from the selected bidder can be considered for installation method if the suggested method / approach help in creating no damage of the bin and avoids tampering / stealing of RFID tags from the bins. The RFID tags shall be fixed on the garbage bins in such a way that the RFID reader in the garbage vehicle reads the RFID tag with a minimum distance at the time of lifting the garbage.

1.12 Level Sensor Bin monitoring

The SI shall supply, install, Operation and Maintenance of Wireless Level Sensors for of Smart Bins in ABD area with Direct 2G/3G

The solution architecture is as follows;

- All sensors installed at various Bins in ABD areas shall send data to central server through Central SWM Operations & Monitoring Center at JMC. This Center shall filter out the local data and send useful data at central server for further action.
- Based on the level status of bins nearby bin lifting vehicle should be getting notification for garbage lifting location.
- Once garbage in Bin at threshold level the sensor should send an alert to the system with bins geo location and identity. Based on the alert received at system, system should look for nearby vehicle and based on that data the notification for Bin lifting should be send to garbage bin lifting vehicle.
- Vehicle should reach at the defined location as per the system and Empty the Bin and place it again at the same place.

1.13 Weight Automation Systems for Waste Quantification

The JMC had installed weigh bridges at various localities in the city for weighing the quantity of garbage. Presently the manual system of recording the quantity exists. It is now proposed to provide weigh meters managing SWM shall be made operational and connected to the C&CC for real time updates on vehicles entering and exiting the facilities, vehicle details, waste source details and weight details. Surveillance camera shall monitor proper weighment operations with 90 days backup. The weigh bridge shall be completely automated with computers, displays, audio alarms etc. as provided in specification. The SI shall Design, develop, install, commission and operate Weight Automation Systems at 12 locations to record the tonnage of garbage transported to the treatment & disposal site. Providing and installing of CCTV with Camera Indoor Dome with POE, 2 bullet camera, 4ch DVR, 2TB Hard Disk, 18.1 inch Monitor, cable, connector, Server based 8 Port NVR. The cameras would be pole mounted. CCTV providing snap shots on regular interval of 15 minutes and upload to internet. This system shall be provided with an application software to enable the data on tonnage of garbage transported shall be available on Dash Board and MIS reports/records on a daily basis. This shall include records of various waste streams from the weigh bridges or record of number of trips to processing/disposal site through various vehicles.

1.14 MIS Report System

The SI shall develop an Integrated MIS based report indicating the efficiency level, defaults, Penalty to be levied, Bills to be paid, Additional Manpower/ Machineries to be mobilized etc. to strengthen the decision making process. The SI shall design the following minimum MIS report systems;

- Monitor the deployment of pickup trucks and personnel based on the schedule originally drawn.
- Info on the use of Transfer Stations
- How much garbage collected, transported, processed and landfilled.
- Door to door collection, ward wise
- Dashboard for all activities
- Reports of Ward Wise Weight Reports.

- Compost/Energy production report
- MIS report shall address the various statutory requirements of MoUD's KPI's, Swachh Survekshan Guidelines
- Any other custom report as per departmental advise from time to time.

1.15 Citizen Empowerment through Mobile App

Design & development of Mobile App for

(1) Registration of Resident Welfare Association/ Mohalla Nigrani Samiti/ NGOs to participate in Swachh Bharat Mission and playing very positive role in keeping their locality clean and empowerment of citizens for attaining Swachh Jaipur;

(2) Designing of Monitoring APP for designated officials / field staff for Real time monitoring of vehicles; Trip Reports & Vehicle Day Summary and integration with Citizen App to report on grievances along with feedback system. The App shall be developed both in Hindi and English;

(3) Development of SWM App for Citizens/ NGOs/RWA's & websites for registering Grievances. Indicating complaint number, task assignment & completion loop, taking mobile photo displaying date, time, Feedback from GRC System, website and mobile application.

(4) To set up a single access point for replying citizen's grievances received through any of the communication mode viz. online portal, mobile application, E-mail, Manually on paper, social media and on call center number. The software solution should provide flexibility for changes if any made during operation.

1.16 Issuing QR Code and Photo based Identity Card

The SWM workforce shall be provided with 19,400 numbers of QR Code AND Photo ID cards and are monitored for their functional area. Similarly, the ID cards are issued to Resident Welfare Committees/Mohalla Nigraani Samithis an NGO's, etc.

1.17 Integration of Existing Vehicle Tracking System (VTS) with Final Fleet Management System

The SI shall integrate the existing VTU systems that are deployed by other vendors for garbage collection operation vehicles. VTS application to provide a seamless VTS solution for monitoring the entire fleet of vehicles with. Integrate this VTS system with the Map and GIS Map provided by RISL Vehicle telematics information is pushed into vehicle tracking module of solid waste management application. The SI shall coordinate with existing vendor and JMC to integrate the solution to Central SWM Operation & Monitoring Center. The SI shall design, develop, customization, integration, installation of an application software for Monitoring of existing GPS based Fleet Management System for all Primary Collection &

Secondary Transportation vehicle (Including Platform Licenses like OS ,DB , Web Server etc.) to integrate the existing GPS based Vehicle Tracking system with the GIS Map provided by RISL along with web portal. The SI shall also develop an Application software for Map Integration software application. The software solution should provide flexibility for changes if any made during operation.

1.18 Central SWM Operation & Monitoring Center

The office space for housing Central SWM Operation & Monitoring Center shall be in the premises of Jaipur Nagar Nigam. The various infrastructure requirements and interiors along with required furniture shall be provided by JSCL. The successful SI shall provide list with details on the requirement for the same along with the plan indicating electrical points, network cable details, AC, etc. long with the drawing. The Proposed manpower is given below:

Sr. No	Designation/Item	Nos
1	Project Manager, (10 yrs in Application Development in related field, MCA/BTECH/MTECH)	1
2	Systems Manager/Application Software Developer (5-7 years, in Application Development in related field, MCA/BTECH/MTECH)	2
2	Shift Incharge (1 per shift), (3-5 yrs experience in Application Development, Testing Management in related field, MCA/BTECH/MTECH)	2
3	MIS Specialist (BCA/MCA/Btech/Mtech, 3 to 5yrs experience in related field) - 2 per shift	8
4	Office Boy (1 per shift)	2
6	Stationary and office running cost	1

1.19 System Integration with DoIT Command & Control Center

Based on the above solution the SI shall assess various hardware and software requirements. The Department of Information Technology (DoIT) Data Centre shall be used for hosting the Control Command Centre Application and Solid Waste Management Application for Jaipur. The system integrator shall ensure that the Central SWM Operation & Monitoring Center at JMC premises (client locations) and DoIT Data Centre Servers shall have VPN or Secure HTTP (HTTPS) and Secure Web Socket (WSS) based connectivity with TLS 1.2 (mutual server and client authentication), to access the web interface and real time data for control command centre dashboard for all monitoring and control of the SWM operations in the city. For this purpose secure client PKI X.509 certificates shall be installed on all machines from where the command centre applications are accessed. Complete certificate lifecycle management including revocation, re-issuing certificates shall be managed centrally from a centralized Identity and Access management Server. Role Based Access control for applications and user groups shall be enabled by IAM server. Field devices and mobile applications shall connect with DoIT data centre using secure TLS 1.2 connectivity with mutual server/client authentication to exchange data. Therefore the SI shall make a list and initiate actions with DoIT and shall submit to JSCL. JSCL shall make

payments to DoIT. Accordingly SI shall coordinate with DoIT and shall integrate the total SWM Digital solution functional. The development Stack for the software solution is already available with Rajasthan State Data Centre (RSDC):

1. The core infrastructure of Software solution (Web Application and Web Portal both) is expected to be hosted at the RSDC. The data collected from SWM locations will be centrally stored at the RSDC.
2. All services, applications and infrastructure to provide efficient delivery of G2G and G2C services will be consolidated on RSDC.
3. RSDC will be responsible to manage all servers and infrastructure to be used for deployment of Software solution.
4. RSDC will provide infrastructure such as firewall, intrusion/ prevention, directory service, management and data storage services, which could be shared infrastructure to all the applications in the RSDC.
5. RSDC shall provide required ports for application load balancers to configure Software solution in high availability active-active mode.
6. RSDC will provide existing EMS server and tools for the SLA management, in respect to monitor application downtime and application performance.
7. RSDC will provide SAN storage, high speed (Fiber Channel)
8. RSDC will provide all provide all SAN related infrastructure (e.g. SAN Switch) for sharing to the successful bidder.
9. RSDC will provide SAN and Tape library support from data storage
10. Some of the key functionalities of RSDC are Central Data Repository of the State, Secure Data Storage, Disaster Recovery, Remote Management and service integration.
11. RSDC will provide required physical and remote access to Selected Bidder for monitoring the Software solution applications at RSDC.
12. RSDC team will take the required backups of application and database as per its policies.
13. RSDC will provide required number of internal and external IP at data centre for the integrated SWM Web application and Web portal.
14. Successful bidder will carry out STQC on overall all applications supplied and hosted at RSDC.

The above are tentative list and is by no means an exhaustive list. SI is recommended to review both hardware and software components in RSDC and leverage them to implement SWM solution.

1.20 Business intelligence application

The SI shall develop and Application software for Business intelligence application. The various revenue earning models by selling compost, Refuse derived fuel, C & D products, Resource recovery, user charges, decentralized options etc. To make the SWM system self-sustainable models. The software solution should provide flexibility for changes if any made during operation.

1.21 Overall Operational Architecture for SWM

The SI shall design and document the overall operational architecture of the Solid Waste Management showing the data flow from various Collection , Transportation, Treatment, Disposal, Complaints registration, application servers , database and subsequently to the display subsystems and operations consoles. The software solution should provide flexible enough to customize/modify / fine tune later on for changes if any and ensure user friendly, easy to access, easy to get report etc. during operation.

1.22 User Acceptance Test (UAT)

Setting up of the devices, development and customization will follow with a comprehensive testing of the each functions identified by the user departments in the SRS. This detailed

testing of the system will be done by the user department's identified personnel using the internal functional testing details of the development team as well by doing a comparison of the initial use case as per the functional requirement and the actual functionality delivered. The necessary and mandatory changes derived out of the UAT will then be incorporated and will be taken for another round of focused testing by the users. A successful UAT approval will then move the job to deployment and configurations for the system in live environment.

1.23 Pilot Run

For better understanding and initial learning, the selected bidder will have to carry out a pilot run which will include hardware installation on certain focused vehicles for a focused ward or area. The key learning and observations are then shall be taken into the consideration and to be implemented in the solution. This will also help in checking the accuracy working adaptability of the hardware devices. This phase will focus on installing hardware devices like GPS based tracking device, RFID Tags, handheldRFID reader, Data Terminal, and other sensors on some selected vehicles for each department. The pilot ward and shall be decided by JMC/JSCL.

1.24 Operational Acceptance

The Operational Acceptance shall commence on the system, once the system is commissioned to a period of maximum 30 days. Operational Acceptance will only be provided after the following activities are completed:

- Verification of installation & commissioning of devices (RFID Readers, RFID Tags,).
- Verification of all the number of bins and its unique RFID tag been read by all the trucks having RFID readers.
- Verification of all the data feeds from all weigh bridges
- Verification of all the data feeds from all processing & disposal sites.
- The SI will have to facilitate the operational acceptance tests and shall be performed by JSCL/JMC
- After the Operational Acceptance has occurred, the implementing agency may give a notice to JSCL's concerned departments/officials requesting the issue of an Operational Acceptance Certificate. Within 30 days after receipt of the implementing agency's notice, the concerned official shall issue an Operational Acceptance Certificate; or
- notify the implementing agency in writing of any deficiencies or other reason for the failure of the Operational Acceptance Tests; or
- Once deficiencies have been addressed, the implementing agency shall notify JSCL, and JSCL, with the full cooperation of the implementing agency, shall use all reasonable endeavors to promptly carry out retesting of the System or Subsystem. Upon the successful conclusion of the Operational Acceptance Tests, the implementing agency shall notify JSCL of its request for Operational Acceptance Certification; JSCL shall then issue to the service provider the Operational Acceptance Certification, or shall notify the implementing agency.

1.25 Outcome/Benefits expected from the Digitization process

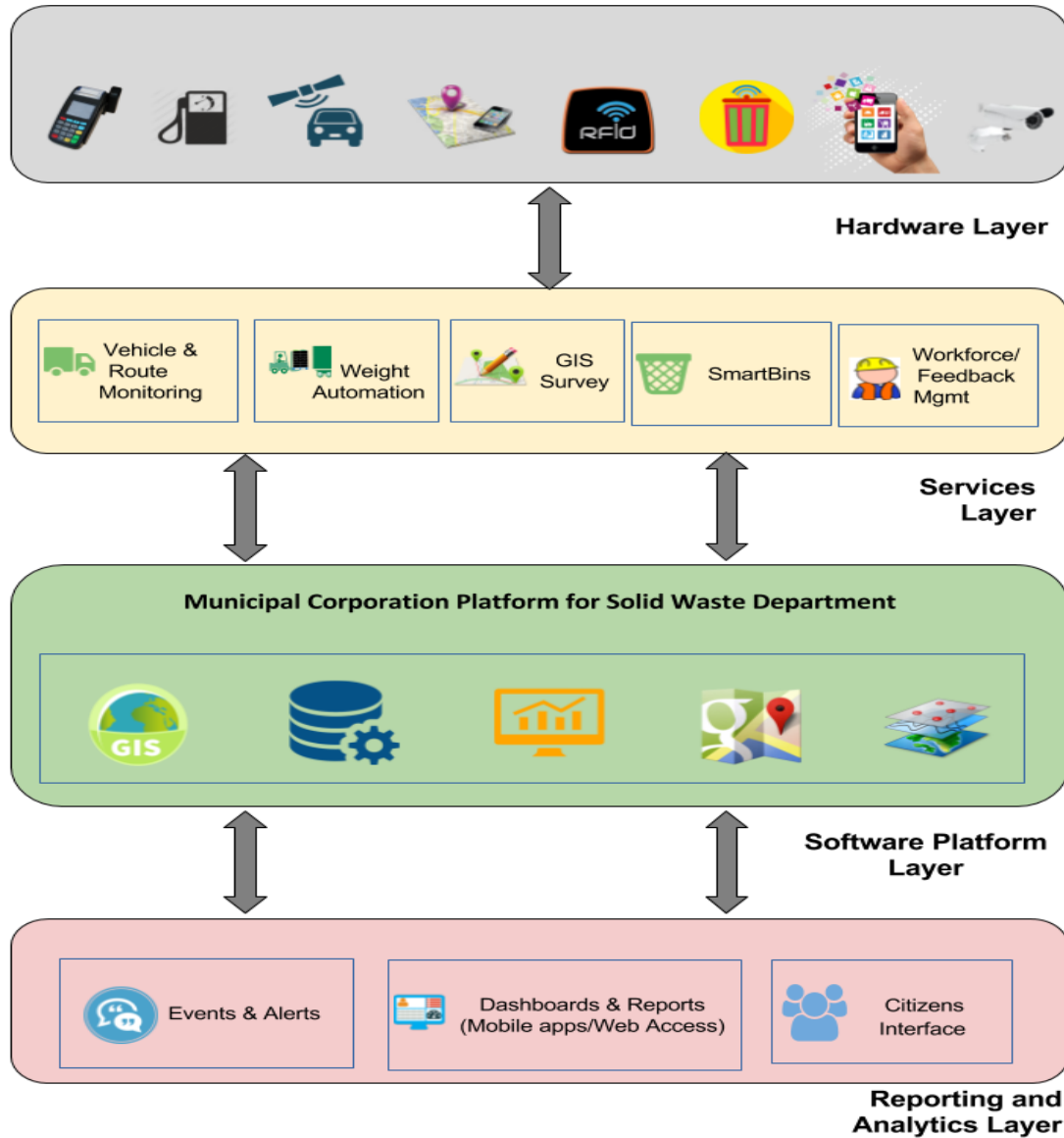
The SI shall ensure following benefits;

- Improve per vehicle productivity & reduce noncompliance through monitoring of the vehicle in real time
- Capturing exact current location through data on latitudes, longitudes of Stoppages, Routes and parking yards
- Geocoding and Geo-fencing of Stoppages, Routes and parking yards
- Route optimization and planning of garbage trucks.

- Quick maintenance of vehicles under breakdown and maintenance.
- Efficient monitoring and clearance of waste bins.
- Reduction of human factor from SWM process starting from collection to billing and disposal.
- Prevention & control of the misuse of manual system and Induction of transparency and accountability in operations.
- Reduction of trip time, fuel saving and serving more locations through route optimization
- Monitoring and quick decision making through MIS generated by the data
- Empowering the end beneficiary through use of Mobile applications, complaint and grievance cell
- Centralized Command and Control Center for waste collection and transportation.

2. Technical Specification for Digital Solutions

The Smart Digital solutions shall include following layers; Hardware Layer, Services Layer, Software Platform Layer, Reporting and Analytics Layer .



The System Integrator shall consider and ensure following minimum specifications;

2.1 GPRS enabled QR Code based Attendance Device, App with Internet connection

The SI shall Supply, Installation and Commissioning of GPRS enabled QR Code Attendance Android Device with Internet (as per specifications provided in Section V - Clause 2.1) for SWM Work force Management including battery backup of at least 8 to 10 hours must be provided, data connectivity through GSM/GPRS, in case of network failure of GPRS option to communicate through GSM should be provided for JMC's Supervisor (Jamadaar). The specification shall be

Feature	Specification	Compliance (Yes/No)
PROCESSOR	1GHz	
OPERATING SYSTEM	ANDROID / LINUX	
MEMORY	1 GB DDR3	
FLASH MEMORY	4GB	
DISPLAY	Color Display: 3.5" QVGA (320 x 240) Sunlight readable and normal outdoor application (options)	
Touch Panel	Resistive Touch	
KEYBORD	Minimum 20 hard keys	
PORTS	USB Host – A Mini USB 2.0 OTG – B (For charging & data Transfer) User-accessible micro SD slot (16 GB support) External Antenna	
BATTERY	3000mAh Li-ION Battery or higher	
	8-10 hrs (Run time) under typical conditions	
Weight	Less than 500gm	
Drop Specification	5ft drop on concrete	
CONNECTIVITY	Quad Band GPRS / 3G	
	Wi-Fi® 802.11 b/g/n	
	Bluetooth® v4 BLE Type 4.0	
CAMERA	5 MP	
GPS	22 Channel GPS, L1 frequency	
GPS Update Rate	1Hz	
Accuracy	2.5m CEP	
BARCODE READER	1D/2D Image Scan Engine	

2.2 **Wall mounted Biometric Device with cable & Wire with software**

Supply, Installation and of Wall mounted GPS enabled Biometric (as per specifications provided in Section V - Clause 2.2)

Supply, Install, Commissioning, Operation and Maintenance of GPRS enabled wall mounted Biometric Device for attendance recording with Internet and storage facility with accessories and software including battery backup of at least 8 to 10 hours must be provided, data connectivity through GSM/GPRS, in case of network failure of GPRS option to communicate through GSM should be provided at JMC's Ward Offices, Transfer station, Compost Plant, RDF Plant, Waste To Energy, Landfill etc.. The minimum specs for Wall mounted Biometric Attendance device with GPS are ;

- STQC or UIDAI Certified Fingerprint Sensor
- Minimum 8GB Memory and 1 GB RAM
- WIFI Enabled
- 2G / 3G Enabled
- GPS enabled
- Minimum 1.2GHz Quad Core Processor
- Microphone, Inbuilt Speakers
- Capacitive 7" Touch screen
- Front VGA Camera
- 4500 mAh Battery

2.3 **CCTV**

Supply, Installation and Commissioning of CCTV with 2 Dome cameras, 2 bullet cameras, 4ch DVR, 2TB Hard Disk, 18.1-inch Monitor, cable, connector, transportation tax, installation complete at various locations namely Vehicle Garage, Transfer Stations, Compost Plant at Sewapura, Dumping Ground at Sewapura, RDF plant, WTE Plant, Landfill site, at Langariyawas, Dumping ground at Mathuradaspora, Construction & Demolition Waste site. These cameras would be pole mounted. CCTV providing snap shots on regular interval of 15 minutes and upload to internet.

Video Surveillance Control, Operation, Recording, Playback and Management Systems Software

Control Network (IP) Based Digital Video Management System comprising of following:	Compliance Yes/No	Remarks
Central Camera Station consisting of monitoring and recording system for Enterprise level installation optimized to take full advantage of IP network cameras and video encoders. It combines easy setup with an intuitive user interface for efficient operation, quick investigation and high definition identification. Includes a 5 year free software maintenance and free upgrade pack.		
video management system shall IPv4 (RFC 791) Microsoft Active Directory Compliant		
Client Licenses for 5 clients		
Provide map-based interface, allowing cameras to be selected based upon location of maps over the facility		
Support live view and recording of at least 70 network video sources, in H.264, MPEG-4 Part 2 or Motion JPEG.		

The video management system shall meet relevant parts of the following video standards: SMPTE 296M (HDTV 720p) SMPTE 274M (HDTV 1080p)		
Support live view and recording of at least 70 network video sources, in H.264, MPEG-4 Part 2 or Motion JPEG.		
Utilize server software for recording and management of video and audio.		
Be able to fast instant replay recorded material.		
Provide enhancing image on live view		
The video management system shall support the following video compression standards: MPEG-4: ISO/IEC 14496-10 MPEG-4 Part 10, Advanced Video Coding (H.264) ISO/IEC 14496-2 (Profiles ASP and SP) (MPEG-4 Part 2)		
The video management software shall support traditional network cameras and video encoders as well as thermal network cameras.		
The video management system shall, when operating in a fully supportive environment, be able to record at least 60 individually configured full frame rate video streams in Full HDTV 1080p (1920x1080 pixels) over IP networks		
The video management system shall provide a total recording capacity of at least 3000 frames per second.		
The video management system shall, for each channel: Support Motion JPEG recording in a selectable range up to 30 fps (60z), 25 fps (50Hz) in all resolutions. Support MPEG4 Part 2 recording in a selectable range up to 30 fps (60z), 25 fps (50Hz) in all resolutions. Support H.264 recording in a selectable range up to 30 fps (60z), 25 fps (50Hz) in all resolutions.		
The video management system shall allow for video to be transported over: Multipart HTTP (Unicast) RTP over RTSP over HTTP (Unicast)		
The video management system shall support simplex audio encoded with the video stream. AAC LC at 8/16 kHz G.711 PCM at 8 kHz G.726 ADPCM at 8 kHz		
The video management system shall accept notifications and alarms from an unlimited number of auxiliary devices connected to the network. Received notifications and alarms shall be able to generate events within the video management system.		
Be able to display up to 25 different video streams.		
Be able to display up to 100 different video streams using multiple split views.		
Provide the functionality to quickly jump between multi-views using a quick view button.		
Support drag and drop of video sources within the user interface.		
Support multiple screens when operating on a computer supporting this.		

Be available in at least 15 different languages, including English, French, Italian, German, Spanish, Polish, Russian, Korean, Japanese, Chinese, Swedish, Danish, Turkish, Arabic, Persian and Brazilian Portuguese.		
The following functionality shall be available from both server and client software, when operating in a fully supportive environment. Live view functionality, Single camera live view, Multi-views Sequence views		
Recording functionality Continuous recording. Scheduled recording, Event driven recording, Manually initiated recording		
Provide individually and configurable resolution and frame rate for each video source.		
The duration of recorded material shall only be limited by the amount of available storage capacity.		
Video and audio shall be recorded using a non-standard format preventing manipulation of the content and shall contain information about date, time and source of the recorded material.		
The video management system shall be able to provide synchronized replay of at least 4 different recorded video streams.		
The video management system shall be able to replay at least 8 simultaneous full frame rate Full HDTV 1080p (1920x1080 pixels) video streams.		
Search functionality The video management system shall provide an ability to search for video based upon the following criteria's: Time & Date, by camera motion detection within a customizable area of the video ,Video streaming content		
IP addresses The video management system shall operate using static or dynamic IP addresses. The video management system shall provide support for addresses provided by a Dynamic Name Server (DNS). The video management system shall allow for automatic detection of cameras and encoders using UPnP and Bonjour		
PTZ functionality The video management system shall for each video channel Provide the ability to control Pan, Tilt and Zoom functionality directly from the user interface. Provide at least 100 present positions, camera depending. Support guard tour functionality, which allows the PTZ device to automatically move between selected presets using an individual viewing time for each preset.		
Event functionality The video management system shall be equipped with integrated event functionality, which can be triggered by: Event triggered in a camera, encoder or other network connected device, including: - Video Motion Detection - Audio Detection - Camera Tampering - Cross Line Detection Lost Connection to network camera or encoder Schedule Failover recording recovery - recovery of local recordings in		

camera or encoder after connection disruption		
Response to triggers shall include: Selecting predefined live-view Recording of video at defined image quality and frame rate Storing of pre-alarm video at the captured frame rate Activating external output Notification of event via email		
Protocol support The video management system shall incorporate support for at least IP, HTTP, TCP, ICMP, RTSP, RTP, RTCP, SMTP, FTP, DHCP, UPnP, DNS, and Bonjour. The SMTP implementation shall include support for SMTP authentication.		
The video management system shall: Provide the ability to create multiple users of the system, either from local PC users or through Active Directory, each with individual definable user rights.		
Provide the ability to assign IP address and configure new and replaced cameras and encoders.		
Provide an ability to back up system configuration.		
Provide the ability to upgrade firmware in individual cameras and encoders.		
When connected to Internet, be able to locate suitable firmware updates and download these		
Maintenance and configuration functionality The video management system shall: Provide the ability to create multiple users of the system, either from local PC users or through Active Directory, each with individual definable user rights. Provide the ability to assign IP address and configure new and replaced cameras and encoders. Provide an ability to back up system configuration. Provide the ability to upgrade firmware in individual cameras and encoders. When connected to Internet, be able to locate suitable firmware updates and download these		

Outdoor 8MP Network Bullet Cameras Specification

1	Image Sensor:	1/2.5" Progressive Scan CMOS
2	Signal System:	PAL/NTSC
3	Min. Illumination:	Color: 0.01 lux @(F1.2, AGC ON), 0 lux with IR
4	Shutter time:	1/3 s to 1/100,000 s
5	Slow shutter:	Support
6	Lens:	8 Megapixel 2.8 mm, horizontal field of view: 102°
7	Adjustment Range:	Pan: 0° to 360°, tilt: 0° to 100°, rotate: 0° to 360°
8	Day& Night:	IR cut filter with auto switch
9	Wide Dynamic Range:	120 dB
10	Video Compression:	H.265+/H.265/H.264+/H.264/MJPEG
11	Video bit rate:	32Kbps~16Mbps

12	Max. Image Resolution:	3840 × 2160
13	Frames per sec	50/60Hz 25/30fps
14	Communication Interface:	1 RJ45 10M / 100M Ethernet interface
15	Operating Conditions:	-30 °C ~ 60 °C (-22 °F ~ 140 °F)
16	Power Supply:	12 VDC ± 25%, PoE (802.3af Class3)
17	Weather Proof:	IP67
18	IR Range:	-I5: up to 50 m; -I8: up to 80 m

List of locations for CCTV Camera Installation

Sr. No	JMC	Nos.	CCTV
	SWM Control Room		2
4	Garage	5	10
8	Transfer station	5	10
9	Sewapura Dumping Ground	1	2
10	Sewapura Compost Plant	1	2
11	Mathuradas Pura dumping Ground	1	2
12	Langriawas RDF Plant	1	2
13	Waste to energy plant-Jindal	1	2
14	Landfill-Jindal	1	2
15	C & D Waste	1	2
			36

2.4 Handheld RFID Readers

Supply, Installation and Commissioning of UHF RFID Handheld Readers with Android Smart phone facility with internet Card. The RFID Reader module works on the combination of GSM & data reading, as soon as the data is read from the tag the data is sent via GSM/GPRS to the server. The API continuously do the polling, and the data in the central command server is displayed.

Features

- Easy & Ready to implement solution that provides:
- Easily pluggable to any other smart module over I2C Bus or to any other devices that communicates over I2C protocol
- Low power consumption
- Highly configurable on the software side to suit customers' specific end needs.
- Modular Software design that helps in easy customization to fit the application.
- Flexible architecture that allow:
- Easy setup of sensor slave modules
- Easy setup of Radio modules like GPRS or WIFI modules
- Support any other sensor/slave modules that can communicate with it over I2C
- Readily deployable in remote locations in a wide range of operating conditions
- Can run from a battery module

- Log Ultrasound/Slave Sensor readings on an micro SD Card
- Mobile Applications & Cloud base Web Application Tracking

Specifications

Feature	Specification	Compliance (Yes / No)
Weight	< 500gm	
Display	Minimum 4" WVGA	
Touch Panel	Rugged capacitive	
Power	Min 3200 mAh	
Interfaces	USB	
CPU	1 Ghz	
Memory	1 GB	
Storage	4 GB	
External Storage	Must support Micro SD Card	
Sealing	Min IP64	
Drp Resistance	Min 1.2 Meter drop multiple time	
Operating System	Android / Linux	
WLAN	IEEE802.11 b/g/n	
GSM	GSM/GPRS/EDGE Quad Band (850/900/1800/1900MHz) WCDMA (850/1900/2100MHz)	
Bluetooth	4	
GPS	GPS with AGPS Support	
UHF RFID		
Frequency	865MHz-868MHz	
Protocol	EPC C1 GEN2 / ISO18000-6C	
Antenna	Linear polarization (1.8dBi) Circular polarization (2.5dBi)	
R/W ranges	up to 4.5 meters	
Reading Tags	Multiple	

2.5 Fixed RFID Readers

Supply, Installation and Commissioning of GPS enabled Fixed RFID readers with internet with mounting clamps and accessories + Poles for RFID Reader + UHF ID Antenna + Controller for UHF ID for Antenna. The Fixed RFID Readers will be installed at transfer section, weighbridge etc.

Specification as follows:

Feature	Specification	Compliance (Yes/No)
Compatibility	EPC Gen 2(ISO18000-6C)	
Operating Frequency	865-868MHz	
RF power	0~30dBm	

Data interface	Wiegand26/34,RS485,RS232	
Reading Range	< 5 meter	
Reading Indication	Buzzer, LED	
Power	9V DC	
Antenna	Circular polarization Gain 7dBi	
Operating Temp	From -20°C~+60°C	
Housing	Waterproof	
Weight	< 2.5 KG	

The Fixed RFID Readers will be installed on Poles. The specification for the poles include ; Supply and installation of pole of total height of 8 meters above the ground. The pole is made out of grooved mild steel tube/GI (MS sheet of TATA / Jindal-‘B’ class or equivalent) and cast iron base The size of the base plate shall be 450X450X15 mm. Cast iron embellishments are fitted with the help of grub screws. A built in service window is provided to accommodate a 6 Amp SP MCB and 32 amp heavy duty connector for mains connections in the bottom part of the pole. The pole is duly pretreated and painted in UV ray resistant P.U. coating in approved colour shade. The coating should pass a minimum of 300 salt spray hours as per IS or ASTM testing methods. The pole shall be installed at desired location including foundation of the pole by making cement concrete foundation of 1:1.5:3 (1 cement : 1.5 course sand : 3 course stone aggregate 20/40 mm nominal size) with the help of anchor bolts and 38 mm GI sleeve as required. The minimum weight of the pole shall be 200 kgs. The grade of cast iron embellishments shall be FG-220.

Locations for installation of fixed RFID Readers are as follows:

Sr. No	JMC	Nos.	Nos
1	Garage	5	5
2	Transfer station	5	5
3	sewapura Dumping Ground	1	1
4	Sewapura Compost Plant	1	1
5	Mathuradas Pura dumping Ground	1	1
6	Langriawas RDF Plant	1	1
7	WTE-Jindal	1	1
8	Landfill-Jindal	1	1
9	C & D Waste	1	1

2.6 Specifications of GPS Device

Supply, Installation and Commissioning of GPS Devices in IP 66/67 Cabinet for mounting in Vehicles for VTS as per specifications provided below;

Feature	Specification	Compliance (Yes/No)
Temperature Range :	(-)5 to (+) 65 Deg C	
Humidity:	95% (non-condensing)	
Altitude:	Max 18500 feet above MSL	
ENCLOSURE	IP67 Minimum	
Communication	GSM / GPRS Class 10 900 / 1800 MHz (Dual band)	
Antenna	All Internal	
Protection	Antenna short circuit protection required	
Casing Tampering	Alert on Open	
Configuration	Over SMS and PC Connection	
External Fuse	Protection Required	
Digital Input	Min 3	
Digital Output	Min 1	
Analog Input	Min 1	
Operating Voltage	6V to 30V	
Flash Memory	To hold minimum 25000 Data	
Battery	1100 mAh	
Indicators	2 LED	
Accelerometer	Required	
Certifications Required		
Enclosure	IP67	
Equipment	ARAI Approved	
GPS Specification		
Channels	min 72 channels	
Accuracy	up to 5 mts	
AGPS Support	Required	
Clod Start	< 35 sec	
Warm Start	< 28 sec	
Hot Start	1 sec	

2.7 Bin Level Sensor Specification

Supply, Installation and Commissioning of Bin Level Sensors. The existing bins in Jaipur shall be retro-fitted with ultrasonic level sensors. Ultrasonic sensors are used in air, non-contact object detection and ranging sensors that detect objects within a defined area. Ultrasonic sensors are not affected by colour or visual characteristics of the detected object and use high frequency sound to detect and localize objects in a variety of environments. They measure the return time of flight for sound reflected back from objects based on which the sensor then outputs a range reading. As these are open bins mostly the volume sensors may be required to be mounted on the side walls of the bins and calibrated accordingly to provide correct readings. The mounting of the volume sensors shall be made of metal fixture with window for ultrasonic beam.

Specification Required as follows:

Feature	Specification	Compliance (Yes/No)
Communication	GPRS / 3G	
Configuration	Through SMS	
Battery Life	Minimum 12 months	
Integration	Integration can be done with any third party software	
Operating Voltage	DC 5V	
Sensor Type	Ultrasonic	
Max measurable height	4 Meters	
Operating Temperature	From -30°C to +70°C	
ENCLOSURE	IP66	

2.8 Technical Specification of the PTZ cameras

Supply, Installation and Commissioning of PTZ Camera + Installations, cable and Accessories + Broadband Internet+ External Power Module as per specifications provided below;

Outdoor High Performance colour Day/ Night True IP based IR PTZ HD Dome camera :

Sl. No.	Parameters	Description
1	Image sensor and Resolution	1/3" progressive CMOS sensor
2	Scanning system	Progressive scanning
3	Multi streaming	Tri streaming or more with individually configurable FHD streams
4	Compression Technology	H.264 , MJPEG
5	Recording Resolution	16:9 HD Resolution with 1920 x 1080 pixels at 25 fps or higher
6	Storage Redundancy	The camera should have built in SD card slot for video storage of 32 GB or higher on the edge during any type of physical link failure to ensure mission critical 24 x 7 surveillance.
7	Day / Night function & IR Illumination	Mechanically switching IR cut filter for D/N operation. The IR filter should cover a distance of 30 mtrs. or above during night.
8	Lens	30X optical zoom with varifocal lens or

		better - and 10X Digital zoom or higher
9	Anti fog	The camera should have improved visibility when viewing foggy or low contrast scenes
10	Iris / Focus	Automatic with manual override
11	Sensitivity	Day & Night operation with minimum illumination 0.002 Lux at 50 IRE or better
12	Dynamic Range	75 db or better for enhanced image quality in different non uniform lighting situation
13	Gain Control	Auto / Manual
14	Presets	256 or more, each with 20-character titles and also option for guard tours
15	Dome bubble	Polycarbonate, clear with UV blocking and anti scratch coating
16	Water / Dust protection	Confirming to IP66 or NEMA 4X certifications with built in heater and blower
17	Operating temperature	55°C (±5%) to withstand harsh outdoor heat during summer
18	Operating humidity	90% RH or higher at non-condensing situation to with stand critical outdoor humid weather condition during heavy rainfall
19	Shutter speed	1/1 to 1/1000 sec
20	Electrical	24V AC / 12V DC self adaptive or /POE+ (IEEE802.3af, class 2 standard).
21	Power Redundancy	Both 240 AC power supply and POE input to the HD PTZ camera should be available.
22	Image stability	Built in Image stabilisation function with motion detection feature
23	PAN, Range and Speed	360° continuous with manual Pan speed from 0.1° /s to 180°/s
24	Tilt angle and speed	0° - 180° or higher with Auto flip manual tilt speed from 0.1° /s to 100° /s
25	Zoom adjustment	The HD PTZ camera should provide zoom adjustment feature that reduces the pan / tilt speed as the camera zoom is on an object so that the relative speed on the screen remains constant
26	Protocols	Should support RTP, UDP, TCP IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/ V3, ICMP, ARP, SMTP, SNTP, SNMP V3, RTSP, 802.1x, IPv4, IPv6, RTCP, TSL.

27	Warranty	5 years warranty from manufacturer.
28	Certifications and Compliance	UL, EN, FCC and ONVIF Compliant (Profile S)
29	Other Requirement	IP66 fittings / enclosures from same OEM. Model no. to be mentioned
30	Make	BOSCH, PELCO, SONY, PANASONIC, HONEYWELL , HIKVISION

2.8 Passive RFID Tags

The SI shall Supply, Install, Commission and Operation and Maintenance of passive RFID Tag (UHF Metal / Ruggedized Plastic Tag) for Door to Door Collection Vehicles, Secondary Collection & Transportation vehicles, Bins, Rickshaw, tricycle, pushcart, etc for all other assets for SWM

Parameter	Specification	Compliant (Yes/No)
Compatibility	EPC Class 1 Gen 2	
User memory	512 bit	
Write endurance	100,000 cycles	
Dimension	90 x 34 x 7mm	
Material	ABS	
Weight	< 20 gm	
Operating Frequency	865-868MHz	
Operating mode	Passive	
Ingress Protection	IP68	
Operating Temp	From -40°C to +85°C	
Reading Distance	3m ~ 4m(UHF)	

List of RFID Fixed Reader, RFID Handheld Reader, GPS Units Required

Sr. No	JMC	Nos.	GPS Units	Handheld RFID Readers	RFID Reader Fixed
1	Garage	5			5
2	Transfer station	5			5
3	sewapura Dumping Ground	1			1
4	Sewapura Compost Plant	1			1
5	Mathuradas Pura dumping Ground	1			1
6	Langriawas RDF Plant	1			1
7	WTE-Jindal	1			1
8	Landfill-Jindal	1			1

9	C & D Waste	1			1
10	BulDozzer	2	2	0	
11	JCB	6	6	0	
12	Loader	9	9	0	
13	Dumper	21	21	21	
14	RC	20	20	20	
15	Jetting Machine	21	21	0	
16	Suction machine	3	0	0	
17	DP	37	37	37	
18	Tractor Trolly	11	0	0	
19	TT With Labour	0	0	0	
20	Tractor with leveller	2	2	2	
21	Battery Rikshaw	22	22		
22	Auto Tipper(500 Kg)	20	20		
23	Auto Tipper(900 Kg)	82	82		
24	BVG Vehicle Small	637	637		
	BVG Larger Vehicle		46	46	
S. No	Vehicles				
1	Mini Truck	26	26	0	
2	Car	59	59	0	
3	Jeep	61	61	0	
4	jeepsi	1	1	0	
5	Hoist	2	2	0	
6	Ambulance	2	2	0	
7	Animal Ambulance	2	2	0	
8	Auto Jet	17	17	0	
9	Road sweeper	1	1	0	
10	cultivator plao	1	1	0	
11	Water Tanker	1	1	0	
12	Cattle Catcher(Big)	5	5	0	
13	Cattle Catcher(small)	8	8	0	
14	Motor Cycle	9	9	0	
15	Crane	0	0	0	
16	Moving Souchalaya	11	11	0	
17	Hook Loader	3	3	0	
	Grand Total		1134	126	17
	Additional JMC suggested		12	14	3
	TOTAL		1146	140	20

2.10 Smart Phone

Supply, Installation and Commissioning of Smart Android Phones with internet for vehicles to get various data/information for effective waste management as per specifications provided below;

Type	3G or above
SIM Type – calling	Dedicated Slot
OS Ver	Android 6 or latest
CPU GHz	1.2 Quad
RAM	1.5GB or above
ROM	8GB or above
Expandable Memory	32 GB
Inch	5.00 or above
Resolution	1280 x 720 Pixels
Screen Type	Touch screen
Camera Rear	5MP
Battery mAh	3,600 or above
UNICODE SUPPORT FOR REGIONAL LANGUAGES SCRIPT (HINDI, TELUGU, MARATHI & BANGLA ETC.	Yes
SAR value within govt prescribed limit	Yes
OTG for external accessory	Yes
GPS	GPS, AGPS
WIFI connectivity	802.11 b/g/n 2.4GHz, WIFI Direct
Sensors	Accelerometer
<p>Device customization OEM should provide a web-based service that allows IT admins to deploy a specific group of settings or apps to set of devices. It should provide powerful and granular device-configuration capabilities. It should enforce settings over-the-air, even after they have been factory reset.</p> <p>Key requirements are -</p> <ol style="list-style-type: none"> 1. Professional Kiosk Mode – It should lock devices down to a single app or group of apps. It should restrict device settings to create single-purpose phones such as survey collectors. 2. Bulk device configuration – Instead of changing multiple settings and functions for each device in the department, solution should help set these options once and remotely deploy them across all devices. 3. Bulk app deployment – It should allow admins to distribute and install apps to enrolled devices over-the-air without manually downloading apps on each device. 4. Console - A web-based portal should be provided to help configure and lock down devices without any Android development effort. 5. Support for Google Play apps – IT should allow admin to add shortcuts to Google Play to create lists of apps that needs to be deployed. It should allow option to place all shortcuts as a single icon on the device screen and even help specify where the app icons will be located on the screen. 	Yes (paid license)

Software features	
Standard SDK for device management	<p>OEM should provide Device management SDK for</p> <p>(1) Creation of closed environment for enterprise work (Kiosk Mode) means it would only be used for a specific purpose of financial transactions. This ensures that users are not able to install key loggers/ root the device to compromise biometric data.</p> <p>(2) Prevent factory reset on the devices which makes the device secure.</p> <p>(3) White list & blacklist desired App as desired by the department which makes sure the optimum usage of device.</p> <p>(4) SDK should have capability to set department wallpaper on phone which can't be changed by user.</p> <p>Department plans to integrate these SDKs in their application at a later date to achieve functionality provided by MDM platform.</p> <p>SDK API details should be provided during bid submission. A prototype demo app may need to be delivered during evaluation phase.</p> <p>Note- Device will not be rooted to deliver this functionality</p>
MDM platform (paid license per year renewals)	<p>For better manageability and control of device, Vendor should provide Device OEM based mobile device management platform (MDM) for</p> <p>-</p> <ol style="list-style-type: none"> 1. White listing/black listing of applications 2. Should have admin portal to manage smart phone remotely 3. Policies to enable/disable Wifi/Camera 4 Install/Upgrade applications remotely 6. Boot level controls

2.11 Automated Weigh Bridge Accessories (Hardware)

Supply, Installation and Commissioning of Hardware for Automated Weigh Bridge Controller , along with Automatic Boom Barrier + Traffic Lights with controller + 1 CCTV Pole Mounted Camera to be connected to Central NVR through Broadband internet,

Weigh Bridge Automation Server and Client Software

1. The system shall integrate all weigh bridges in the city to provide real time data on amount of dry, wet and hazardous waste generated in the city.
2. It shall also provide quantity of recyclables like paper, glass, metal, RDF etc. that is segregated and sold to recyclers and other agencies from processing plants, landfills, transfer stations and other facilities through data from weigh bridges at these facilities.

(a) Automatic Boom Barrier

Index	Parameter	Value
1.	General Features	High Strength , Attractive Look and Fine Finish
2.	Opening Time(sec):	6 Sec

Index	Parameter	Value
3.	Boom Length(mm):	3000
4.	Height Of Boom Form Ground (mm)	800
5.	Housing Dimension (mm)	1050x300x260
6.	Boom Dimension (mm)	100x50
7.	Controller Protecting Rating	IP 55
8.	Power	100 Watt or less
9.	Torque(nm)	400 or more
10.	Duty Use	Intensive Use
11.	Operating Temp & Humidity	-20 C To + 60 C, 5-95% RH
12.	Life Expectancy	10 Years
13.	Daily Operating Cycles (recommended)	600
14.	Standard Accessories (included)	Remote, Control Board, Instruction Manual, Manual Key, Wireless Push Button

(b) Traffic Lights with Controller at Weigh Bridge

Index	Parameter	Value
1.	Size	200 mm Diameter
2.	Display (Stop)	Red LED full Round
3.	Display (Start)	Green LED Full Round
4.	Visibility Range	20 m (under normal visibility conditions)
5.	Enclosure	Polycarbonate Plastic / Metal
6.	Wavelength	Red 630 Nm
7.	Wavelength	Green 526 Nm
8.	LED	2000 mcd 5 mm
9.	LED Pitch	10 mm
10.	Working voltage	90 – 270 Vac , 45 – 60 Hz
11.	Power Factor	more than 0.90%
12.	MTTR	30 minutes
13.	Controller	Supplied with Traffic Light
14.	Average Life Span	10 years
15.	Operating Temperature & Humidity	-20 to 50 Degree C , 5-95% RH

(c) IP Camera at Weigh Bridge

Index	Parameter	Value
Camera		
1.	Image Sensor	1/2.8" Progressive Scan CMOS
2.	Min. Illumination	0.005 Lux @(F1.2,AGC ON), 0.007 Lux @(F1.4,AGC ON), 0 Lux with IR
3.	Shutter time	1 s to 1/100,000 s
4.	Slow shutter	Support
5.	Lens	2.8-12mm @ F1.4 8-32mm @ F1.4
6.	Lens Mount	AF automatic focusing and motorized zoom lens
7.	Auto Iris	DC drive
8.	Day& Night	IR cut filter with auto switch
9.	Wide Dynamic Range	120 dB
Compression Standard		
10.	Video Compression	H.264+/H.264/MJPEG
11.	H.264 code profile	Baseline Profile / Main Profile / High

Index	Parameter	Value
		Profile
12.	Video bit rate	32Kbps~16Mbps
13.	Audio Compression	G.711/G.722.1/G.726/MP2L2
14.	Audio bit rate	64Kbps(G.711) / 16Kbps(G.722.1) / 16Kbps(G.726) / 32-128Kbps(MP2L2)
15.	Max. Image Resolution	2048x1536
16.	Sub Stream	50Hz: 45fps(2048 × 1536), 50fps@(1920 × 1080, 1280 × 720) 60Hz: 45fps(2048 × 1536), 60fps@(1920 × 1080, 1280 × 720)
17.	Third Stream	Independent with Main Stream and Sub Stream, up to 50/60Hz: 10fps@1280 ×720
18.	Image Enhancement	BLC/3D DNR/ROI/Defog
19.	Image Settings	Rotate mode, Saturation, Brightness, Contrast adjustable by client software or web browser
20.	Distortion Correction	Support
21.	Target Cropping	Support
22.	Picture Overlay	LOGO picture can be overlaid on video with 128x128 24bit bmp format
23.	Day/Night Switch	Auto/Schedule/Triggered by Alarm In
Network		
24.	Network Storage	NAS (Support NFS,SMB/CIFS), ANR
25.	Alarm Trigger	Motion detection, tampering alarm, network disconnect , IP address conflict, storage exception
26.	Protocols	TCP/IP, UDP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, Bonjour
27.	General Function	User Authentication, Watermark, IP address filtering
28.	System Compatibility	ONVIF (Profile S, Profile G), PSIA, CGI, ISAPI
Interface		
29.	Audio	1-ch 3.5 mm audio in (Mic in/Line in)/out interface (-S model)
30.	Communication Interface	1 RJ45 10M/100M/1000M Ethernet port
31.	Alarm	1 input, 1 output (up to DC24V 1A or AC110V 500mA) (-S model)
32.	Video Output	1Vp-p composite output (75 Ω/BNC) (-S model)
33.	On-board storage	Built-in Micro SD/SDHC/SDXC slot, up to 128 GB
34.	Reset Button	Yes
Audio		
35.	Environment Noise Filtering	Support(-S)
36.	Audio I/O	Support dual audio track, stereo (-S)
37.	Audio Sampling Rate	16kHz / 32kHz / 44.1kHz / 48kHz (-S)
Smart Feature-set		
38.	Behavior Analysis	Line crossing detection, Intrusion detection, Region entrance, Region exiting, Unattended baggage, Object removal
39.	Line Crossing Detection	Cross a pre-defined virtual line

Index	Parameter	Value
40.	Intrusion Detection	Enter and loiter in a pre-defined virtual region
41.	Region Entrance	Enter a pre-defined virtual region from the outside place
42.	Region Exiting	Exit from a pre-defined virtual region
43.	Unattended Baggage	Objects left over in the pre-defined region such as the baggage, purse, dangerous materials
44.	Object Removal	Objects removed from the pre-defined region, such as the exhibits on display.
45.	Exception Detections	Scene change detection, Sudden audio increase/decrease detection, Audio loss detection, Defocus detection
46.	Recognition	Face detection recognition
47.	Statistics	Object Counting (Entrance and Exit object number is accounted and showed on screen in real time)
General		
48.	Operating Conditions	-30 °C – 60 °C (-22 °F – 140 °F) , Humidity 95% or less (non-condensing) -H: -40 °C – 60 °C (-40 °F – 140 °F) with smart heater on
49.	Power Supply	12 V DC ± 10%, PoE (802.3at)
50.	Power Consumption	14.25W MAX, -H:16.75W MAX
51.	14.25W MAX, -H:16.75W MAX	IP67
52.	IR Range	Up to 50m (2.8-12mm) /100m (8-32mm)
53.	Dimensions	100×103.9×311.8mm (3.94" × 4.09" × 12.28")
54.	Weight	2000g (4.41 lbs)

- a) Panel Computer: The driver can operate the touch panel computer directly, for operator less weigh bridge operations. The panel computer shall provide driver with an application interface to enter details of waste and ward number from which he is transporting the waste.
- b) Vehicle Position Sensor – These shall be installed to determine correct position of vehicle before commencement of weighment.
- c) Audio Announcement System: Audio annunciation system, typically a horn shall indicate completion of correct weighment.
- d) Software :
 - a. Complete weighbridge management user friendly Software for processing data date wise, truck wise, challan wise, shift wise, customer wise product wise etc. for generation of daily, weekly & monthly reports.
 - b. Preparing Transport Permit, Invoice etc. as per our requirement. Provision for connecting with other weighbridges / server computer by LAN & sharing the common data base.
 - c. The software shall be compatible for integrating with Terminal Automation System software and migration of data.
 - d. Software must be password protected for operation and editing.
 - e. The software installed at each weighbridge shall be integrated with centralized SWM Software for real-time syncing of data from weigh bridges in the city.
- e) Digital indicator: 1 No. Digitizer shall be state of the art high performance micro-processor based system having high This internal resolution, clear and bright six digit LED display auto zero tracking tare/gross weight indications, Auto calibration facilities etc. It shall be capable of interfacing with the computer for further processing of data as per requirement operating temperature is to be -5 degree centigrade to 60 degree centigrade, response time less than 0.5 seconds, electrical safety IEC-348.

- a. Display: Backlit Display, graphics up to 64 x 240 pixels up to 8 digits characters of size 17 mm x 10 mm
- b. Mounting: Wall / Desk
- c. Options:
 - o Graphic display
 - o Serial test
 - o Network interface
 - o Ethernet port
 - o Analogue out
- d. Repeatability : 0.01% of rated output
- f) Red LED Jumbo Display having Characters of size 120 mm X 100mm
- g) Weigh slip Printing Device

Channel NVR Specification

Sl	Specification	Compliance Yes/No
1	MAKE: Should be Same as Quoted for IP camera [MUST BE SPECIFIED BY BIDDER]	
2	MODEL: ANY [MUST BE SPECIFIED BY BIDDER]	
3	Network Video Recorder : 30 days recording of all camera footage with Full resolution & full frame. Monitoring would be required at local control room as well as remote central location on WAN ,LL & broadband line,iphone,ipad & Android . System should have required power backup and should be placed in the central Server room .	
4	Should be ONVIF/PSIA compliant and should support various ONVIF/PSIA compliant IP cameras from different manufacturers.	
5	Operating System: Embedded LINUX or OEM Supported	
	System resources: Simultaneous multi-channel live view, real-time recording, playback, network operation, remote access, USB backup	
6	Interface	
	User Interface :_Support 16-bit true color graphical menu interface and mouse operation. Preview Screen : 1/ 4 / /8 /16	
7	Recording resolution: Simultaneous multi-channel live view, real-time recording, playback, network operation, remote access, of the connected camera with up to the resolution of 5 megapixels.	
	Record Mode: Manual / Alarm / Video Detection /Timing	
	Search Mode : Time / calender / Event / Channel	
	Realtime Local Playback : 8 channels @ 720P, 4 Channels @ 1080P	
8	HDMI/VGA output: 1-ch, resolution: 1920 x 1080P /60Hz, 1600 x 1200 /60Hz, 1280 x 1024 /60Hz, 1280 x 720 /60Hz, 1024 x 768 /60Hz(Simultaneous HDMI and VGA outputs at up to 1920x1080 resolution)	
9	Storage & backup: Inbuilt 4TB surveillance SATA HDD must be installed. SATA:4 SATA interface for 4 HDDs	
	Capacity: Each SATA slot should support 4 TB hdd	
	Health check (HDD) & Support HDD quota mode; different capacity can be assigned to different channel. record Storage : HDD, Network	

	Backup Mode: Network, USB HDD & USB Writer, SATA writer	
10	Compatibility : Monitoring, Controlling and Recording Software shall be compatible with	
	a.) Supplied Cameras (must be from same supplier/manufacturer. No third party software will be accepted.)	
	b.) Windows and LINUX (any flavour) Operating System C). 16-ch synchronous playback at 720P resolution or better	
11	Network interface Port: 2 self-adaptive 10M/100M/1000M network interface	
	Interface: min 2 USB and one eSATA,RS-485 keyboard interface(Optional),support PTZ protocols or better	
12	Recording Data :Locking and unlocking record files. Playback: 16 channel play back synchronisation	
13	Language: Multi-language selectable	
14	IP video & Audio input processing	
	Audio: 2 way audio support for all 16 channel cameras	
	Audio Compression : G.711A	
	Audio Input : 1 Channel RCA Audio Output : 1 Channel RCA	
	Video:	
	Video input : RJ45	
	Video Output : 1 Channel VGA, 1 Channel HDMI	
	Alarm facility : Alarm I/O facility	
	Alarm input : Min 16 channels or more	
Alarm out : Min 4 Channels or more		
	Motion detection : Support	
15	Backup Facility: Automatic backup by schedule at Local place & remote server by software.	
16	Support :Dynamic IP support for DDNS / DHCPm & UPnP support or equivalent. Support all connectivity options for WAN (ADSL/BB/CDMA/GPRS)	
17	Date & time : Time & date sync from NTP server	
18	Power supply: 12V DC	
	Operating Temperature : - 5°C to 55 °C Operating humidity : 20% to 90%	
19	OEM Undertaking Letter: Bidder/SI should have a back-end / back-to-back support contract/agreement/arrangement specifically for this tender no. for services including supply of spare parts, expertise requirements etc. with the Original Equipment Manufacturers (OEMs) which includes the post sales support activities to meet the Service Level Agreement (SLA) mentioned for the entire warranty period.	
	The OEM undertaking/Authorization letter on OEM Letter Head in this regard should be submitted along with the bid mentioning this tender no.	
20	Quoted Product should have CE/EN or FCC/UL, ROHS certification	

2.12 Computer

Supply, Installation and Commissioning of Computer + Printer + UPS + Broadband Internet as per

specifications provided below;

Item	Description of Requirement
Processor	Intel Core i5 7th generation Processor
Chipset	Compatible Chipset on Intel motherboard
Memory	8 GB DDR4 RAM upgradable to 16 GB
Storage	500 GB 7200 Serial ATA HDD or higher
DVD	Internal DVD Writer
Monitor	47 cm (18.5 inch) TFT LED Digital Colour Monitor, TCO' 06 certified monitor
Keyboard	OEM USB Keyboard
Mouse	Two button USB Optical Scroll Mouse
Cabinet	Small Form Factor
I/O Ports	One Serial Port, 1 RJ45 port for Gigabit Ethernet, min. 2 USB3.0 ports in the front, min. 4 USB ports at the back, Headphone (front), Microphone(front), Line in, Line out, VGA Port
Network Features	10/100/1000 on board integrated network port
Graphic	2 Gb Graphics
Slots	Minimum 1 * x16 PCI Express, 1 * x1 PCI Express
Multimedia	Integrated Audio and Graphic Controller
Preloaded Software	Windows 10 Professional or latest With OEM recovery partition
Antivirus	3 years Antivirus
Warranty	5-Year comprehensive on-site OEM Warranty from the date of installation

(a)UPS: -

Item	Description of Requirement
Required Qty	375 Nos.
Type	Offline1
Capacity	1000 VA Line interactive UPS system with minimum 20 minute battery backup on full load (0.65 PF)
Warranty	(1 year warranty on battery (with 3 year onsite warranty))

(b)Printer

Black & White, Laser printer Multi functions printer- PRINT / COPY / SCAN , 512 MB RAM , PCL 6 & UFR II TECHNOLOGY, 15000 PG DUTY CYCLE; FPOT 6 SECS, 2 paper input tray, Auto Duplex, WIFI, Network, Access point, Scan Resolution UPTO 9600 DPI, Push & Pull Scan, ID Card Copy, Upto 999 copies, FCOT 9 Secs, ADF - 35 Sheets.

List of location for installation of computers, UPS and printers

Sr. No	Jmc	Nos.	Lease line	Computer, Printer with UPS	Internet	Landline	Antivirus
1	SWM Control Room (\$ Work stations with two monitors each)	1	1	8	4	5	8
2	Garage	5		5	5	5	5
3	Ward Office	91		91	91		91
4	Transfer station	5		5	5		5
5	sewapura Dumping Ground	1		1	1		1
6	Sewapura Compost Plant	1		1	1		1
7	Mathuradas Pura dumping Ground	1		1	1		1
8	Langriawas RDF Plant	1		1	1		1
9	Waste to Energy Plant-Jindal	1		1	1		1
10	Landfill-Jindal	1		1	1		1
11	C & D Waste Center	1		1	1		1
	Grand Total		1	116	112	10	116

2.13 SWM Monitoring through Dash Board (55 inches) LED Smart TV

Supply, Installation and Commissioning of Dash Board /Smart LED Display of 55" with cables, cabling and accessories as per specifications provided below;

Product Specification

Panel	Diagonal Size	55"
	Type	60Hz D-LED BLU
	Resolution	1,920 x 1,080 (16:9)
	Contrast Ratio(Typ.)	5000:1
	Viewing Angle(H/V)	178:178
	Response Time(G-to-G)	6ms
	Display Colors	16.7 M
	Color Gamut	72%
	Dynamic C/R	50,000:1
Display	H-Scanning Frequency	30 ~ 81kHz 48 ~ 75HZ
	V-Scanning Frequency	
	Pixel Frequency	148.5MHz
Sound	Speaker Type	Built in Speaker(10W + 10W)

Connectivity		RGB	Analog D-SUB, DVI-D (HDMI® Common)
	INPUT	VIDEO AUDIO	HDMI1 Component(CVBS Common) Stereo mini Jack
		USB	USB 2.0 x 1
	EXTERNAL CONTROL		RS232C(in/out) thru stereo jack, RJ45
	EXTERNAL SENSOR		IR, Ambient Light
	Type		Internal
Power	Power Supply		AC 100 - 240 V~ (+/- 10 %), 50/60 Hz
		Max[W/h]	121 132
		Typical[W/h]	W/W: 76, US: 40, KOR: 91 W/W: 86, US: 44, KOR: 90
	Power Consumption	BTU(Max)	412.61 450.12
		Sleep mode	less than 0.5W
		Off mode	less than 0.5W
	Operating Temperature Humidity		0°C~ 40°C 10~80%
		H/W	Super Clear Coating, Temperature Sensor, Pivot Display, Button Lock, Clock Battery(168hrs Clock Keeping), Wi-Fi Module Embedded, SD Card Slot
	Special	S/W	Magic Clone(to USB), Auto Source Switching & Recovery, RS232C/RJ45 MDC, Plug and Play (DDC2B), PIP/PBP, Image Rotation, Built In MagicInfo Player S3, Firmware Update by Network, SMART Signage New Home Screen, Predefined Template for Vertical Usage, Multi Channel, Mobile Control,
			Event Schedule, Backup Player, PC-less Touch, Magic Presenter
		Processor	1GHz Quad Core CPU
		On-Chip Cache	L1 (I/D) : 32KB / 32KB
		Memory	L2 (Unified) : 1MB
		Clock Speed	1GHz CPU Quad
Feature		Main Memory Interface	1.5GB 48bit DDR3-933 (1,866MHz)
			2D & 3D Graphics Engine
	Internal Player (Embedded H/W)	Graphics Storage (FDM)	- Up to 1,920 x 1,080. 32bpp - Supports OpenGL ES® 8GB (2.65GB Occupied by O/S, 5.35GB Available)
			Video Decoder
			- MPEG-1/2, H.264/AVC (Dual)

		Multimedia	- VC-1, JPEG, PNG, VP8
			Audio DSP (Decoder)
			- AC3 (DD), MPEG, DTS and etc.
		IO Ports	USB 2.0
		Operating System	Linux®

2.14 Specifications 8 port Video Wall Controller + Software

Supply, Installation and Commissioning of 8 Port Video Wall Controller with cables and other accessories with Video conferencing facility as per specifications provided below;

Specification Item	Detailed Specification	
Display & Controller	Display & Controller should be from the same manufacturer	
Reputed Company	The OEM should be an established multinational in the field of video walls and should have installations around the world	
Display controller	Controller to control max 8 no of displays with 8 no of outputs along with necessary software's	
Chassis	19" industrial Rack mount Lockable front door to protect drives	
Operating System Platform	Window 7- 64 bit	
Processor options	Xeon/ i3/i5/ i7	
RAM	Std. 4 GB DDR3, higher on request	
HDD	Support upto minimum 2 HDD Std.: 500 GB , can be upgraded on request	
Networking	Dual-port Gigabit Ethernet Controller inbuilt Supports Add on copper/ optical fiber adapters	
Input / Output supported	LAN * 2x RJ45 LAN ports USB 2.0 port	
RAID	RAID 0, 1, 5, 10 support	
Power Supply	(1+1) Redundant hot swappable	
Cooling	Forced cooling	
Indicators	LED's for HDD activity and Power status	
Switches	Power On/Off and System Reset	
Monitoring options	CPU, FAN, Temperature	
Accessories	DVD +RW ,Keyboard and mouse	
Voltage	100-240V @ 50/60 Hz	
Redundancy support	Power Supply, HDD, Cooling FAN, LAN ports	
Scalability	Display multiple source windows in any size, anywhere on the wall	
Outputs	8 No of DVI Outputs (or 6 DVI and 2 nos HDMI)	
Accessories	DVD-R,DVD+RW,, Keyboard, mouse	

Power Supply	(1 + 1) Redundant AC-DC high-efficiency power supply	
	* AC Voltage 100 - 240V, 50-60Hz	
Operating Conditions	* Operating Temperature: 10° to 40°C (50° to 95°F)	
	* Humidity: 10 – 90% non-condensing	
Wall management SW		
Scaling and display	Software to enable the user to display multiple sources in any size and anywhere on the display wall.	
Auto Source Detection	Software should support for auto source detection	
Layout Management	Should support for Video, RGB, DVI, ,Internet Explorer, Desktop Application and Remote Desktop Monitoring Layouts	
Scenarios	Software should be able to Save and Load desktop layouts from Local or remote machines	
Layout Scheduler	All the Layouts can be scheduled as per user convenience	
	Software should support auto launch of Layouts according to specified time or event by user	
Layout Preview	Software should support layout preview option	
Launch Application	Software should be able to support	
Integration with 3rd party devices	System should offer interface to enable control from 3rd party devices like Creston ,AMX etc.	
Live Preview	Software should be able to provide live preview of video-wall	
Work space allocation	System should provide functionality to the administrator to define and allocate work space for a particular operator or a group of operators when working on a Video wall	
Authentication	Software should offer 4 levels of Authentication (User accounts, Permissions for functionality & Roles etc).	
Offline Layouts	It should be possible to create offline layouts	
User friendly	Software should be user friendly	
Ticker	Ticker message can be positioned anywhere on the display wall. Inside the ticker window, font size, colour and background can be set	
Ticker Type	Software should be able to prepare three kinds of tickers: text ticker, RSS ticker and time ticker	
SNTP	System should support SNTP function	
Protection	System should have Hardware License key to protect the software from unauthorized access.	

Functional Requirements for VIDEO WALL CONTROLLER and SOFTWARE

Controller System should be appropriate solution for video wall or control room visualization needs. The Controller System should be capable of handling different kinds of applications. The Controller should have the capability to drive multiple monitors or cubes to form one large logical screen called a data wall or high resolution display wall. The Controller System should ensure high quality graphics performance over the video wall surface.

a) Key Features:

- Should run on all standard Windows® operating systems and with Linux Emulation
- Support multiple processor : Xeon / i7/i5/i3 etc.
- Redundant and hot swappable components (HDD , power supply)
- Dual Redundant Ethernet port

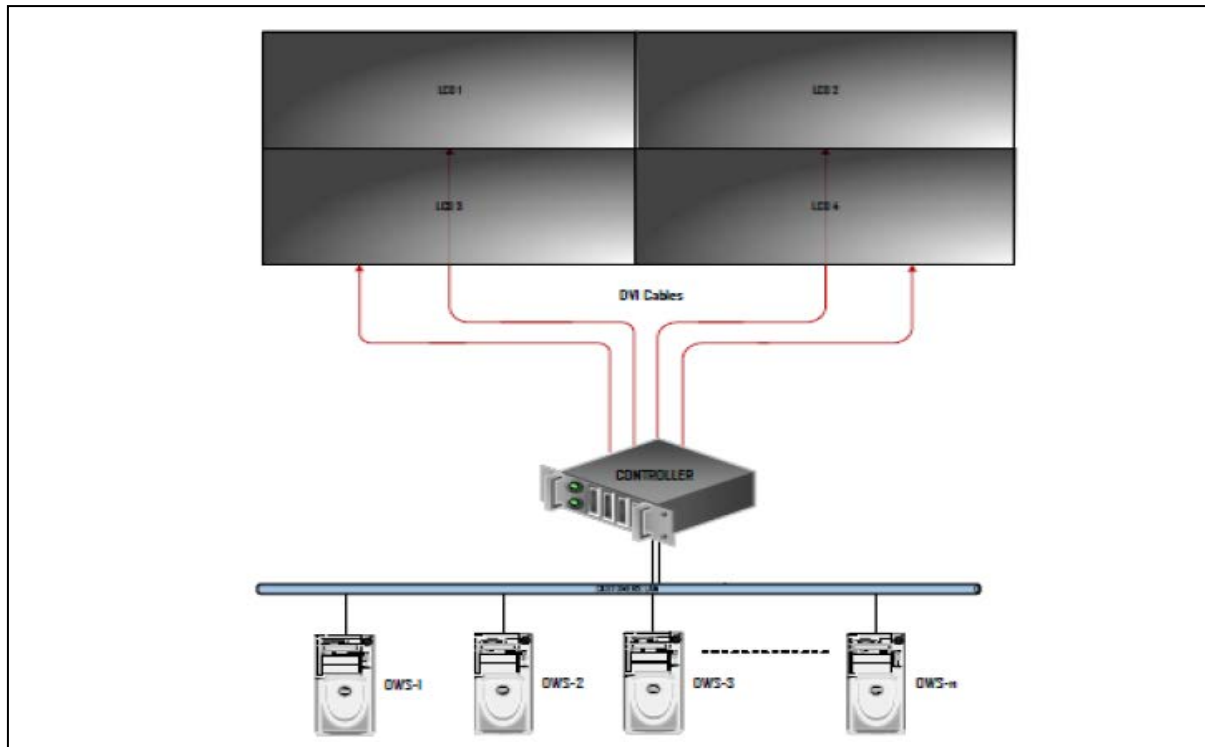
- Should have Raid Support : 0/1/ 5 / 10
- Input capability (DVI, RGBHV, HD video, display over LAN, VNC)
- Supports input resolutions up to 2048 x 1536
- Alarm for different chassis related events (CPU, Fan, etc.)
- Remote management for hardware functions
- Event log and remote power control
- Displays resolutions up to 1920 x 1200 per channel

VIDEO WALL MANAGEMENT SOFTWARE

Video Wall management software should provides a visual environment to control the entire wall layout. Layouts can be saved and recalled. Software interface should have dynamic adjustment capacity to display whatever type of source is connected to the controller and the software's interface should complies with the familiar Windows design standards making it intuitive and easy to learn.

- Software should allow user to full control and monitoring of the display wall and its content – both locally and/or remotely using unique Client based architecture
- Should supports multiple clients and multiple operating systems.
- Input sources and applications can be configured anywhere on the display wall and should integrate with a Video Conferencing system
- Should have saving option for multiple wall layouts/wall configurations for quick recall as or when required.
- Should have different levels of Authentication & Permission system (User accounts ,Permissions for functionality & Roles)
- Options for creating Work Space
- API should be given for integration with any other 3rd party application.

Sample Connectivity Diagram



SCOPE OF WORK – MINI 2x2 VIDEO WALL

The basic outline of scope of work to be undertaken by the bidder for setting up Video Wall is mentioned in the following documentation.

- Fixing of Display units on Wall with mounting bracket.
- Cabling: Power and Display cabling for Display units and controller, bidder needs to suggest UPS requirement and he should mention the cost of UPS as a part of his solution for 24x7 seamless operation with min 30minutes back time.
- Connectivity: The selected bidder shall visit the site of installation and design connectivity plan accordingly prior to submitting their bid.
- Design, Supply, Installation and Commissioning Phase
- Operation and Maintenance (O & M)Phase
- The bidders are requested to cover both the above areas in the same bid which would be combined for evaluation purposes.
- For detailed requirement specifications for Video Wall Solution, please refer the Bill of Materials and Technical specifications

2.15 Specifications for UPS & Battery

Supply, installation and commissioning of UPS and battery set for 4 Displays of 1 hour backup.

2.16 Specifications for QR-Code ID Card Printer

Supply, Installation and Commissioning of ID Card Printer as per specifications provided below;

sl	Features/specifications	Compliance Yes/No
1	Print technology- Direct-to-card dye-sublimation/resin thermal transfer	
2	Print and lamination capabilities One- or two-sided edge-to-edge printing, with standard one-sided and optional two-sided lamination Full-color and monochrome printing capability Alphanumeric text, logos and digitized signatures Variety of bar QR codes: 1D/2D bar code images Printer pooling/sharing	
3	Print resolution 300 dots per inch, 256 shades per color panel	
4	Print quality Ability to conform to sRGB/RGB standard Flexible color management options	
5	Print, lamination and tactile impression speed Min 100 cards per hour (two sided printing and one sided lamination)	
6	Printer memory 128 MB Min	
7	Card capacity Automatic feed: 100-card input for(0.76 mm)Cards Manual feed: 1-card input; 5-card output. Front exception card slot Separate reject location and holding tray Input hopper empty detection	
8	User-friendly operation Printer messages display on LCD panel Message display on Windows operating system when using the Windows driver Easy, fast installation of the printer Card remake standard with cancel option Operator-replaceable print head Front panel power button	
9	Print ribbon kits - color Full-color with resin black on front, resin black on back, 500 images (duplex)	
10	Plastic cards accepted ISO ID-1/CR-80 size cards; 3.370 in. x 2.125 in. (85.6 mm x 53.98 mm) PVC with glossy laminate surface Plastic cards accepted PVC with glossy laminate surface Select key fob cards (ISO ID-1/CR-80 size cards) Data card® Sticki Card™ adhesive-backed plastic cards	

11	Card thickness accepted 0.030 in. (0.76 mm) +/- 10%	
12	Operating environment 60°F to 95°F (15°C to 35°C) 20% to 80% non-condensing humidity	
13	Connectivity Bidirectional USB 2.0 high speed Ethernet 10 Base-T/100-Base-TX (with activity light)	
14	Operating system support for printer driver Windows 8 (32 and 64 bit) Windows 7 (32 and 64 bit)	
15	Agency approvals Any one of FCC, I.C., CE, Ctick, VCCI, RoHS, WEEE, CCC	

NOTE: These ID Card Printers shall be used at later part of commissioning for any additional parts.

2.17 Specifications for QR-Code ID Cards

Supply, Installation and Commissioning of RFID based Smart ID cards for SWM staff , NGOs as per specifications given below;

sl	Features/specifications	Compliance Yes/No
1	Print technology- Direct-to-card dye-sublimation/resin thermal transfer	
2	Cards accepted ISO ID-1/CR-80 size cards; 3.370 in. x 2.125 in. (85.6 mm x 53.98 mm) PVC with glossy laminate surface with Key Fob hole	
3	Card thickness accepted 0.030 in. (0.76 mm) +/- 10%	

NOTE: Initially the bidder has to get the 19400 Nos. of ID cards before commissioning.

2.18 : Specifications for 16 port Switch in Operations centre

Supply, Installation and Commissioning of 16 Port Industrial 100/1000Mbps Managed switch with two nos of 10G uplink ports and associated data and power cabling (Make MOXA/Rugged.com/Perle/Siemens/Schneider).

SI	Specifications	Compliance Yes/No
1	Interfaces Gigabit Ethernet: 10/100/1000BaseT(X) -Min 16 Ports 10 Gigabit Ethernet: 10GbE SFP+ slot -Min 2 nos Console Port: USB-serial console -1 no	
2	Technology	
	Standards:	
	IEEE 802.3 for 10BaseT	
	IEEE 802.3u for 100BaseT(X) and 100BaseFX	
	IEEE 802.3ab for 1000BaseT(X)	

	IEEE 802.3z for 1000BaseSX/LX/LHX/ZX	
	IEEE 802.3ae for 10 Gigabit Ethernet	
	IEEE 802.3x for Flow Control	
	IEEE 802.1D-2004 for Spanning Tree Protocol	
	IEEE 802.1w for Rapid Spanning Tree Protocol	
	IEEE 802.1s for Multiple Spanning Tree Protocol	
	IEEE 802.1Q for VLAN Tagging	
	IEEE 802.1p for Class of Service	
	IEEE 802.1X for Authentication	
	IEEE 802.3ad for Port Trunk with LACP	
3	Software Features	
	Management: IPv4/IPv6, SNMP v1/v2c/v3, Port Mirror,	
	RMON, DHCP Server/Client, BootP, TFTP,	
	SMTP, RARP, Telnet, Flow Control,	
	Filter: 802.1Q VLAN,	
	Redundancy Protocols: STP, RSTP, Link Aggregation	
	Security: RADIUS, TACACS+, SSL, SSH, Broadcast Storm Protection,	
	Port Lock	
	Unicast Routing: Static Routing, RIPv1/V2, OSPF	
	Time Management: SNTP, NTP Server/Client,	
	Industrial Protocols: EtherNet/IP, Modbus/TCP, PROFINET	
	MIB: MIB-II, Ethernet-like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge	
	MIB, RMON MIB Groups 1, 2	
4	Switch Properties	
	Priority Queues: Min 4	
	VLANs: min 128	
	VLAN ID Range: VID 1 to 512	
	DRAM Size: Min 64 MB	
	Flash Size: Min 8 MB	
5	Physical Characteristics	
	IP Rating: IP30 protection	
	Installation: 19-inch rack mounting	
	Operating Temperature: -10 to 60°C (14 to 140°F)	
	Ambient Relative Humidity: 5 to 95% (non-condensing)	
6	Standards and Certifications	
	Safety: UL 60950-1/ EN 60950-1	
7	Warranty	
	Warranty Period: 5 years	

List of Software :

2.21	Architect, Design, and document the overall SWM System requirement Specifications(SRS) , reports , dashboards , workflow, dataflow and access control requirements	1	No
2.22	Design, Implement Fleet management solution with GPS , integrated with the existing VTS and create the necessary reports and dashboards	1	No
2.23	Design and implement Weight Bridge Automation systems for multiple locations	1	No
2.24	Design and implement VTS Route optimisation application integrating inputs from Bin Level Sensors and VTS/GPS with the route available through Mobile Apps for Vehicle drivers .	1	No
2.25	Design and Implement an RFID/GPS based asset management solution	1	No
2.26	Design, develop, supply, installation application software for Workforce / Biometric Attendance for about 8000 persons.	1	No
2.27	Development of SWM Mobile App and Web portal for (i) Citizens/ NGOs/RWA's for (ii) Field staff	1	No
2.28	Development of an Integrated Call centre /Grievance Management application for 8 agents	1	No
2.29	Survey and Map Digitization of all bin locations, plants, treatment centre, weighbridge, dumpyard and Other SWM related point of interests	1	No
2.30	Integration of all SWM application modules in a common SWM operations centre infrastructure. .		
2.31	Integration of CCTV data with Functional Dashboard for users including application for video streaming, photo/frame transmission, storage, archival and retrieval ..	1	No
2.32	Installation of the OS ,application and database software in the Servers.	1	No
2.33	Integration of the various applications in the Central operations centre with the Command and Control Centre through APIs	1	No
2.33	Customized functional Dashboards for each ward/zone/group/ executives and senior management .	1	No
2.34	Customization of the reports required for each of the above applications, listed in the Architecture, SRS and Tender Document	1	No
2.35	Documentation of each application software Code, workflow, SOP , Processes, SWM policies, deliverables, DFD , etc	1	No
2.36	Implementation & subsequent Operation & Maintenance Support for five years for entire SWM system including all Manpower , transportation , mobilization, and OPE	1	No
2.37	4 year AMC for all hardware, software, firmware, database, tools , manpower, installation , all inclusive with taxes	1	No

Integration with weighbridge solution

The solution architecture is as follows;

- RFID reader should be installed at every weighbridge site.
- When vehicle arrives on weighbridge, RFID reader will identify the vehicle and sends information to Central server.
- Weighing information should also be capture from Weighbridge Application (if any available) and same data should be interfaced with Central Server through broadband connectivity.
- Weigh bridge solution needs to be integrated with GPS based fleet monitoring solution and relevant report needs to be generated from the application.
- The application at weighbridge should also capture image through CCTV footage and integrate with RFID information and Weighing information and send total formed packet to central server.

i. Interfaces- GPS Hardware Interface

- GPS device needs to be installed at vehicle and it will communicate with Software application via GPRS network
- Web based Application should directly communicate with DB server through LAN/WAN connection

ii. RFID Hardware Interface;

- RFID hardware needs to be installed at pre-defined gates at client premises and it will communicate with Software application via GPRS network. Also RFID tag needs to be installed at vehicle for its identification.
- RFID reader will read the tag information and provide it to central server using GPRS n/w.
- Web based Application will directly communicate with DB server for RFID based vehicle tracking data through LAN/WAN connection
- Reports can be able to generate from web based solution application.

iii. Weighbridge Interface

Weighbridge data will be interfaced with the central server as per the below mentioned diagram;

- RFID reader will be installed at weighbridge which will perform vehicle identification and provide data to Central server using GPRS network.
- Interface solution will be installed at local weighbridge PC, which will capture weighbridge data from existing application and directly communicate with Central Server for weighbridge data through LAN/WAN connection at predefined regular interval.
- Reports will be generated from web based solution application hosted at central server

iv. Reports and Features required

Central Statistics / MIS: Zonal Waste Collection Summary

- Should show total no of wards per Zone
- Should show total no of Transporters/Contractors per Zone for MIS Duration Selected
- Should show total no of Complaints per Zone for MIS Duration Selected
- Should show total no of Active Vehicles v/s Planned Vehicles in case of MIS for single Day
- Should show total no of Avg. Active Vehicles v/s Avg. Planned Vehicles in case of MIS for Duration
- Should show total no of Bins Collected v/s Bins Planned in case of MIS for single Day
- Should show total no of Avg. Bins Collected v/s Avg. Bins Planned in case of MIS for Duration
- Should show total no of Bins Lifted v/s Bins Planned in case of MIS for single Day
- Should show total no of Avg. Bins Lifted v/s Avg. Bins Planned in case of MIS for Duration
- Should show total no of Completely Served Routes v/s Planned in case of MIS for single Day
- Should show total no of Avg. Served Routes (completely) v/s Avg. Planned in case of MIS for Duration
- Should show cumulative Waste Dumped in case of MIS for single Day
- Should show Avg. (Daily) Waste Dumped in case of MIS for Duration.

v. Weighing Statistics / MIS: Weighbridge wise Weighing Information

- Should show Weighbridge ID & Name *along with vehicle wise waste carried in* (i.e. Weighbridge ID which is performing Gross Weight)
- Should show Zone wise Waste Collected at each Weighbridge in case of MIS for single Day
- Should show Zone wise Avg. (Daily) Waste Collected at each Weighbridge in case of MIS for Duration
- Should show Zone wise Transporter wise Waste Collected at each Weighbridge in case of MIS for single Day
- Should show Zone wise Transporter wise Avg. Waste Collected at each Weighbridge in case of MIS for Duration

vi. Live Zonal Dashboard

- **Zonal Summary**
 - a. Should show total no of Wards
 - b. Should show total no of Transporters with Names
 - c. Should show total no of Complaints and complaints responded to / status
 - d. Should show total no of Active Vehicles v/s Planned
 - e. Should show total no of collected Bins v/s Planned as per TPM Sheet

- f. Should show total no of lifted Bins v/s Planned as per TPM Sheet
- g. Should show total no of completely served Routes v/s Planned
- h. Should show Zone wise Waste dumped at Dumping Site

- **Ward Summary**

- i. Should show Ward Name
- j. Should show total no of Active Vehicles v/s Planned
- k. Should show total no of Collected Bins v/s Planned as per TPM Sheet
- l. Should show total no of Bins Lifted v/s Planned as per TPM Sheet
- m. Should show total no of Routes Served (Completed) v/s Planned

- **Vehicle Summary**

- n. Should show Transporter Name
- o. Should show Vehicle Number
- p. Should show Driver Name
- q. Should show Vehicle's Current Status (Running, Idle, Breakdown)
- r. Should show Trip Summary like; Trip Start time, Trip End time, Planned Ward, Planned Route, Current Location (Live Location), & Trip Status (i.e. Trip Ongoing, Trip Completed, Vehicle Breakdown on Trip, Running on unscheduled Route)
- s. Should show GSM Connectivity Status (i.e. Connected or Disconnected)
- t. Should show GPS's connectivity with Vehicle's Battery (i.e. Connected or Disconnected),
- u. In case of Chhota Hathi, Bins Collected v/s Planned shown to user. In case of Bin Lifters Bins Lifted v/s Planned shown to user. In case of Compactor/Dump Trucks, Trips Completed and waste Dumped information will be shown to user.
- j. Vehicle wise TPM Sheet Summary will be shown to user, which shall involve POI sequence no, POI name, Collection Status (Served/Un-served), Planned Collection Time v/s Actual Collection Time.

Map Operations (Live Individual Vehicle)

- a. Should Display Planned Route and Collection POIs in gray Scale. Tool tip will show Planned Start time, Planned End Time & POI Name. POI Served/Un-served Status shall not be available initially.
- b. Should Display Vehicles actual Position. Served and Un-served Bins will be highlighted. Tool Tip will show POI Name, actual Collection time & Collection Status.
- c. Should show Vehicle Summary; Trip Start Time, Trip End Time, Total KM travelled, Total served POIs and unserved POIs.

- **Map Operations (Route Replay of Individual Vehicle)**

- d. Should Display Planned Route and Collection POIs in gray Scale. Tool tip will show Planned Start time, Planned End Time & POI Name.

- e. Should Display Vehicles actual Routes over Planned Route in Green Scale. Served and Un-served Bins will be highlighted. Tool Tip will show all above information with actual start/end time & Collection Status.
- f. Should show Vehicle Summary; Trip Start Time, Trip End Time, Total KM travelled, Total served POIs and unnerved POIs.
- g. Should show Transit history of Time duration selected; which shall be 1 Date only (under 24 hours i.e. 12:00 AM to 11:59:59 PM)
- **Map Operations (Zonal Vehicles Current Location & Status)**
- h. Should show geo-fences for Zone, Ward, Transfer Station, Parking Point, Weigh Bridges, Dumping Site, Collection POIs
- i. Show all zonal vehicles at their Current Location and Current Status (I.e. Running, Idle, Breakdown)
- **Map Operations (Route Replay for Specific Vehicle)**
- j. Should allow user to select Zone, Transporter, Vehicle Type, wise Vehicle Number for Route Replay
- k. Should allow user to select Day & Time Duration of Route Replay
- l. Should show Vehicle's Transit History with POIs Served / Un-served
- **Map Operations (Waste Collection Status)**
- m. Should show Zone wise Bins Served or Un-served for any specific Day. Will Allow Day Selection Facility.
- n. Should show Collection Status of 24 hours i.e. 12:00 AM to 11:59:59 PM of any specific day
- o. Tool Tip of any Point will show POI Name, Assigned Vehicle, Assigned Route, Appointed Transporter, Collection Status, Collection Time in case of served Bins.

(c)Reports

Operational Reports

- a. Door to Door Collection Status from all point of interest
- b. Daily Operational Vehicles
- c. Daily Route Violations
- d. Daily Vehicle Attendance
- e. Daily Over speed report for vehicle
- f. Daily Zonal Waste Collection Summary for Trips
- g. Vehicle wise Waste Collection Trip Summary
- h. Daily Weighing Abnormalities Reported
- i. Daily Vehicle Presence at Dumping Site/Transfer Station
- i. Daily Vehicle wise Stoppage Details
- j. Container/Bin Pickup Time
- k. Daily and monthly summary of vehicles picking up garbage from particular point of interest
- l. Daily and monthly summary of defaulted locations

Summary Reports

- a. Route Wise Collection Summary for specific Duration
- b. Daily Vehicle wise Performance Summary
- c. Daily Overall Waste Collection Summary
- d. KM Travelled Summary
- e. Zone wise Waste Dumped
- f. Zone wise Vehicle wise Disposal of Waste
- g. Transfer Station wise Disposal of Waste
- h. Transfer Station wise Vehicle wise Disposal of Waste
- i. Daily Vehicle wise Weighing (Weight in MT)
- j. Daily Total Waste Dumped (Weight in MT)

Per Weighbridge Bandwidth Requirements

- In case of wire line connectivity minimum 512 kbps broadband.
- In case of wireless 3G/4G data card would be required.

(d)List of Software's

The SI shall design, develop, supply, install and operate the following Software;

Sl.	List of Software's
1	Design and document the overall operational architecture of the Solid Waste Management showing the data flow from various Collection , Transportation, Treatment, Disposal, Complaints registration, application servers , database and subsequently to the display subsystems and operations consoles . The software solution should provide flexible enough to customize/modify / fine tune later on for changes if any and ensure user friendly, easy to access, easy to get report etc. during operation.
2	Design, development, customization, integration, installation of an application software for Monitoring of existing GPS based Fleet Management System for all Primary Collection & Secondary Transportation vehicle (Including Platform Licenses like OS, DB , Web Server etc.) to integrate the existing GPS based Vehicle Tracking system with the GIS Map provided by RISL along with web portal. The software solution should provide flexibility for changes if any made during operation.
3	Design, develop, supply, install of an application software for Weigh bridge automation integration and related application connected to dashboard for live data on quantity of garbage entering various facilities viz., five Transfer Station, Compost Plant, RDF Plant, Two Dumping grounds, Waste to Energy Plant, C & D Plant (excluding Weigh Bridge civil and mechanical) for 12 locations. The software solution should provide flexibility for changes if any made during operation.
4	Design, develop, supply, install of an application software for Asset tracking & Management systems. The software solution should provide flexibility for changes if any made during operation.
5	Design, develop, supply, install of an application software for Workforce / Biometric Attendance recording system for about 8000 persons. The software solution should provide flexibility for changes if any made during operation.
6	Development of Application software for Map Integration software application
7	Development of Integrated MIS based Report indicating the efficiency level, defaults, Penalty to be levied, Bills to be paid, Additional Manpower/ Machineries to be mobilized etc.to strengthen the decision making process

8	Development of Application software for Business intelligence application(optional). The software solution should provide flexibility for changes if any made during operation.
9	Development of Grievance Management application through SMS, Email, Web form, mobile application and call Centre and management workflow design for grievance servicing.
10	MDM Software for smart phone application monitoring and management.
11	Survey and Map Digitization of all bin locations, plants, treatment Centre, weighbridge, dump yard etc. locations involved. Complete data has to be ported in the mapping to be provided in the application
12	Development of SWM App for (1) Citizens/ NGOs, (2) RWA's registration, (3) Workforce and websites for registering Grievances. Indicating complaint number, task assignment & completion loop, taking mobile photo displaying date, time, Feedback from GRC System, website and mobile application. To set up a single access point for replying citizen's grievances received through any of the communication mode viz. online portal, mobile application, E-mail, Manually on paper, social media and on call center number. The software solution should provide flexibility for changes if any made during operation.
13	Integration of above digital solution application software's with Command & Control Centre complete by considering following features.
14	Software application for photo ID card printing at kiosk setup for issuing and maintaining ID card related operations.
15	Open source mapping platform / interface is preferred which will be able to integrate with any given mapping source like Google/ BHUVAN / BING Maps / Yahoo maps.
16	Customization of the application to take care of the SRS if the application is already available as a package.
17	Installation of the application and database software in the Servers allotted for the same in the data Centre, configure the same to suit the needs of the stake holders.
18	Integration of the various application with the Smart Command and Control Centre through appropriate APIs (Application Programming Interfaces)
19	Demonstration of the accuracy , completeness and authenticity of real time operations and tracking for all the applications listed above
20	Customization of the reports required for each of the above applications, listed later in this document. (3.6.3 and 3.7 of Employers requirement - Technical Specifications)
21	[Documentation for the application, prepare operational RUN books and Standard operating process for the entire operations management.

(e)Asset Management System

Asset management maintains a desired level of service for municipal assets to provide the lowest life cycle cost. Lowest life cycle cost refers to the best appropriate cost for rehabilitating, repairing or replacing an asset. Asset management is implemented through an asset management program and typically includes an asset management plan and software.

Challenges faced in Asset Management for Solid Waste

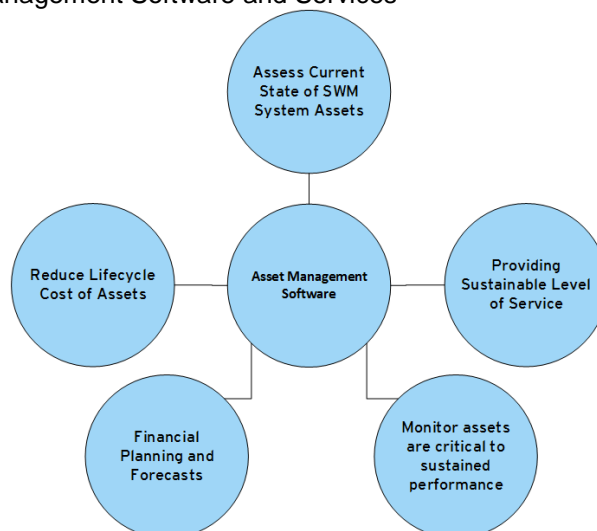
- Determining the best (or optimal) time to rehabilitate/repair/replace aging assets
- Increasing demand for services
- Overcoming resistance to rate increases
- Diminishing resources
- Rising service expectations of customers
- Increasingly stringent regulatory requirements
- Responding to emergencies as a result of asset failures
- Protecting assets

Key Goals of Asset Management Software for Municipal Solid Waste Management Assets

- Prolonging asset life and aiding in rehabilitate/repair/replacement decisions through efficient and focused operations and maintenance
- Meeting consumer demands with a focus on system sustainability

- Setting rates based on sound operational and financial planning
- Budgeting focused on activities critical to sustained performance
- Meeting service expectations and regulatory requirements
- Improving response to emergencies
- Improving security and safety of assets

Framework for Asset Management Software and Services



i. Assess Current State of SWM System Assets

The asset management software shall help in knowing their current state of assets used for the Solid Waste Management for the city of Jaipur. These assets shall include the below assets;

a) Tractors	g) JCB's	n) Cage
b) Dumper Placers	h) Loaders	o) Bulldozers
c) Refuse Compactors	i) Road Sweepers	p) Ambulance
d) Auto Tippers	j) Levelers	q) Suction Machines
e) Auto Jets	k) Jeeps	
f) Jetting Machines	l) Mini Trucks	
	m) Dumpers	

The asset management software shall provide

- List of all assets owned by Jaipur Municipal Corporation, asset inventory and system map.
- Location of all assets
- Current condition of assets including age, operational status etc. The system shall provide a condition assessment and rating system for all assets.
- Total Life of the asset and assessing remaining useful life by consulting projected-useful-life tables or decay curves.
- Ability to determine asset values and replacement costs.

Providing Sustainable Level of Service

The asset management software shall help in maintaining a required “sustainable” level of service. It shall help in implementing an asset management program and provide real time information to all stakeholders. The asset management software shall help in defining level of service and associated system performance goals, both short- and long-term, based on Quality, quantity, reliability, and environmental standards.

The asset management software shall be able to gather information about customer demand, benchmarks for SWM from MOUD and CPCB, and information from other stakeholders to develop the level of service requirements. The level of service requirements shall be regularly updated to account for changes due to growth, regulatory requirements, and technology improvements.

The asset management software shall provide

- Define level of service demanded by stakeholders and customers, analyze current and anticipated customer demand and satisfaction with the software.
- Define regulatory requirements like benchmarks defined by SWM 2016 rules and bodies like MoUD and CPCB
- Measure physical capabilities of municipal assets like waste carrying capacity, suction capacity etc.
- Using level of service standards to track system performance over time.
- Measure actual performance against those benchmarks and capacity and determine asset utilization.
- The system shall be transparently show to all stakeholders and citizens level of service delivered as per agreement that describes system's performance targets.

Monitor assets are critical to sustained performance

The asset management software shall monitor assets failure and mitigate risks using a mechanism proactive information sharing, escalations and standard operating procedures. Every asset presents different risk upon failure and critical in unique way to SWM operations. Therefore, it is important to know which assets are required to sustain your SWM system's performance. Critical assets are those which have a high risk of failing (old, poor condition, etc.) and major consequences if they do fail (major expense, system failure, safety concerns, etc.). It should be possible to define how critical each asset is and rank them accordingly with this type of analysis in vulnerability assessments.

The asset management software shall provide

- Listing of assets according to how critical they are to system operations.
- Store information based on failure analysis (root cause analysis, failure mode analysis).
- Determining the probability of failure and listing assets by failure type.
- Analyzing failure risk, probability of failure and consequences.
- Using asset decay curves.
- Reviewing and updating your system's vulnerability assessment (if your system has one).
- List repair cost and time and other consequences of breakdown

ii. Reduce Life cycle Cost of Assets

Operations and maintenance (O&M), personnel, and the capital budget account for a large percentage of a typical SWM system's expenses. Asset management enables a system to determine the lowest cost options for providing the highest level of service over time. The software shall help to optimize the work O&M crews are doing, where they are doing it, and why. The software shall help to make risk-based decisions by choosing the right project, at the right time, for the right reason.

The asset management software shall provide

- Ability to move from reactive maintenance to predictive maintenance.
- Knowing the costs and benefits of rehabilitation versus replacement.
- Looking at lifecycle costs, especially for critical assets.
- Deploying resources based on asset conditions.
- Analyzing the causes of asset failure to develop specific response plans.

iii. Financial Planning and Forecasts

Sound financial decisions and developing an effective long-term funding strategy are critical to the implementation of an asset management program. The asset management software shall help to ascertain economic costs and revenues generated by your SWM system to enable JMC to determine your system's financial forecast. System's financial forecast can then help JMC decide what changes need to be made to SWM system's long-term financing strategy.

The asset management software shall provide

- Estimate budget required to maintain our assets for required level of service
- Help define and revising rate structures sustainable for system's long-term needs
- Predict fund requirements for Financing asset rehabilitation, repair, and replacement

(f) Asset Management System – Functional Requirements

The Asset management system shall maintain a registry of the following information for the assets

- **Identification registry:** codes and other identification / localization elements, etc.

- **Specification registry:** physical and performance features, consistency (size, surface, volumes), preservation status, etc.
- **Functional registry:** purposes, operational procedures, rules, staff representative, etc.
- **Administrative registry:** rental agreement and purchase agreements, supply contracts, utilities, legal status, amortizations, maintenance, etc.
- The software shall manage the maintenance activities in a customized way for each organization and in a differentiated way for every asset type. For each asset requiring maintenance it shall be possible to define;
 - Activities types
 - Tools Required
 - Necessary spare parts
 - Possible damages and related solutions
 - Diagnostic checklists
- The software shall manage
 - Scheduled maintenance work order management
 - Workflow of the breakdown maintenance
 - Check of scheduling criteria like time and threshold
 - Generation of the calendar for the required period
 - Production of the work orders
- The software shall manage the maintenance with the following flow:
 - Open the request through various channels, including a self-service portal, any automatic warning systems, and the maintenance scheduler
 - Check and approve the request by help desk / call Centre operators
 - Forward the working order to the operations team / supplier
 - Take charge or reassign the requests
 - Plan and execute the intervention with any suspensions / linked requests, by referring the Standard Operating Procedures defined in the system.
 - Record the activities report from smart phones
- The asset management software shall include other features to manage the maintenance:
 - Checks and automatic notifications upon SLA and KPI
 - Collection and record of user feedbacks
 - Continuing increasing of the knowledge base, available to operators
 - Multiple types of reports and dashboards for visualizing asset information data
 - Management of purchase order workflows and material receipt
 - It shall be possible to refer and search data available in the application through the graphical user interface
 - Detailed analysis shall be available through reports which can also be forwarded via email
- The asset management software shall allow to geo-reference buildings and infrastructures online maps such as Open Street Map/ Bing Maps/ BHUVAN Maps. It should be possible to also geo-reference the assets onto the plans of buildings, produced by external tools (i.e. Autodesk AutoCAD) and manually imported into the software, in order to:
 - Graphically show the location of the asset, with automatic zoom on its location
 - Define and graphically modify the position
 - Query the information associated to the elements represented on the map
 - Move through the navigation tree among the objects represented on the map
 - Operate on the list of layers represented on the map
- The asset management system shall be able to integrate with existing ERP system, using connectors to access data related to administrative offices and related cost centers, internal staff, suppliers, maintenance teams, any customers, partners of the supplied services and of the related SLA's.
- The software shall manage movement of spare parts and consumables, which can be activated in different ways:
 - By receiving new materials against a purchase order
 - During a maintenance work order
 - Movements among stores or year-end inventory corrections
- It shall be possible to register the available information for example the type and frequency of the activities, required equipment, necessary spare parts, possible breakdowns, diagnostic check lists in the asset management software.

- The asset management system shall automatically create scheduled maintenance activities, produces work orders, forward them through inbuilt workflow management system to the right personnel (in and/or outside the organization) and help in resolving issues at the earliest.
- The workflow management system shall allow creation of request through different channels including
 - Request generation via the self-service portal
 - Request generation by the call Centre operators
- The system shall forwarding of work order to the right team / supplier (suggested by the system according to the type of the problem and the contracts)
- The system shall allow planning, execution & registering of the intervention report
- It shall be possible to set criteria (SLA / KPI) for the monitoring of the SWM operations activity progress and the start of the related management actions (e-mail / SMS notifications for any delays).
- The system shall allow to capture user feedback (rated from 1 to 5) on the quality of the problem-solving service for Customer satisfaction metrics.
- The system shall provide reports for the analysis of the scheduled activities and breakdowns incidents like location statistics / cost Centre / problem type / etc., and compare with standard operation data like MTBF, MTTR.
- The asset management system shall provide through the workflow engine asset handling, based on the following flow:
 - Logging of logistics requests like assignment , shifting , withdrawal and removal and provisioning of new supplies
 - The request shall require approval by the designated authority
 - Forwarding of work order to the right team or supplier
 - Planning, execution and logging of the intervention report
- The asset management software shall also provide a workflow for the spare parts management and updating the related stores:
 - Logging of requests for incoming / outgoing parts from stores by staff or while as part of a work order
 - The request shall require approval by the designated authority
 - Delivery of goods and related registering into the system
- It should be possible to define an annual budget by period / cost Centre / site.
- The asset management system shall record any purchase requests, purchase orders, invoices, bills generated as part of workflow execution in the system.
- The system shall generate reports and dashboards related to financial data from all financial asset management operations.
- The asset management software shall provide the below financial management features:
 - Basic data management: Departments, Suppliers with contact persons and maintenance teams, Customers, other data
 - Annual budget management on two levels: budget centers, budget items
 - Contracts management: utilities, rental, sale
 - Purchase requests
 - Purchase orders (related to the request)
 - Purchase invoice (related to the order)

(g)Solid Waste Management Citizen Centric Mobile Application

Functional Requirements

1. Users shall be able to download applications from Android and Apple stores and register in them.
2. Report garbage lying in open areas using photograph with automatic geo-tagging and times tamping by mobile application.
3. Report non-pickup of DTD garbage collection on daily basis.
4. See Expected Time of Arrival of DTD garbage pickup trucks and service in their locality on daily basis on a map
5. Raise complaints for damaged or missing garbage bins in their locality
6. They shall be able to make request and pay through mobile for new Garbage Segregation Sticker Booklets using the mobile application which shall be delivered to their house.

7. They shall be able pay monthly Garbage Collection User fee through the application. .
8. The mobile application shall also provide guidelines for waste segregation including how different household and commercial items shall be segregated into Dry, Wet and Hazardous waste. It shall how guide on how to dispose of Construction and Demolition and Horticulture and Garden waste.
9. The application shall provide real time status of garbage collection operations in their locality and ward.
10. The mobile application shall also support ability to push messages for promotion and awareness programs related to solid waste with text and pictures.
11. Users shall be able to understand how to segregate domestic waste through tutorial in the mobile app

(h) Solid Waste Management Field Staff Centric Mobile Application

Functional Requirements

1. Field Staff shall be able to download applications from web stores and register in them.
2. The employee shall be able to login to the application.
3. The bin collection field staff shall be able to perform all the activities listed below:
 - a. For Bin Collection Staff details of the fixed route with bin collection waypoints shall be displayed on a map on mobile handheld as per the daily schedule.
 - b. Real-time position of vehicle shall be displayed on the map
 - c. Warning message shall be displayed on mobile application if vehicle moves away from pre-determined fixed route using prefixed geo-fencing or equivalent mechanism.
 - d. Separate color code shall be used for bin markers based on serviced / un-serviced status along the route in real time
 - e. Notification of Bin Pickup detected by Bin Readers shall be relayed to mobile application in real time to mobile application when vehicle reaches in vicinity of the bin.
 - f. Trip Start , Ongoing and Completion status shall be shown in the software
 - g. The following details of a particular bin shall be available on clicking on bin marker
 - i. Bin ID
 - ii. Bin Garbage Level
 - iii. Location Name
 - h. Picture of Pickup Location
 - i. The staff shall be able to get trip details like distance travelled , average speed , current speed , next stop
 - j. Fuel filled and distance travelled shall be correlated to find any fuel pilferage
 - k. Bin collected staff shall be able to report blocked bins (due to illegal parking etc.) via the mobile application with geo-tagged photograph as evidence
 - l. Dynamic routing to any filled bin shall be done by sending route updates to vehicles with new optimal route plan.

(i) Roles and responsibilities

- i. System Integrator(SI) / Vendor/ Winning Bidder will be referring to the successful bidder who shall undertake to implement the project for which this bid is invited. The selected System Integrator is required to be completely responsible for
 - Demonstrating or carrying out a proof of concept for the entire scope in a test environment. For better understanding and initial learning, the selected bidder will have to carry out a pilot run which will include hardware installation on certain sample vehicles for a particular ward or area. The observations are then shall be taken into the consideration and to be implemented in the solution. This phase will focus on installing hardware devices like GPS

based tracking device, RFID Tags, RFID reader, Data Terminal, and other sensors on some selected vehicles for each department.

- Integration of JMC and BVG VTS application to provide a seamless VTS environment. For this purpose the SI has to act as an intermediary between REIL and BVG and provide necessary technical help to have an integrated VTS system.
- GIS mapping on the GIS map provided by RISL. Delay of more than two weeks shall attract penalty. Geocoding / surveying of the following components shall be done by the implementing agency:
 - House hold Waste Collection points
 - Bin locations
 - Ward Offices
 - Transfer stations
 - Weigh Bridge
 - Others (as per JSCL request)

The accuracy of these locations should be within 5 meters. The implementing agency shall use these locations over the maps and shall deliver the same to JSCL in formats like ESRI formats or any other standard GIS format. The GIS map will be provided to the Bidder for the purpose of Geo-coding.

- Facilitate acceptance tests for the entire installation
The setting up of the devices, development and customization will be followed by a comprehensive testing of the each functions identified by the user departments in the SRS. This detailed testing of the system will be done by the user department's identified personnel.
- the rollout of the project and commencement of operations post acceptance of the POC.
- the complete services as stated in the scope that includes, supply of required Devices, Application Development & Customization
- Application deployment on server, training, installation, maintenance, support etc. on an Opex model payable per quarter the application and database related technical part of the application shall be hosted at central server.
- O & M support for a period of 5 years after Final Acceptance test of the entire installation
- The vendor would be expected to conduct workshops with the following points in mind –
 - Demonstrate the benefits and functionality of the ISWM focusing on the business process
 - Train the man power (both existing and new) on the usage of vehicle tracking software, distribution of user guides and manuals and the potential of the software in performing daily tasks more effectively and efficiently.
 - Planning and devising a training program to ensure transition from manual to the new system is seamless.
 - Develop and implement a standard data collection procedure and template spreadsheets

- The Training will be given based on the roles and authorization.
- Managing warranty of all equipment supplied by the winning bidder Undertake end-to-end management of database on an on-going basis to facilitate smooth
- Ensuring regular database backup and periodical restoration of backup data
- configuration management for database tuning, database schema, disk space, user roles, and storage.
- Escalate and co-ordinate with its OEMs for problem resolution wherever required.
- Comply with JMC's security and data protection requirements
- Provide necessary software upgrades, enhancements, refreshes and maintenance.
- Provide software license management and control.
- maintain data regarding entitlement for software upgrades, enhancements, refreshes, replacements and maintenance
- Collection of GIS Information related to the Bins locations, ward offices
- Registration of vehicles, locations and other information
- Replacing non-functional devices from Field with configured working devices.
- Development of Mobile, DB, Web applications as required by JMC .
- Supplying required consumables, spares & support infrastructure.
- design and development of MIS & GIS reports.
- Producing SLA compliance report with third party auditable background data
- Developing software to generate payment data every month inclusive of penalties
- Ensuring security and authentication at all levels of IOT
- Taking necessary backup and data archivals
- Mobile and Web Application system maintenance/enhancements as required from time to time including bug fixing.
- Taking necessary action if the application is found vulnerable through VA/PT tests
- Preparation of
 - Systems Administration Manuals,
 - Installation Manuals,
 - Operational Manuals and Maintenance
- Registering complaints and resolving effectively and within the SLAs defined, all complaints related to the functioning of the devices/software through a managed help desk and service centers.
- Ensure smooth handing over/transfer of the system at the time of expiry or termination of the contract through submission of all relevant documentation , drawings etc
- Provide three months transition period to the incumbent vendor for uninterrupted operation.

ii. Jaipur Municipal Corporations (JMC) is the customer who will get the services from the system integrator for the Digitization Services and will be responsible for

- Tender management and selection of the winning bidder
- Signing the Contract Agreement with the identified System Integrator
- Provide acceptance test certificate to the vendor /SI
- Nomination of ward-wise, Zone-wise supervisors
- Oversee project implementation on day-to-day basis.
- Input system requirement functional specification to the SI for designing the required Application
- Suggest SI for the design of the MIS reports and analytic data
- Monitoring SLA at regular intervals.
- Facilitate training for staff to be provided

iii. Project management unit will have the following responsibilities

- Create two cover based performance based tender document as per the RTPP format
- Bid management evaluation and selection of Service Provider for implementation of the project
- Be the Technical Advisor to JMC for successful implementation of the project.
- Monitoring project milestone activities
- System integrator performance management
- Recommending JMC for release of payment for SI services after deduction of penalty.
- Help in conducting third party SLA and other audits

iv. Project Execution Timelines

The Project execution period is 9 months.

Week	Activity	Remarks
S+ 0	Project Start	This would be done after Contract Signing between JSCL and Bidder
S+ 3	Site Survey	Site survey and documentation by 3 weeks JMC to coordinate
S+ 5	Proof of Concept/Trial Run	Selected vehicle and ward
S+ 7	Finalization of SRS	To be finalized with JMC and JSCL within 10 days
S + 13	Installing Servers in data Centre	DoIT Data Centre
S+14	Deployment of GPS units in all vehicles and roll out VTS application	Help of JMC required
S+ 16	Deployment of RFID tags, handheld RFID devices	Report of deployment to be prepared by Bidder
S + 18	Complete Geocoding and Mapping	GIS Map from RISL/JDA/Google
S + 19	Deployment of cameras, LCD displays & Weigh bridge automation, Bin level sensors	JMC to coordinate
S+ 22	Test Rollout attendance recording application, route optimization application, mobile application for citizen and field staff	JMC to coordinate
S+ 23	UAT User Acceptance Test for VTS, RFID and attendance application	Discussions with Stakeholders for final changes if any
S + 25	Integrated Testing and Rollout	
S + 28	Acceptance Testing	Acceptance test Certificate from JSCL
S+ 30	Training	To be decided with JSCL
S + 33	SOP , Run Book , Security Audit	
S+36	Trial run and rectification	Successful commissioning
S+39	Start of O&M and Warranty.	After user acceptance test / successful commissioning
S+91	Start of AMC	

(j) Service Level Agreements

SLA Objective

The selected bidder shall provide services as per SLA matrix, which defines maximum response as well as rectification times for all kinds of infrastructure/equipment/Software covered under the contract. Contractor is required to provide minimum 99.75% overall uptime for components/services, measured quarterly.

- i. SLA Service Level Agreement (SLA) shall be the part of contract between JSCL and the successful Bidder. SLA defines the terms of the successful Bidder's responsibility in ensuring the timely delivery of the deliverables and the correctness of the same based on the agreed Performance Indicators as detailed in this section.

The successful Bidder has to comply with Service Levels requirements to ensure adherence to project timelines, quality and availability of services.

The successful bidder has to supply software / automated tools to monitor all the SLAs mentioned in the scope of work.

ii. Penalties

Penalties shall **not** be levied on the successful Bidder in the following cases:

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

The non-compliance to the SLA has been due to reasons beyond the control of the bidder.

Theft cases by default would not be considered as "beyond control of the bidder". However, in certain cases, based on circumstances & certain locations, police may agree to qualify as "beyond control of the bidder".

Damages due to Road Accident / Mishap shall be considered as "beyond the control of bidder".

However, Power shut down or deliberate damage to Pole /Equipment/Sensors would not be considered as "beyond control of the bidder".

This SLA document is to clearly define the levels of service which shall be provided by the System Integrator to JSCL for the duration of this contract.

Definitions for availability

Uptime shall mean the time period for the specified services / components with the specified Functional and technical requirements stipulated are available to the user department.

$$\text{Uptime} = \left\{ \frac{1 - \text{Downtime} - \text{Planned Maintenance time}}{\text{Total Time} - \text{Planned maintenance time}} \right\} * 100$$

Downtime shall mean the time period for the specified services / components with the specified Functional and technical requirements stipulated are not available to the user department. and excludes downtime owing to Force Majeure & Reasons beyond the control of bidder .

Planned application / server downtime would not be included in the calculation of application /server availability. However, the Successful Bidder should take at least 10 days prior approval from JSCL in writing for the planned outage, which should not be for more than 30 minutes, would be in lean period (non-movement period, like post mid-night) and limited to max. 4 outages in a year

Incident refers to any event / abnormalities in the functioning of those defined services that may lead to disruption in normal operations

Helpdesk Support shall mean the 24 x 7 x 365 Centre which shall respond to/resolve/ escalate customer received complaint on phone, web based application and email/SMS.

Resolution Time shall mean the time taken (after the incident has been reported at the helpdesk), in resolving (diagnosing, troubleshooting and fixing) or escalating (to the second level or to respective

Vendors/OEMs, and raising a child ticket for the OEM, and closing the same subsequently.

iii. SLA Metrics and Payment

- The SLA metrics provided specifies a baseline performance of Service availability.
- There are multiple slabs for Service Levels which relate to certain definite percentage of Penalty.
- The Agency will get 100% of the contracted value if the all baseline performance metrics are complied.
- The Agency will get lesser payment in case of the lower performance as indicated in the SLA matrix.
- SLAs will be evaluated on a Quarterly basis unless specified otherwise.
- If the performance of the Agency in respect of any parameter falls below the prescribed lowest permissible limit specified, then under certain conditions the contract itself may be terminated.
- Appropriate SLA Measurement tools to be are to be provided by the SI and audited by JSCL or its appointed Consultant for accuracy and reliability.
- It is the responsibility of the System Integrator would to configure the SLA Measurement Tools such that all the parameters as defined under SLA matrix given can be measured and appropriate reports be generated for monitoring the compliance.
- The SLAs defined, shall be reviewed by JSCL on an annual basis after consulting the SI, Project Management Consultants and other experts for correcting unrealistic metrics and penalties.
- JSCL shall also have the right to conduct, either itself or through any other agency as it may deem fit, an audit / revision of the SLA parameters in consultation with the bidder.
- Total penalty to be levied on the SI shall be capped at 25% of the total contract value.
- JSCL would have right to invoke termination of the contract in case the overall penalty equals 20% in two consecutive months.

iv. Service Level and Penalty matrix at Steady State

SERVICE AVAILABILITY and PENALTY MATRIX

Srl No	Service Level Description	Achieved service level thresholds	Penalty
1	Adherence to milestone activity timelines mutually decided	Delay per week from stipulated completion of milestone activity	1% or QGR payment
2	Availability of the SWM application	99% or above	1% or QGR payment
		Between 95-99%	3% or QGR payment
		Less than 95%	8% or QGR payment

3	Failure of Hardware components like GPS, RFID , Display units , and other active devices etc	less than 2% per week across all active devices	No penalty
		Between 2-5% per week across all devices	0.5% of QGR
4	Average Query response for a Vehicle status query	Less than 30 secs	No penalty
		Between 31-60 secs	0.2% of the QGR payment
		Between 60-120secs	0.5% of the QGR payment
		More than 120 secs	1% of the QGR payment
5	Replacement of Damaged , nonworking or stolen RFID reader , Tags or any other active device	within 24 hours of reporting	No penalty
		Between 24-48 hrs.	0.01 % of the QGR payment per device
		More than 48hrs	0.05% of the QGR payment per device
6	Call handling percentage on First Call	More than 95%	No Penalty
		Between 90-95%	0.2% of QGR payment
		Less than 90%	0.5% of QGR payment
7	Call resolution timelines for severity 1 Calls	More than 8 hrs.	No of such calls * .01% of the QGR payment
8	Call resolution timelines for severity 2 Calls	More than 24 hrs.	No of such calls * .02% of the QGR payment
9	Call resolution timelines for severity 3 Calls	More than 72 hrs.	No of such calls * .02% of the QGR payment
10	Availability of proposed manpower	Deviation of man powers at a level by 10%	10% of the Total salary for people at that level
		Deviation of man powers at a level by 20%	15% of the Total salary for people at that level

Severity definitions

Severity 1:

The ISWM solution down impacting critical business functions OR Multiple critical functions down

impacting SWM users on daily operations OR any module/ function deemed as highly critical by JSCL.

Severity 2:

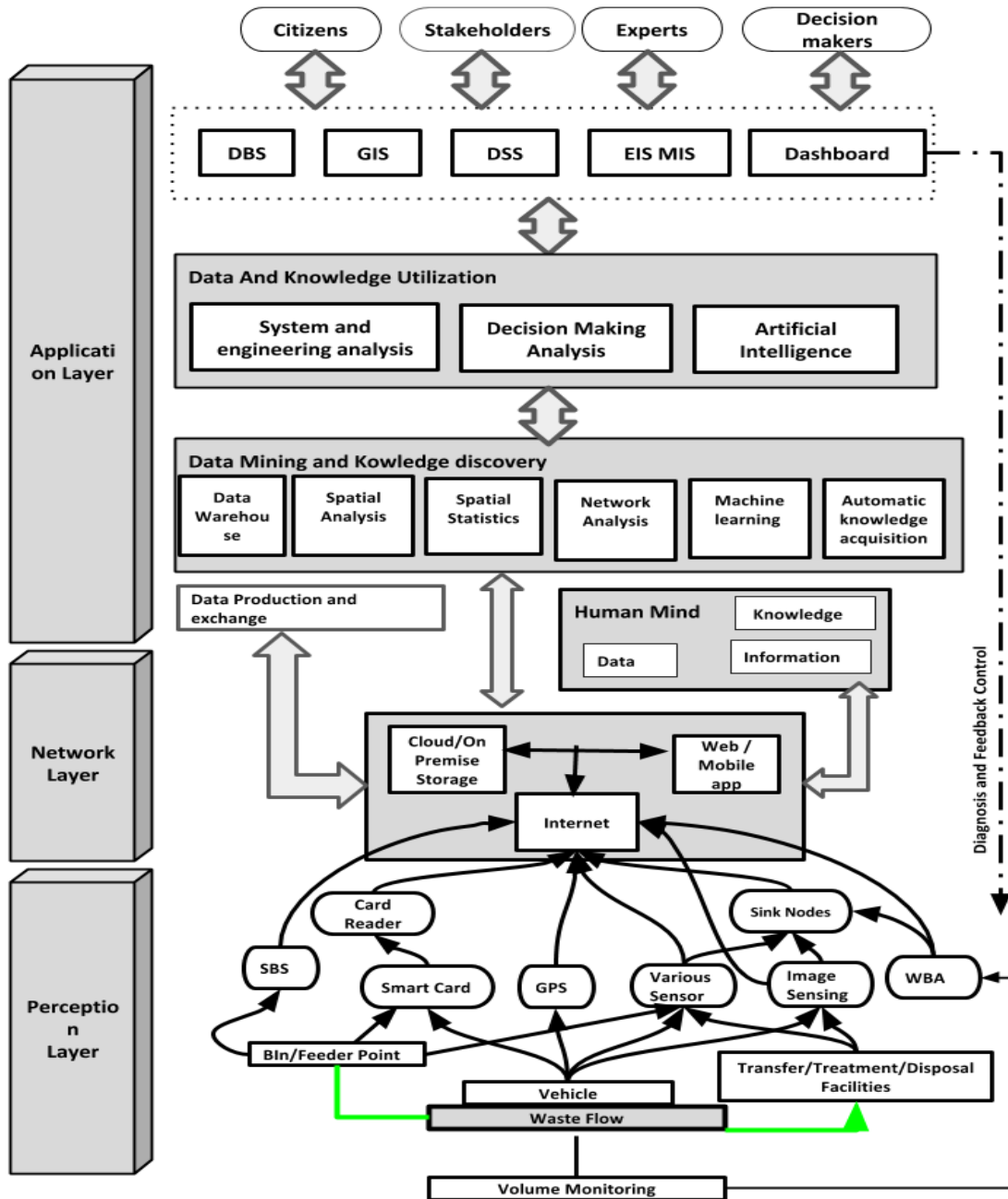
One ISWM module / functionality down impacting critical business functions OR Multiple critical functions down impacting SWM users having a major impact on daily operations.

Severity 3:

Loss of business functionality for 10 or more users impacting day to day operations

c) System Architecture

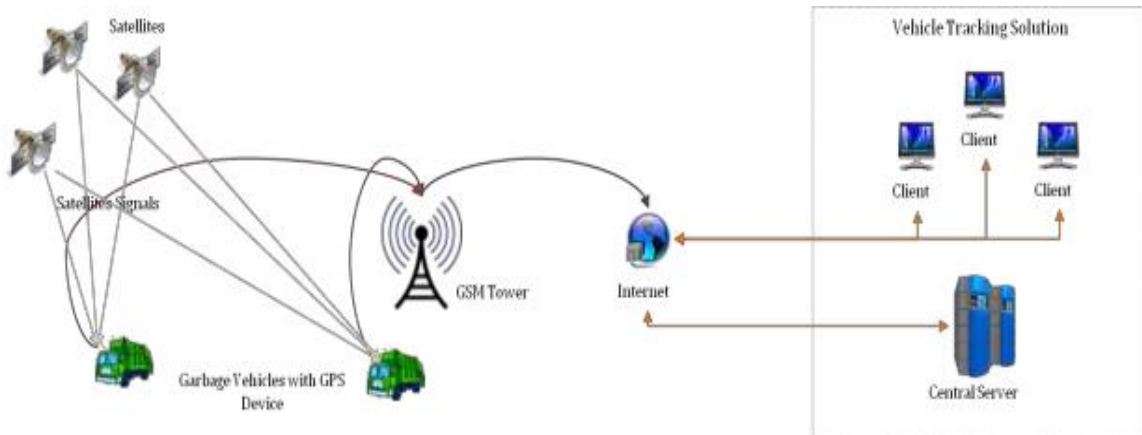
(a) Layered Architecture



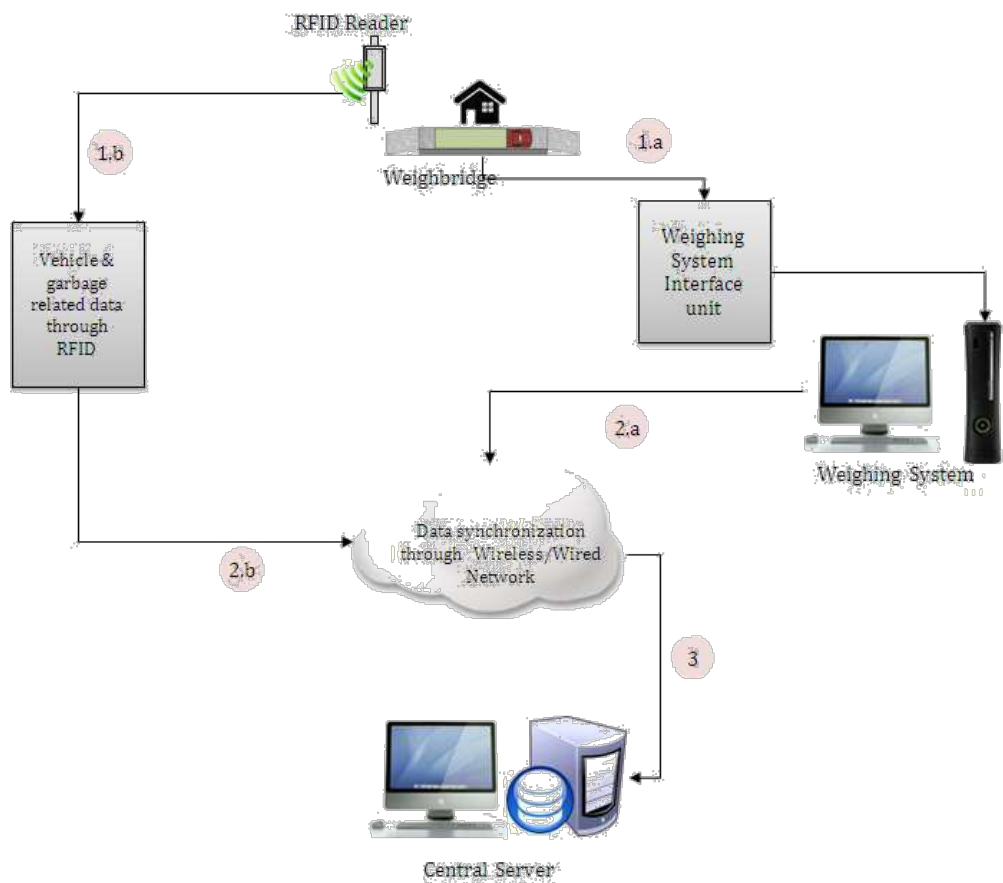
SBS - Smart Bin Sensor
 WBA - Waste Bin Automation
 DBS - Database System
 GIS - Geographic Information System

DSS - Decision Support System
 MIS - Management Information System
 EIS - Executive Information System

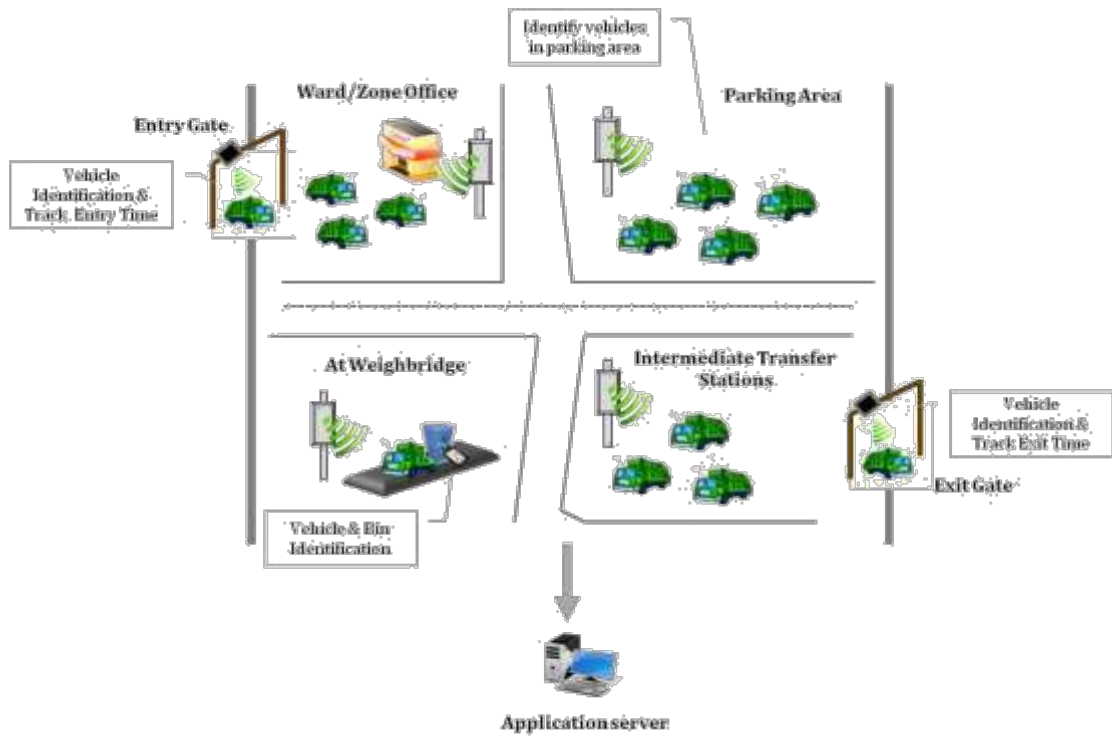
(b) GPS Hardware interface diagram for the GPS based solution and central server should be as mentioned follows



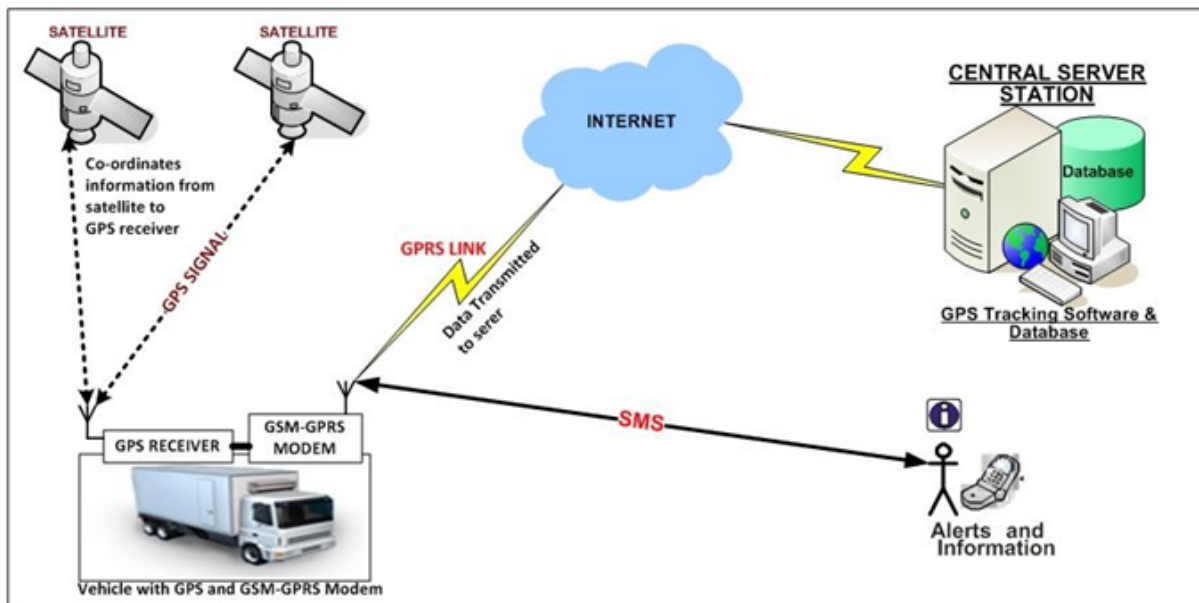
(c) RFID Interface:



(d) Application Server

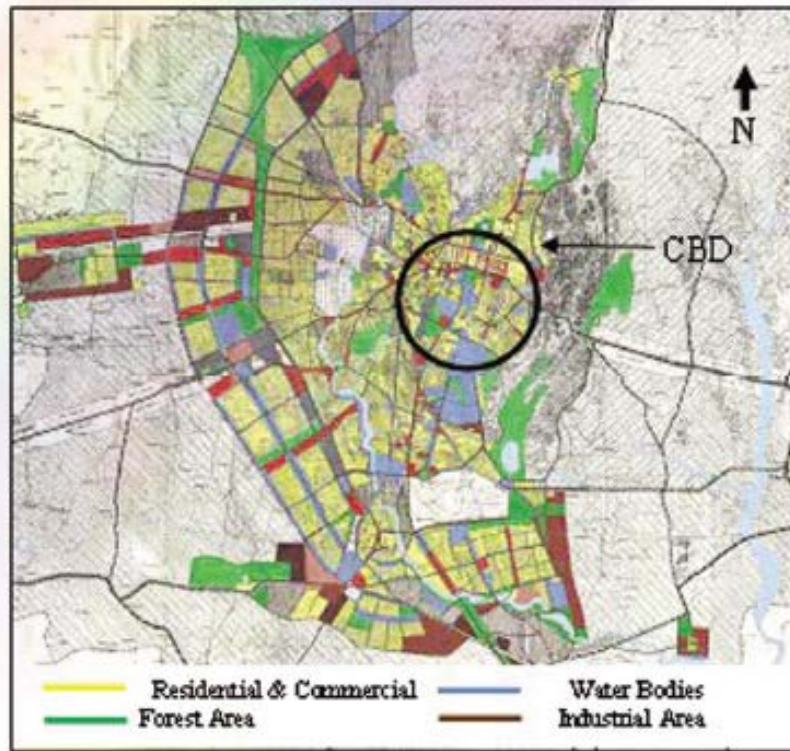


(e) Architecture of GPS Vehicle Tracking System

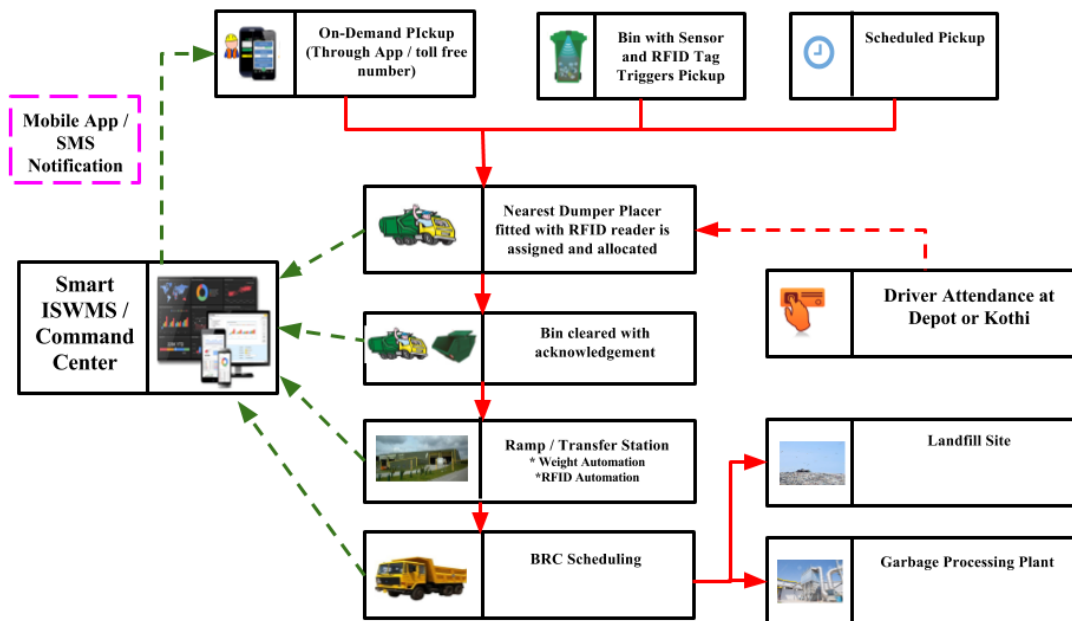


(f) GIS based Fleet Monitoring and Control System

GIS SURVEY OF BINS / FEEDER POINT



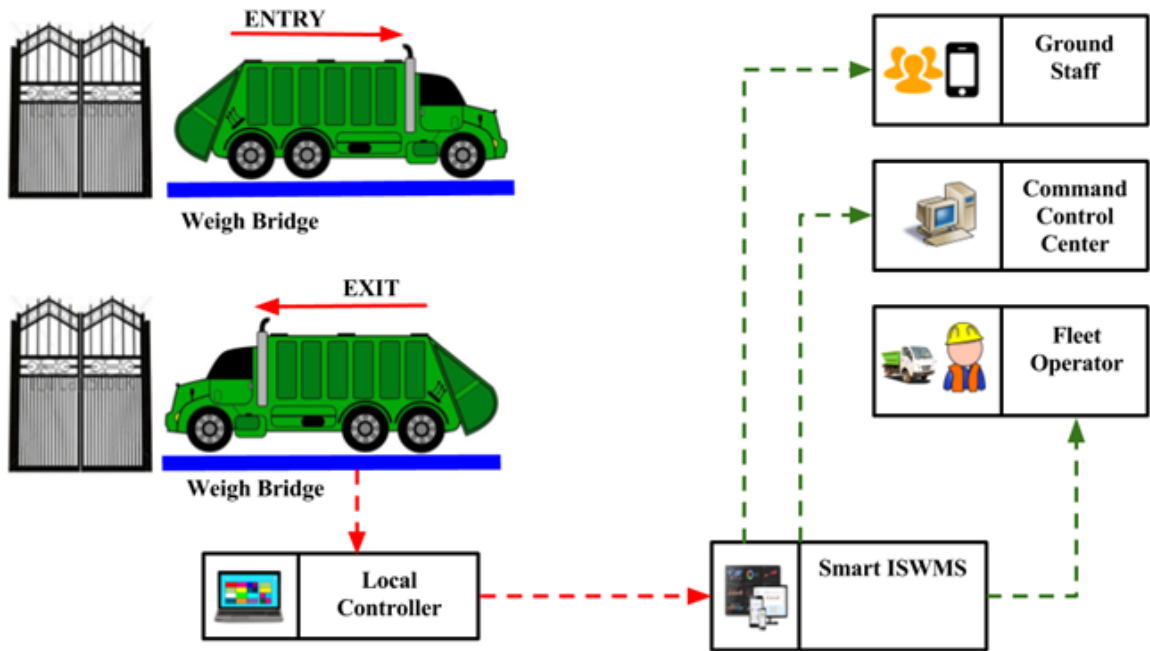
(g) Architecture of Smart Bins with Weight and Volume Sensor



(h) Door to Door Collection

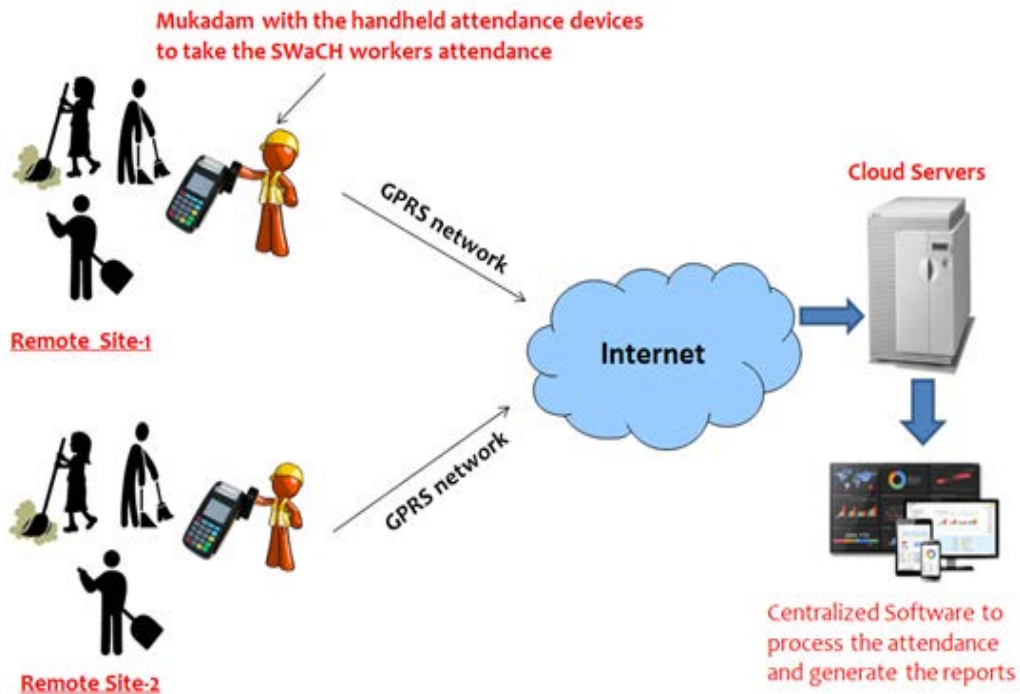
The Door to Door waste collection will be the responsibility of the Contracted agency . The vehicles will travel through a designated route and stop a defined collection points , where the domestic wastes will be collected . The movement of these vehicles will be tracked through the VTS system

(i) Architecture of Weight Automation at Transfer Stations, Processing Units & Landfills Site Collections



(j) Work force Management System / Attendance System for Staff

Architecture (Implementation)



Section VIA

General Conditions of Contract

Section VI A: General Conditions of Contract

Bidders should read these conditions carefully and comply strictly while sending their bids.

1. **Definitions:** For the purpose of clarity, the following words and expressions shall have the meanings hereby assigned to them: -
 - 1.1. **Contract-** means the Agreement entered into between the Purchaser and the successful/ selected bidder, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
 - 1.2. **Contract Documents-** means the documents listed in the Agreement, including any amendments thereto.
 - 1.3. **Contract Price-** means the price payable to the successful/ selected bidder as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - 1.4. **Day-**means a calendar day.
 - 1.5. **Delivery-** means the transfer of the Goods from the successful/ selected bidder to the Purchaser in accordance with the terms and conditions set forth in the Contract.
 - 1.6. **Completion-** means the fulfillment of the related services by the successful/ selected bidder in accordance with the terms and conditions set forth in the Contract.
 - 1.7. **Goods-** means all of the commodities, raw material, machinery and equipment, and/or other materials that the successful/ selected bidder is required to supply to the Purchaser under the Contract.
 - 1.8. **Purchaser-** means the entity purchasing the Goods and related services, as specified in the bidding document.
 - 1.9. **Related Services-** means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the successful/ selected bidder under the Contract.
 - 1.10. **Subcontractor-** means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the related services is subcontracted by the successful/ selected bidder.
 - 1.11. **Supplier/ Successful or Selected bidder-**means the person, private or government entity, or a combination of the above, whose Bid to perform the Contract has been

accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the successful/ selected bidder.

- 1.12. The Site**, where applicable, means the designated project place(s) named in the bidding document.
- 1.13. 'Acceptance of System'** - The system including the hardware, software, solution or any deliverable shall be considered to have been accepted by the procuring entity, subsequent to its installation, rollout and deployment of trained manpower, when all the activities as defined in Scope of Work as laid down in the Bid have been successfully executed and completed by the System Integrator (SI) to the satisfaction of procuring entity and the Purchaser has indicated its acceptance by signing the Acceptance Certificate.
- 1.14. 'Acceptance Certificate'** - means that document issued by the procuring entity signifying Acceptance of a hardware, software, solution, or any other deliverable pursuant to the successful completion of the acceptance test of the System.
- 1.15. 'Applicable Law (s)'** - Any statute, law, ordinance, notification, rule, regulation, judgment, order, decree, bye-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 Agreement and during the subsistence thereof, applicable to the Project.
- 1.16. 'System Integrator (SI)'**- Organization (Sole Bidder or Consortium members) the successful/ selected bidder appointed by JSCL for implementation and O&M of Smart Solid Waste Management project.
- 1.17. "Be-spoke"** - term used for a custom-made product or service, applied to information technology, especially for software consulting services.
- 1.18. Defect Liability Period (DLP)**—the defects liability period is the period calculated from the Completion Date where the Contractor remains responsible for remedying defects.
- 1.19. 'Source Code & Intellectual Property Rights'**—means and includes all rights in the be-spoke software, its improvement, upgradation and enhancements, modified versions that may be made from time to time, database generated, compilation made, source code and object code of the software, the said rights including designs, copyrights, trademarks, patents, trade secrets, moral and other rights therein.
- 1.20. 'OEM'** -means the Original Equipment Manufacturer of any equipment / system / software / product which are providing such goods to the Purchaser under the scope of this contract.
- 1.21. 'Scope of Work'** - means all Goods and Services, and any other deliverables as required to be provided by the contractor under the contract.
- 1.22. 'Service Level (s)'**- means the service level parameters and targets and other performance criteria which will apply to the Services and Deliverables as described in the bidding document;

- 1.23. **Time lines'** -means the project milestones for performance of the Scope of Work and delivery of the Services as described in the bidding document.

Note: The bidder shall be deemed to have carefully examined the conditions, specifications, size, make and drawings, etc., of the goods to be supplied and related services to be rendered. If the bidder has any doubts as to the meaning of any portion of these conditions or of the specification, drawing, etc., he shall, before submitting the Bid and signing the contract refer the same to the procuring entity and get clarifications.

2. Contract Documents:

Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

3. Interpretation

- 3.1. If the context so requires it, singular means plural and vice versa.
- 3.2. Entire Agreement: The Contract constitutes the entire agreement between the Purchaser and the Supplier/ Selected bidder and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.
- 3.3. Amendment: No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.
- 3.4. Non-waiver: Subject to the condition (f) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- 3.5. Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.
- 3.6. Severability: If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

4. Language

- 4.1. The Contract as well as all correspondence and documents relating to the Contract exchanged by the successful / selected bidder and the Purchaser, shall be written in English language only. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate

translation of the relevant passages in the language specified in the special conditions of the contract, in which case, for purposes of interpretation of the Contract, this translation shall govern.

- 4.2. The successful / selected bidder shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

5. Eligible Goods and Related Services

- 5.1. For purposes of this Clause, the term goods includes commodities, raw material, machinery, equipment, and industrial plants; and related services includes services such as insurance, transportation, supply, installation, integration, testing, commissioning, training, and initial maintenance.
- 5.2. The OEM / Vendor of the quoted product must have its own registered spares depot in India having adequate inventory of the equipment being quoted for providing the necessary spares within next business day or maximum 30 hours.
- 5.3. The OEM / Vendor of the quoted product should also have its direct representation in India in terms of registered office for at least past 3 years. The presence through any Distribution / System Integration partner agreement will not be accepted.
- 5.4. Bidder must quote products in accordance with above clause Eligible goods and related services.

6. Notices

- 6.1. Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the contract. The term —in writing means communicated in written form with proof of dispatch and receipt.
- 6.2. A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.

7. Governing Law:

The Contract shall be governed by and interpreted in accordance with the laws of the Rajasthan State / the Country (India), unless otherwise specified in the contract.

8. Scope of Supply

- 8.1. Subject to the provisions in the bidding document and contract, the goods and related services to be supplied shall be as specified in the bidding document.
- 8.2. Unless otherwise stipulated in the Contract, the scope of supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining delivery and completion of the goods and related services as if such items were expressly mentioned in the Contract.
- 8.3. The bidder shall not quote and supply and hardware that is likely to be declared as End of Sale in next 12 months and End of Service / Support for a period of 24 months from

the last date of bid submission. OEMs are required to mention this in the MAF for all the quoted hardware. If any of the hardware is found to be declared as End of Sale/ Service/ Support, then the bidder shall replace all such hardware with the latest ones having equivalent or higher specifications without any financial obligation to the purchaser.

9. Delivery

- 9.1. Subject to the conditions of the contract, the delivery of the goods and completion of the related services shall be in accordance with the delivery and completion schedule specified in the bidding document. The details of supply / shipping and other documents to be furnished by the successful/ selected bidder with invoices are specified in the PCC.
- 9.2. The contract for the supply can be repudiated at any time by the purchase officer, if the supplies are not made to his satisfaction after giving an opportunity to the bidder of being heard and recording the reasons for repudiation.
- 9.3. The Supplier/ Selected Bidder shall arrange to supply, install the ordered materials / system as per specifications within the specified delivery / completion period at offices / locations mentioned in the PO / WO.
- 9.4. Shifting the place of delivery: The user will be free to shift the place of delivery within the same city / town / district/ division. The successful/ selected bidder shall provide all assistance, except transportation, in shifting of the equipment. However, if the city/town is changed, additional charges of assistance in shifting and providing maintenance services for remaining period would be decided mutually.

10. Supplier's/ Selected Bidder's Responsibilities:

The Supplier / Selected Bidder shall supply all the goods and related services included in the scope of supply in accordance with the provisions of bidding document and / or contract.

11. Purchaser's Responsibilities

Whenever the supply of goods and related services requires that the Supplier/ Selected Bidder obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier/ Selected Bidder, make its best effort to assist the Supplier / Selected Bidder in complying with such requirements in a timely and expeditious manner.

12. Contract Price

- 12.1. The Contract Price shall be paid as specified in the contract subject to any additions and adjustments thereto, or deductions there from, as may be made pursuant to the Contract.
- 12.2. Prices charged by the Supplier/ Selected Bidder for the Goods delivered and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier/ Selected Bidder in its bid, with the exception of any price adjustments authorized in the special conditions of the contract.

13. Terms of Payment

13.1. The Supplier's request for shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 9 and upon fulfillment of all the obligations stipulated in the Contract.

14. Performance Security

14.1 The Supplier shall, within twenty-eight (28) days of the notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the SCC.

14.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

14.3 The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser

14.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.

15 Taxes & Duties

15.1 The income tax, service tax, value added tax, etc., if applicable, shall be deducted at source from the payment to the Supplier / Selected Bidder as per the law in force at the time of execution of contract.

15.2 The entry tax, if applicable shall be deducted at source and deposited in the government Treasury in proper revenue receipt head of account.

15.3 For goods supplied from outside India, the successful / selected bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the country.

15.4 For goods supplied from within India, the successful / selected bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

15.5 Revision in VAT and Service Tax shall be on account of the tendering authority if it has been asked for separately in the financial bid and is not taken into account for the purpose of comparison of bids. If, however, they have not been asked for separately,

any benefit or additional cost will be on account of the bidder. Revision of any other tax or duty shall be on account of the bidder.

- 15.6 If any tax exemptions, reductions, allowances or privileges may be available to the successful/ selected bidder in India, the Purchaser shall use its best efforts to enable the successful/ selected bidder to benefit from any such tax savings to the maximum allowable extent.

16 Copyright:

The copyright in all drawings, design documents, source code and other materials containing data and information furnished to the Purchaser by the Supplier / Selected Bidder herein shall remain vested in the Selected Bidder, or, if they are furnished to the Purchaser directly or through the Supplier / Selected Bidder by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

17 Specifications and Standards

17.1 Technical Specifications and Drawings

- a. The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract.
- b. The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser
- c. The Goods and Related Services supplied under this Contract shall conform to the standards mentioned in Section VI, Schedule of Supply and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.

17.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Section VI, Schedule of Supply. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause.

18 Warranty

18.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials

18.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination

18.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment or loading in the country of origin, whichever period concludes earlier.

18.4 The Purchaser shall give Notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects. Upon receipt of such Notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser. If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract

19 Patent Indemnity

19.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 22.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- a. the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- b. the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

19.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 22.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

19.3 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

20 Sub-contracting

- 20.1 Unless otherwise specified in the Contract, the bidder shall not assign or sub-let his contract or any substantial part thereof to any other agency without the permission of Purchaser / Tendering Authority.
- 20.2 If permitted, the selected bidder shall notify the Purchaser, in writing, of all subcontracts awarded under the Contract, if not already specified in the Bid
- 20.3 Subcontracting shall in no event relieve the Supplier/ Selected Bidder from any of its obligations, duties, responsibilities, or liability under the Contract.
- 20.4 Subcontracts shall comply with the provisions of bidding document and/ or contract.

21 Packing and Documents

- 21.1 The Supplier / Selected Bidder shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.
- 21.2 The packing, marking, and documentation within and outside the Works shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the contract, and in any other instructions ordered by the Purchaser.

22 Insurance

- 22.1 The Goods supplied under the Contract shall be fully insured, as mentioned in PCC, against loss by theft, destruction or damage incidental to manufacture or acquisition, transportation, storage, fire, flood, under exposure to weather and delivery at the designated project locations, in accordance with the applicable terms. The insurance charges will be borne by the supplier and Purchaser will not be required to pay such charges if incurred.
- 22.2 The goods will be delivered at the FOR destination in perfect condition.

23 Transportation

- 23.1 The supplier / selected bidder shall be responsible for the proper packing so as to avoid damage under normal conditions of transport by sea, rail and road or air and delivery of the material in the good condition to the consignee at destination. In the event of any loss, damage, breakage or leakage or any shortage the bidder shall be liable to make good such loss and shortage found at the checking / inspection of the material by the Consignee. No extra cost on such account shall be admissible.

23.2 All goods must be sent freight paid through Railways or goods transport. If goods are sent freight to pay, the freight together with departmental charge @5% of the freight will be recovered from the supplier's / selected bidder's bill.

24 Inspection

24.1 The Purchase Officer or his duly authorized representative shall at all reasonable time have access to the supplier's / selected bidder's premises and shall have the power at all reasonable time to inspect and examine the materials and workmanship of the goods / equipment / machineries during manufacturing process or afterwards as may be decided.

25 Inspection / Testing charges:

Inspection / Testing charges (for engaging third party if any) shall be borne by the supplier/ bidder/ selected bidder.

26 Rejection

26.1 Articles / Goods not approved during inspection or testing shall be rejected and will have to be replaced by the selected bidder at his own cost within the time fixed by the Purchase Officer.

26.2 If, however, due to exigencies of work, such replacement either in whole or in part, is not considered feasible, the Purchase Officer after giving an opportunity to the selected bidder of being heard shall for reasons to be recorded, deduct a suitable amount from the approved rates. The deduction so made shall be final.

26.3 The rejected articles / goods shall be removed by the supplier/ bidder/ selected bidder within 15 days of intimation of rejection, after which Purchase Officer shall not be responsible for any loss, shortage or damage and shall have the right to dispose of such articles as he thinks fit, at the selected bidder's risk and on his account.

27 Extension in Delivery Period and Liquidated Damages (LD)

27.1 Except as provided under clause Force Majeure, if the supplier/ selected bidder fails to deliver any or all of the 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.

27.2 The time specified for delivery in the tender form shall be deemed to be the essence of the contract and the supplier/ selected bidder shall arrange goods supply and related services within the specified period.

- 27.3 Delivery and installation / completion period may be extended with or without liquidated damages, if the delay in the supply of goods or service is on account of hindrances beyond the control of the supplier / selected bidder.
- 27.4 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 goods or service within the stipulated delivery period or is unable to maintain prorate progress in the supply of goods or service delivery. This request shall be submitted as soon as a hindrance in delivery of goods and service occurs or within 15 days from such occurrence but before expiry of stipulated period of completion of delivery of goods and service after which such request shall not be entertained.
- 27.5 The Purchaser shall examine the justification of causes of hindrance in the delivery of goods and service and the period of delay occurred due to that and recommend the competent authority on the period of extension which should be granted with or without liquidated damages.
- 27.6 Normally, extension in delivery period of goods and service in following circumstances may be considered without liquidated damages:
- 27.7 When delay has occurred due to delay by JAIPUR SMART CITY LIMITED in performing any of the duties to be performed by them as mentioned in the Chapter titled Scope of Work, Deliverables and Timelines.
- 27.8 When delay has occurred in supply of materials etc. if these were required to be supplied to the supplier or service provider by JAIPUR SMART CITY LIMITED as per terms of the contract.
- 27.9 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 goods and service.
- 27.10 It shall be at the discretion of the concerned authority to accept or not to accept the supply of 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 goods and/ or service.
- 27.11 If JAIPUR SMART CITY LIMITED is in need of the good 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.

28 Liquidated Damages/Penalty for delay:

In case of extension in the delivery and/or installation/completion/commissioning period is granted with penalty / liquidated damages, the recovery for the un-finished work on pro-rata

basis for each milestone, shall be made on the basis of following percentages of value of goods and/or service which the supplier / selected bidder has failed to supply or complete for the individual milestone as in the RFP : -

No.	Condition	LD %*
A	Delay up to one fourth period of the prescribed delivery period & completion of work	2.5%
B	Delay exceeding one fourth but not exceeding half of the prescribed delivery period & completion of work	5.0%
C	Delay exceeding half but not exceeding three fourth of the prescribed delivery period & completion of work	7.5%
D	Delay exceeding three fourth of the prescribed delivery period, & completion of work	10.0%

28.1 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.

28.2 The maximum amount of liquidated damages shall be 10% for the individual milestone

28.3 The percentage refers to the payment due for the associated milestone.

28.4 The LD shall be levied if delay is attributable to the Bidder only.

28.5 Service level penalties as per the Section 5, Procuring Entity requirement.

29 Risk & Cost:

If successful bidder fails to complete the milestone(s) the same will be got executed by another participated firm and the expenses incurred in this account will be charged by the bidder.

30 Price Fall Clause:

The prices under a rate contract shall be subject to price fall clause of Act.

31 Limitation of Liability: Except in cases of gross negligence or willful misconduct: -

31.1 neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier / selected bidder to pay liquidated damages to the Purchaser; and

31.2 the aggregate liability of the supplier/selected bidder to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the Contract, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier / selected bidder to indemnify the Purchaser with respect to patent infringement.

32 Change in Laws & Regulations:

Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in Rajasthan/ India, where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and / or the Contract Price, then such Delivery Date and/ or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited, if the same has already been accounted for in the price adjustment provisions where applicable.

33 Force Majeure

33.1 The supplier / selected bidder shall not be liable for forfeiture of its PSD, LD, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

33.2 For purposes of this Clause, Force Majeure means an event or situation beyond the control of the supplier / selected bidder that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the supplier / selected bidder. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

33.3 If a Force Majeure situation arises, the supplier/ selected bidder shall promptly notify the JAIPUR SMART CITY LIMITED in writing of such conditions and cause thereof within 15 days of occurrence of such event. Unless otherwise directed by JAIPUR SMART CITY LIMITED, the supplier / selected bidder shall continue to perform its obligations under the contract as far as reasonably practical.

33.4 If the performance in whole or part or any obligation under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party at its option may terminate the contract without any financial repercussion on either side.

33.5 In case a Force Majeure situation occurs with the JAIPUR SMART CITY LIMITED, the JAIPUR SMART CITY LIMITED may take the case with the supplier / selected bidder on similar lines.

34. Change Orders and Contract Amendments

34.1 The Purchaser may at any time order the supplier / selected bidder through Notice in accordance with clause Notices above, to make changes within the general scope of the Contract in any one or more of the following: -

- i. drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- ii. the method of shipment or packing;
- iii. the place of delivery; and

iv. the related services to be provided by the supplier/ selected bidder.

34.2 If any such change causes an increase or decrease in the cost of, or the time required for, the supplier's/ selected bidder's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly should be amended. Any claims by the supplier / selected bidder for adjustment under this clause must be asserted within thirty (30) days from the date of the supplier's / selected bidder's receipt of the Purchaser's change order.

34.3 Prices to be charged by the supplier / selected bidder for any related services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier / selected bidder for similar services.

35. Termination

35.1 Termination for Default

The tender sanctioning authority of JAIPUR SMART CITY LIMITED may, without prejudice to any other remedy for breach of contract, by a written notice of default of at least 30 days sent to the supplier/ selected bidder, terminate the contract in whole or in part: -

- I If the supplier/ selected bidder fails to deliver any or all quantities of the service within the time period specified in the contract, or any extension thereof granted by JAIPUR SMART CITY LIMITED; or
- II If the supplier/ selected bidder fails to perform any other obligation under the contract within the specified period of delivery of service or any extension granted thereof; or
- III If the supplier/ selected bidder, in the judgment of the Purchaser, is found to be engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the contract.
- IV If the supplier/ selected bidder commits breach of any condition of the contract.

If JAIPUR SMART CITY LIMITED terminates the contract in whole or in part, full amount of PSD shall stand forfeited.

Before cancelling a contract and taking further action, advice of senior most finance person available in the office and of legal adviser or legal assistant posted in the office, if there is one, may be obtained.

35.2 **Termination for Insolvency:** JAIPUR SMART CITY LIMITED may at any time terminate the Contract by giving a written notice of at least 30 days to the supplier / selected bidder, if the supplier / selected bidder becomes bankrupt or otherwise insolvent. In such event,

termination will be without compensation to the supplier / selected bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to JAIPUR SMART CITY LIMITED.

35.3 Termination for Convenience

JAIPUR SMART CITY LIMITED, by a written notice of at least 30 days sent to the supplier / selected bidder, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the supplier / selected bidder under the Contract is terminated, and the date upon which such termination becomes effective.

Depending on merits of the case the supplier / selected bidder may be appropriately compensated on mutually agreed terms for the loss incurred by the contract if any due to such termination.

The Goods that are complete and ready for shipment within twenty-eight (28) days after the supplier's/ selected bidder's receipt of the Notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

- 35.3.1 To have any portion completed and delivered at the Contract terms and prices; and/or
- 35.3.2 To cancel the remainder and pay to the supplier / selected bidder an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the supplier/ selected bidder.

36. Settlement of Disputes

36.1 General: If any dispute arises between the supplier / selected bidder and JAIPUR SMARTCITY LIMITED during the execution of a contract that should be amicably settled by mutual discussions. However, if the dispute is not settled by mutual discussions, a written representation will be obtained from the supplier/ selected bidder on the points of dispute. The representation so received shall be examined by the concerned Procurement Committee which sanctioned the tender. The Procurement Committee may take legal advice of a counsel and then examine the representation. The supplier / selected bidder will also be given an opportunity of being heard. The Committee will take a decision on the representation and convey it in writing to the supplier / selected bidder.

36.2 Standing Committee for Settlement of Disputes: If a question, difference or objection arises in connection with or out of the contract / agreement or the meaning of operation of any part, thereof or the rights, duties or liabilities of either party have not been settled by mutual discussions or the decision of tender sanctioning Procurement Committee, it shall be referred to the empowered standing committee as decided by JAIPUR SMART CITY LIMITED for decision.

36.3 Procedure for reference to the Standing Committee: The supplier / selected bidder shall present his representation to the Procuring Entity along with a fee equal to two

percent of the amount of dispute, not exceeding Rupees One Lakh, within one month from the date of communication of decision of the tender sanctioning Procurement Committee. The officer-in-charge of the project who was responsible for taking delivery of the goods and/ or service from the supplier/ selected bidder shall prepare a reply of representation and shall represent the JAIPUR SMART CITY LIMITED's stand before the standing committee. From the side of the supplier / selected bidder, the claim case may be presented by himself or through a lawyer. After hearing both the parties, the standing committee shall announce its decision which shall be final and binding both on the supplier/ selected bidder and JAIPUR SMART CITY LIMITED. The standing committee, if it so decides, may refer the matter to the empowered committee as decided by JAIPUR SMART CITY LIMITED.

36.4 Legal Jurisdiction: All legal proceedings arising out of any dispute between both the parties regarding a contract shall be settled by a competent court having jurisdiction over the place, where agreement has been executed and by no other court, after decision of the standing committee for settlement of dispute

Appendix B

Dispute Resolution During Execution of the Contract

1.0 Dispute

Disputes are germane to any contract. A 'dispute' implies an assertion of a right or a claim by one party and repudiation thereof by the other party, either expressed or implied, and may be by words or by conduct. A mere 'difference' is not necessarily a dispute; when the parties fail to resolve it, the difference culminates in dispute.

1.1 Dispute Resolution in a Construction Contract

Since arbitrations are fairly time consuming, it is always advisable to sort out the disputes mutually through the mechanism of adjudication through Dispute Resolution Board (DRB), which is a sort of voluntary arbitration. Arbitration can be resorted to if the adjudication decision is not forthcoming or is not acceptable to any party. For dispute resolution following procedure will be followed:

2.0 Dispute Resolution Board (DRB)

- (a) A formal Sub-Clause of obtaining dispute resolution through DRB will be inserted in the Conditions of the Contract. A separate Dispute Resolution Agreement will also be drawn up, detailing therein provisions like: Eligibility of Members, date of commencement, manner of entry on the reference by the Members and their resignation; obligation of the Members, the Procuring Entity and the Contractor; terms of payment (monthly retainer ship fee, daily fee for travel & site visits, out-of-pocket expenses); manner of sharing the fees and expenses and of making payments; arrangements of site visits and their frequency; conduct of hearings; termination/ phasing out the activities of DRB; default of the Member, and action to be taken in case of dispute in relation to DRB Agreement, etc.
- (b) DRB should be put in place within one month of Letter of Acceptance.
- (c) The DRB for all projects costing more than Rs.10 crore will comprise of three Members, one each to be appointed by the Procuring Entity and the Contractor and approved by the other. The third Member, who will also act as the presiding Member, will be selected by the first two Members and approved by the parties. If either of the first two Members is not so selected and approved, or the parties fail to reach an agreement on the third Member then on request of either or both parties, appointment will be made by concerned Administrative Department in case of Government Departments and Head of the Organization (Chairman, etc.) concerned in other cases.
- (d) The Members to be appointed shall be out of a panel maintained by the Department/ Organization concerned and should be experienced in the type of construction actually involved and/ or finance and accounts and/ or contractual documents. **They should be persons of repute and integrity.**
- (e) If any dispute that arises at any stage between the Procuring Entity and the Contractor in connection with, or arising out of the Contract or the execution of the Works, including any disagreement by either party with any action, inaction, opinion, instruction, determination, certificate or valuation of the Engineer, the matter in dispute shall, in the first place, should be tried to be settled amicably. If the dispute still remains unsettled, it shall be referred to the DRB.
- (f) Both parties shall promptly make available all information, access to the Site, and appropriate facilities, as the DRB may require for the purposes of making a recommendation on such dispute.
- (g) Within 56 days after receiving such reference, or within such other period as may be proposed by the DRB and approved by both parties, the DRB shall give its recommendation with reasons. The recommendation shall be binding on both parties,

who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.

- (h) If either party is dissatisfied with the recommendation, then either party may, within 28 days after receiving the recommendation, or if the DRB fails to give its recommendation within 56 days (or as otherwise approved), within 28 days after the said period of 56 days has expired, give notice to the other party, with a copy to the Engineer-in-Charge, of its intention to commence arbitration proceedings.
- (i) If the DRB has given its decision within the stipulated period, and no notice of intention to commence arbitration as to such dispute has been given by either party within 28 days of the said decision, then the decision of DRB shall become final and binding.

3.0 Arbitration

- (a) Any dispute in respect of which the recommendations (if any) of DRB has not become final and binding, shall be finally settled by arbitration in accordance with the Indian' Arbitration and Conciliation Act, 1996, or any statutory amendment thereof.
- (b) The Arbitral Tribunal will comprise three Members, one each to be appointed by the Procuring Entity and the Contractor. The third Member, who will also act as the presiding Member, will be appointed by mutual consent of the first two Members. If the parties fail to reach an agreement on the third Member then on request of either or both parties, appointment will be made by concerned Administrative Department in case of Government Departments and Head of the Organization (Chairman, etc.) concerned in other cases.
- (c) The Tribunal shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer-in-Charge, and any decision of the DRB, relevant to the dispute.
- (d) Neither party shall be limited in the proceedings before the Tribunal to the evidence or arguments previously put before the DRB to obtain its decision, or to the reasons for dissatisfaction given in its notice of dissatisfaction.
- (e) Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, the Engineer-in-Charge and the DRB shall not be altered by reason of any arbitration being conducted during the progress of the Works.

4.0 Language

All proceedings before DRB/ arbitral tribunal shall be in the Language of the Contract/ English.

5.0 Terms and conditions for engagement of DRB Member and Chairman

The terms and conditions including the remuneration and other facilities to be given to the Members of DRB and Arbitrators in case of civil engineering construction contracts/ consultancies shall be as notified by the State Government from time to time. Each Party to the Contract (the Contractor/ Consultant) shall be responsible for paying one-half of the remuneration. Since the fee structure has to be agreed by both the parties i.e. Procuring Entity and Contractor/ Consultant, the fee structure may also be got accepted by the respective Contractor/ Consultants. In the contracts the fee structure may be included as part of the bidding documents/ contract documents and the acceptance of the fee structure by the Contractors/ Consultants may be kept as a pre-condition for signing the Contract.

Section VI B:

Special Conditions of Contract

Section VI B: Contract Data / Special Conditions of Contract

9. Delivery

The details of supply / shipping and other documents to be furnished by the successful/selected bidder with invoices are: Upon delivery of the Goods to the transporter, the Supplier shall notify the Purchaser/Nodal Officer and send the following documents to the Purchaser:

- 9.1 Five copies of the Supplier's invoice showing the description of the Goods, quantity, unit price, and total amount;
- 9.2 delivery note, railway receipt, or truck receipt;
- 9.3 Manufacturer's or Supplier's warranty certificate;
- 9.4 inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report;

The Purchaser, shall receive the above documents before the arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

12 No Price Adjustment is permissible.

13 Payment of the contract price shall be made in the following manner:

BoQ-1: For Goods and Services during the implementation Phase

<i>SI</i>	<i>Activity</i>	<i>Timeline (in Week)</i>	<i>Payment Milestone (% Capex)</i>
1	Project Kick off	S+ 0	15%
2	Site Survey/ Point of Interest	S+ 4	
3	Preparation and approval of FRS including Report formats	S+ 8	
4	Finalization of SRS and its approval	S+ 12	
5	Deployment of GPS units in all vehicles and roll out VTS application	S+16	20%
6	Deployment of RFID tags, handheld RFID devices	S+ 16	
7	Deployment of cameras, LCD displays & Weigh bridge automation, Bin level sensors and remaining devices.	S + 18	
8	Complete Geocoding and Mapping	S + 18	20%
9	Development/customization of all the software applications and their integration including their Installation in the Servers in data center	S + 20	
10	Test Rollout attendance recording application, route optimization application, mobile application (for	S+ 22	
			15%

SI	Activity	Timeline (in Week)	Payment Milestone (% Capex)
	citizen & field staff) and other applications		
11	UAT (User Acceptance Test) for VTS, RFID, attendance and other applications	S+ 23	
12	Integrated Testing & Acceptance Testing of the develop system	S + 28	10%
13	Training	S+ 32	
14	SOP, Run Book, Security Audit	S + 34	
15	Pilot Rollout / Trial run and rectification	S+36	10%
16	Go live at all locations	S+36	
17	Start of O&M and Warranty period	S+36	
18	Completion of defect liability period (Start of AMC)	S+91	10%

BoQ- 2: For O&M Services (After Go Live)

- a) **On Regular basis:** The Supplier will raise Invoices on a monthly basis for Operation and Maintenance Services (60 equal monthly installments) and the Procuring Entity shall pay **hundred (100) percent** of the value of the Invoices raised per month, upon submission of a claim supported by the acceptance certificate issued by the procuring Entity and/or its Authorised Representative/s.

BoQ- 3: For Annual Maintenance Contract (AMC) Services (After successful Commissioning of Goods after one year warranty period)

- a) **On Regular basis:** The Supplier will raise Invoices on a Yearly basis for AMC Services (4 equal yearly installments) at the end of 2nd year and the Procuring Entity shall pay 100% of the value of the Invoices raised per Year upon submission of a claim supported by the acceptance certificate issued by the procuring Entity and/or its Authorized Representative/s..

NOTE: *Acceptance Certificates for AMC Services carryout (both hardware and software) will be issued by Procuring Entity.*

- 13.1 The Contract Price includes all duties, taxes, royalty, and fees that may be levied in accordance with the laws and regulations in force as on the Base Date on the Contractor's equipment, Plant, Materials and supplies acquired for the purpose of this Agreement and on the services performed under this Agreement. Nothing in this Agreement shall relieve the Contractor from its responsibility to pay any tax

including any tax that may be levied in India on profits made by it in respect of this Agreement.

13.2 The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs, unless otherwise provided for in this Agreement.

13.2.1 Unless otherwise stated in this Agreement, the Contract Price covers all the Contractor's obligations for the Works under this Agreement and all things necessary for the Construction and the remedying of any Defects in the Project.

13.2.2 All payments under this Agreement shall be made in Indian Rupees.

13.3 **Procedure** for estimating the payment for the Works

13.3.1 The Employer shall make interim payments to the Contractor as certified by the Engineer on completion and handover of each phase as indicated in the agreed payment schedule on submission of invoice/bill.

13.3.2 Any reduction in the Contract Price arising out of Change of Scope or the works shall not affect the amounts payable for the items or stage payments there of which are not affected by such Change of Scope or withdrawal. (For avoidance of doubt and *by way of illustration*, the Parties agree that if the amount assigned to Major Bridges is reduced from Rs. 100 Crore to Rs. 80 Crore owing to Change of Scope or withdrawal of work, the reduction in payment shall be restricted to relevant payments for Major Bridges only and the payment due in respect of all other stage payments under the item Major Bridges shall not be affected in any manner. The Parties further agree that the adjustments arising out of the aforesaid modifications shall be carried out in a manner that the impact of such modifications is restricted to the said Change of Scope or withdrawal, as the case may be, and does not alter the payments due for and in respect of items or stage payments which do not form part of such Change of Scope or withdrawal).

13.4 **Stage Payment Statement for Works**

The Contractor shall submit a statement (the "Stage Payment Statement"), in 3 copies, by the 7th (seventh) day of completion of each phase as indicated in the agreed payment schedule to the Engineer in the form set forth, showing the amount calculated to which the Contractor considers himself entitled for completed phase(s) of the Works. The Stage Payment Statement shall be accompanied with the progress reports and any other supporting documents. The Contractor shall not submit any claim for payment of incomplete stages of work.

13.5 **Stage Payment for Works**

13.5.1 Within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor, the Engineer shall broadly determine the amount due to the Contractor and recommend the release of 90 (ninety) percent of the amount so determined as part payment against the Stage Payment Statement, pending issue of the Interim Payment Certificate by the Engineer. Within 10 (ten) days of the receipt of recommendation of the Engineer, the Employer shall make electronic payment directly to the Contractor's bank account.

13.5.2 Within 15 (fifteen) days of the receipt of the Stage Payment Statement the Engineer shall determine and shall deliver to the Employer and the Contractor an IPC certifying the amount due and payable to the Contractor, after adjusting the payments already released to the Contractor against the said statement. For the avoidance of doubt, the Parties agree that the IPC shall specify all the amounts that have been deducted from the Stage Payment Statement and the reasons there for.

13.5.3 In cases where there is a difference of opinion as to the value of any stage, the Engineer's view shall prevail and interim payments shall be made to the Contractor on this basis; provided that the foregoing shall be without prejudice to the Contractor's right to raise a Dispute.

13.5.4 The Engineer may, for reasons to be recorded, withhold from payment:

- (a) the estimated value of work or obligation that the Contractor has failed to perform in accordance with this Agreement and the Engineer had notified the Contractor; and
- (b) the estimated cost of rectification of work done being not in accordance with this Agreement.

13.5.5 Payment by the Employer shall not be deemed to indicate the Employer's acceptance, approval, consent or satisfaction with the work done.

13.6 Time of payment and interest.

13.6.1 The Employer shall pay to the Contractor any amount due under any payment certificate issued by the Engineer in accordance with the provisions or in accordance with any clause of this Agreement as follows:

- (a) payment shall be made no later than 30 (thirty) days from the date of submission of the Stage Payment Statement by the Contractor to the Engineer for certification for an IPC; provided that, in the event the IPC is not issued by the Engineer within the aforesaid period of 30 (thirty) days, the Employer shall pay the amount shown in the Contractor's Stage Payment Statement and any discrepancy therein shall be added to, or deducted from, the next payment certificate issued to the Contractor; and
payment shall be made no later than 30 (thirty) days from the date of submission of the Final Payment Certificate for Works along with the discharge submitted to the Engineer for certification.

14.1 The subject contract will entail the bidder to submit Two separate Performance Securities, one for Supply, installation, commissioning of the system and the other for Operation and Maintenance of the system for Five (5) years. The Implementation phase and O&M phase Performance Securities will amount to 10% of the Agreement price for the corresponding phases.

18.3 The warranty of all items of Goods, will remain valid for **12 (Twelve)** months after the Goods, or any portion thereof as the case may be, have been delivered to, accepted at

the final destination and commissioned as part of the ICT system

20. Under this contract Sub-Contracting is not allowed by the successful bidder(s).

22. Insurance

- a. the Supplier must insure the Goods in an amount equal to 110 percent of the price of the Goods from “Warehouse” to “Warehouse” on “All Risks” basis, including War Risks and Strikes”.
- b. separate insurance coverage during the O& M phase will be applicable, for;
 - i) for the Works, Plant and Materials;
 - ii) for loss or damages to equipment;
 - iii) for loss or damage to property (except the Works, Plant, Materials and Equipment) in connection with Contract;
 - iv) for personal injury or death;
 - a) of the Contractor’s employees;
 - b) of other people and any other items as per rules / statutes of Government of Rajasthan.

28. Manpower

- a. The operational manpower, as detailed in Section V, Schedule of Supply of this bidding document, will work under the guidance of Nodal Officer, JAIPUR SMART CITY LIMITED.
- b. The successful bidder will submit the list of professional manpower designated to work in this project, along with their CVs to the Nodal Officer, JAIPUR SMART CITY LIMITED.
- c. The professionals in the team, will be entitled for Government Holidays. However, their services will be provided even on Government Holidays, if deemed required by the Nodal Officer, without any extra cost.
- d. In case there is a need to replace an existing member of the professional team, as requested by the Nodal officer, the bidder will replace the same within 7 days.
- e. If the bidder and /or his employees are found to be directly or indirectly involved in any unwanted activities, his services would be discounted / terminated.
- f. The legal bidding as per the industries dispute act. Payment of wages act, contract labour Act., and others pertaining to Civil/Criminal legislation, Medical claim if any, are the

obligations of the bidder. The JAIPUR SMART CITY LIMITED would have no responsibility for the same.

- g. It is the responsibility of the bidder to provide payments, and other facilities as per the nominal wages in accordance with the law. All issues pertaining to the same would be dealt with by the bidder. The JAIPUR SMART CITY LIMITED would have no role in this.
- h. The State insurance, Provident Fund, Pension Gratuity, leaves, wages etc. as applicable, would have to be provided by the bidder and he would also be accountable for the employees. If for any reason, legal proceeding is undertaken against any employee, the bidder shall bear the responsibility. The JAIPUR SMART CITY LIMITED would not represent the same.
- i. JAIPUR SMART CITY LIMITED shall not have any liability/pay compensation towards any injury/ accident to the firm's employee while carrying out the maintenance/repair work under this contract.
- j. The bidder should also ascertain that as per contract the employees would not from any group/union etc. and would also not participate in such nor represent the same. If such incidence comes under the notice of the JAIPUR SMART CITY LIMITED, it would terminate the contract.

Annexure A:**Compliance with the Code of integrity and No Conflict of interest**

Any person participating in a procurement process shall –

- a. Not offer any bribe reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or otherwise influence the procurement process
- b. Not misrepresent or omit that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation ;
- c. Not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
- d. Not misuse any information shared between the procuring entity and the Bidders with an intent to gain unfair advantage in the procurement process;
- e. Not indulge in any coercion including impairing or harming or threatening to do the same directly or indirectly, to any party or to its property to influence the procurement process;
- f. Not obstruct any investigation or audit of a procurement process;
- g. Disclose conflict of interest, if any; and
- h. Disclose any previous transgressions with any entity in India or any other country during the last three years or any debarment by any other procuring entity

Conflict of interest:-

The Bidder participating in a bidding process must not have a conflict of interest. A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with palpable laws and regulations. A Bidder may be considered to be in conflict of interest with one or more parties in a bidding process if including but not limited to:

- a. Have controlling partners/shareholders in common; or
- b. Receive or have received any direct or indirect subsidy from any of them; or
- c. Have the same legal representative for purposes of the Bid; or
- d. Have a relationship with each other, directly or through common third parties , that puts them in a position to have access to information about or influence on the Bid of another. Bidder, or influence the decisions of the procuring Entity regarding the bidding process;

or

- e. The Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder in more than one Bid;
or
- f. The Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, works or services that are the subject of the Bid;
or
- g. The Bidder or any of its affiliates has been hired (or is proposed to be hired) by the procuring Entity as engineer-in-charge/consultant for the contract.

Signature of Tenderer
With seal

Annexure B :**Declaration by the Bidder regarding Qualifications Declaration by the Bidder**

In relation to my/our Bid submitted to ----- for procurement of ----- in response to their Notice inviting Bids No. ----- Dated ----- -I/we hereby declare under section 7 of Rajasthan Transparency in public procuring Act, 2012 that:

1. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the procuring Entity;
2. I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and the state Government or any local authority as specified in the Bidding Document;
3. I/we are not insolvent, in receiver shop, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons;
4. I/we do not have , and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
- 5 I/we do not have a conflict of interest as specified in the Act, Rules and the Bidding

Document, which materially affects fair competition:

Date: signature of bidder

Place: Name

Designation:

Address:

Signature of Tenderer

With seal

Annexure C :**Grievance Redressal during Procurement Process**

The designation and address of First Appellate Authority is -----

The designation and address of second Appellate Authority is -----

1. Filing an appeal

If any Bidder or prospective bidder is aggrieved that any decision, action or omission of the procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be. Clearly giving the specific ground or grounds on which he feels aggrieved: Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a procuring Entity Evaluates the Technical Bids before the opening of the Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable.

2. The officer whom an appeal is filed under para (1) shall deal with the appeal as expeditiously as possible and shall endeavor to dispose it of within thirty days from the date of the appeal.
3. If the officer designated under para (1) fails to dispose of the appeal filed within the period specified in para (2) or if the Bidder or prospective bidder or the procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the procuring Entity, as the case may be may file a second appeal to second Appellate authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (3) or of the date of receipt of the order passed by the First Appellate Authority as the case may be.
4. Appeal not to lie in certain cases
No appeal shall lie against any decision of the procuring Entity relating to the following matters, namely:-
 - a. Determination of need of procurement
 - b. Provisions limiting participation of Bidders in the Bid process;
 - c. The decision of whether or not to enter into negotiations;
 - d. Cancellation of a procurement process;
 - e. Applicability of the provisions of confidentiality.

5. Form of Appeal

- a) An appeal under para (1) or (3) above shall be in the annexed Form along with as many copies as there are respondents in the appeal
- b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.
- c) Every appeal may be presented to first Appellate Authority or second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

6. Fee for filing appeal

- a. Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non –refundable.
- b. The fee shall be paid in the form of bank demand draft or banker's cheque of a scheduled Bank in India payable in the name of appellate Authority concerned.

7. Procedure for disposal of appeal

- a. The First Appellate Authority or second Appellate Authority, as the case may be upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing
- b. On the date fixed for hearing , the First Appellate Authority or second Appellate Authority, as the case may be, shall –
 - I. Hear all the parties to appeal present before him; and
 - II. Peruse or inspect documents, relevant records or copies thereof relating to the matter.

- c. After hearing the parties, perusal or inspection of documents and relevant records

Or

copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.

- d. The order passed under sub-clause (c) above shall also be placed on the state public procurement portal. FORM No. 1 [see rule 83]

Memorandum of Appeal under the Rajasthan Transparency in Public Procurement Act, 2012

Appeal No. ----- of -----

Before the ----- (First/second Appellate Authority)

1. Particulars of appellant :

- I. Name of the appellant:
- II. Official address, if any :
- III. Residential address:

2. Name and address of the respondent (s):

- (i)
- (ii)
- (iii)

3. Number and date of the order appealed against and name and designation of the officer/authority statement of a decision, action or omission of the procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4. If the Appellant proposes to be represented By a representative, the name and postal address

Of the representative :

5. Number of affidavits and documents enclosed with the appeal :

6. Grounds of----- appeal ; -----

--

----- (supported by an affidavit)

7.

Pra
yer:

--

--

Place -----

Date -----

Appellant's signature

Signature of Tenderer
With seal

Annexure D :**Additional Conditions of contract****1. Correction of arithmetical errors**

Provided that a financial Bid is substantially responsive, the procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis:

- I. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall governs and the unit price shall be corrected:
- II. If there is an error in a total corresponding to the addition or subtraction of subtotals the subtotals shall prevail and the total shall be corrected :
- III. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid security shall be forfeited or its Bid securing Declaration shall be executed.

2. Procuring Entity's Right to vary Quantities

- I. At the time of award of contract, the quantity of Goods, works or services originally specified in the Bidding Document may be increased or decreased by a specified percentage, but such increase or decrease shall not exceed twenty percent, of the quantity specified in the Bidding Document. It shall be without any change in the unit prices. Or other terms and conditions of the Bid and the conditions of contract.
- II. If the procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the conditions of contract.
- III. In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 25 % of the value of Goods of the original contract and shall be. Within one month from the date of expiry of last supply. If the supplier fails to do so, the procuring Entity shall be free to arrange for the balance

supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the supplier.

Signature of Tenderer
With seal

Section VI C:

Contract Forms

Section VI C: Contract Forms

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1. Letter of Acceptance

Letter of Acceptance

[on letter head paper of the Procuring Entity]

No.

Dated

To: **[name and address of the Contractor]**

Subject: **[Notification of Award for the Works]**

This is to notify you that your Bid dated **[date]** for execution of the

.... **[name of the contract and identification number, as given in the Contract**

Data] for the Accepted Contract Amount of the equivalent of

[.amount in numbers and words and name of currency], as corrected

and modified in negotiations and in accordance with the Instructions to Bidders has

been accepted by **[designation of the Procuring Entity]** The date of

commencement and completion of the Works shall be:

.....

You are requested to furnish the Performance Security/ Performance Security

Declaration within Days in the form given in the Contract Forms for the same

for an amount equivalent to Rupees within days of notification of

the award valid up to 60 days after the date of expiry of Defects Liability Period and

maintenance period, if applicable, and sign the Contract, failing which action as stated

in sub-section 2 of section 42 of the Rajasthan Transparency in Public Procurement

Act, 2012 and Instructions to Bidders shall be taken.

Authorized Signature:

Name and Title of Signatory: Chief Executive Officer, JSCL, Jaipur.

Designation:

2. Contract Agreement.

Contract Agreement

THIS AGREEMENT made theday of,, between the Governor of Rajasthan/ [**Jaipur Smart City Limited**]. (hereinafter “the Procuring Entity”) which expression shall, where the context so admits, be deemed to include his successors in office and assigns, of the one part, and [**name of the Contractor**].(hereinafter “the Contractor”), which expression shall, where the context so admits, be deemed to include his heirs, successors, executors and administrators, of the other part:

WHEREAS the *Procuring Entity* desires that the Works known as [**name of the Contract**]should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein, and for which the Contractor has submitted Performance Security for Rupees ----- in the form of -----(For Jaipur Smart City Limited)

The Procuring Entity and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - a) the Letter of Acceptance;
 - b) the Bid of the Contractor as accepted along with the correspondence done on it, if any;
 - c) the Special Conditions of Contract/ Contract Data;
 - d) the General Conditions of Contract;
 - e) the Specifications;
 - f) the Drawings; and
 - g) the Instructions to Bidders and Notice Inviting Bids.
3. In consideration of the payments to be made by the Procuring Entity to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Procuring Entity to execute the Works and to remedy defects therein (and, if applicable, maintain the Works for a period of -----) in conformity in all respects with the provisions of the Contract.
4. The Procuring Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein (and, if applicable, maintain the Works for a period of -----), the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in

the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of India and Rajasthan on the day, month and year indicated above.

Signed by

Signed by.....

for and on behalf of the Governor/ Palika Entity

for and on behalf the Contractor

(Chief Executive Officer, JSCL)
in the presence of

in the presence of

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address,
Date

Contract Agreement Works

THIS AGREEMENT made this.....day of.....2017., between Government of Rajasthan, represented by the Chief Executive Officer, JSCL (Jaipur Smart City Limited) JMC Building, Pt Deendayal Upadhyay Bhawan LalKothi, Tonk Road, Jaipur-302015 Phone No. 0141-2741346/2741347, E-Mail ID: jscljaipur@gmail.com

(hereinafter “the Employer”), of the one part and M/S
(hereinafter “the Contractor”), of the other part:

WHEREAS the *Employer* desires that the Works known as Work x: Project Scoping, designing, supply and installation of 50 nos. of VMS in Jaipur and post implementation maintenance. Should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects and maintenance therein for five years upon commissioning of the system, including supply of all materials under this contract for 5 years in conformity with the provisions of the contract in all respect.

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - a) Notice to Proceed
 - b) the Letter of Acceptance;
 - c) the Bid
 - d) the Addenda and Corrigendum
 - e) the Special Conditions
 - f) the General Conditions
 - g) the Specifications;
 - h) the Drawings;
 - i) Instructions to Bidders and Notice Inviting Bids
 - j) the Priced Bill of Quantities and
 - k) The Schedule of Supplementary information,
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of India on the day, month and year indicated above.

Signed by

Signed by

Chief Executive Officer
Jaipur Smart City Limited
for and on behalf of the Employer

for and on behalf the Contractor

Witness, Name, Signature, Address

Witness, Name, Signature, Address
Signed by

Signed by

3. Performance Security

Performance Security

..... **[Bank's Name, and Address of Issuing Branch or Office]**

Beneficiary: **[Name and Address of Procuring Entity (Chief Executive Officer, Jaipur Smart City Limited)]**

Date:

Performance Guarantee No.:

We have been informed that **[name of the Contractor]** (hereinafter called "the Contractor") has entered into Contract No. **[reference number of the Contract]**. dated with you, for the execution of **[name of contract and brief description of Works]** (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance security is required.

At the request of the Contractor, we **[name of the Bank]** hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of Rupees* **[amount in figures]** (Rupees..... **[amount in words]**) such sum being payable upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

The Guarantor agrees to extend this guarantee for a specified period in response to the Procuring Entity's written request for such extension for that specified period, provided that such request is presented to the Guarantor before the expiry of the guarantee.

This guarantee shall expire, no later than the Day of **, and any demand for payment under it must be received by us at this office on or before that date.

.....
Seal of Bank and Authorized Signature(s)

* **The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract**

** **Insert the date sixty days after the expected completion date, including defect liability period and maintenance period, if any.**

Notes: 1. *All italicized text is for guidance on how to prepare this advance payment guarantee and shall be deleted from the final document.*

2. *The Procuring Entity should note that in the event of an extension of the time for completion of the Contract, the Procuring Entity would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee.*

4. Performance Security Declaration

Form of Performance Security Declaration

Date: _____ ***[insert date (as day, month and year)]***
Contract Name and No.: _____ ***[insert name and number of Contract]***
To: _____ ***[insert Designation and complete address of Procuring Entity]***

We, the undersigned, declare that:

We understand that, according to your conditions, the Contract must be supported by a Performance Security Declaration as a guarantee to ensure fulfillment of our all performance obligations under the Contract for _____ ***[insert name of subject matter of procurement]***.

We accept that we will automatically be suspended from being eligible for bidding in any contract with you for the period of time of _____ ***[Procuring Entity to indicate here the period of time for which the Procuring Entity will declare a Bidder in eligible to be awarded a Contract if the performance Security Declaration is to be executed]*** starting on the date that we receive a notification from you, the _____ ***[Designation of the Procuring Entity]*** that our Performance Security Declaration is executed, if we are in breach of any of our performance obligation under the conditions of the Contract,

We understand this Performance Security Declaration shall expire after 60 days of completion of our all obligations under the Contract including Defect Liability, warranty/ Guarantee, operation, maintenance, etc. in accordance with the conditions of the Contract.

Signed: _____

[insert signature of person whose name and capacity are shown]

In the capacity of: _____

[insert legal capacity of person signing the Performance Security Declaration]

Name: _____

[insert complete name of person signing the Declaration]

Duly authorized to sign the Contract for and on behalf of: _____

[insert complete name and address of the Bidder]

Dated on _____ day of _____, _____ ***[insert date of signing]***

Corporate Seal _____