

RFP FOR SMART SOLID WASTE MANAGEMENT SOLUTION FOR SURAT CITY



**Surat
Municipal
Corporation**



एक कदम स्वच्छता की ओर



Invited by

Surat Smart City Development Limited

115, Smart City Cell, Surat Municipal Corporation,
Muglisara, Main Road, Surat – 395003, Gujarat

RFP No.: SSCDL-SMARTSWM-RFP-01-2017

Last date (deadline) for online Price Bid Submission: 28/06/2017

Last date (deadline) for Technical Bid Submission: 01/07/2017

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I. DISCLAIMER

The information contained in this Request for Proposal document ("RFP") whether subsequently provided to the bidders, ("Bidder/s") verbally or in documentary form by Surat Smart City Development Limited (henceforth referred to as "SSCDL" in this document) or any of its employees or advisors, is provided to Bidders on the terms and conditions set out in this Tender document and any other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is not an offer or invitation to any party. The purpose of this RFP is to provide the Bidders or any other person with information to assist the formulation of their financial offers ("Bid"). This RFP includes statements, which reflect various assumptions and assessments arrived at by SSCDL in relation to this scope. This Tender document does not purport to contain all the information each Bidder may require. This Tender document may not be appropriate for all persons, and it is not possible for the Chief Executive Officer, SSCDL and their employees or advisors to consider the objectives, technical expertise and particular needs of each Bidder. The assumptions, assessments, statements and information contained in the Bid documents, may not be complete, accurate, adequate or correct. Each Bidder must therefore conduct its own analysis of the information contained in this RFP and to seek its own professional advice from appropriate sources.

Information provided in this Tender document to the Bidder is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. SSCDL accepts no responsibility for the accuracy or otherwise for any interpretation of opinion on law expressed herein.

SSCDL and their employees and advisors make no representation or warranty and shall incur no liability to any person, including the Bidder under law, statute, rules or regulations or tort, the principles of restitution or unjust enrichment or otherwise for any loss, cost, expense or damage which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, reliability or completeness of the RFP, and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

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

The issue of this Tender document does not imply that SSCDL is bound to select a Bidder or to appoint the Selected Bidder (as defined hereinafter), for implementation and SSCDL reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by SSCDL or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and SSCDL shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation for submission of the Bid, regardless of the conduct or outcome of the Selection process.

II. DEFINITIONS

In this RFP, the following word (s), unless repugnant to the context or meaning thereof, shall have the meaning(s) assigned to them herein below:

1. **“SSCDL”** or **“Authority”** means the Surat Smart City Development Limited and shall include its authorized successors and assigns at all times.
2. **“SMC”** means Surat Municipal Corporation.
3. **“Bid/Proposal”** means the proposal submitted by the Bidder(s) in response to this RFP in accordance with the provisions hereof including Technical Proposal and Price Proposal along with all other documents forming part and in support thereof as specified in this RFP.
4. **“Bidder”** means Implementation Agency responding to the RFP.
5. **“Earnest Money Deposit (EMD)”** means Security furnished by the Bidder.
6. **“Bid Process”** means the process of selection of the Successful Bidder through competitive bidding and includes submission of Proposals, scrutiny and evaluation of such Bids as set forth in the RFP.
7. **“Deadline for Submission of Bids/ Proposal”** or **“Proposal Due Date/Bid Due Date”** shall mean the last date and time for receipt of Bids as set forth in ‘Invitation for Proposal’ of this RFP or such other date / time as may be decided by SSCDL in its sole discretion and notified by dissemination of requisite information.
8. **“Monitoring and tracking solution for smart waste management Project** or **“Project”** refers to the design, development, implementation, operation, maintenance and management of Monitoring and Tracking of Smart Waste Management Solution
9. **“Agreement”** means the legal agreement including, without limitation, any and all Appendix thereto, which will be entered into between SSCDL and the Successful Bidder for smart solid waste management solution. The Draft License Agreement is specified in Appendix-5 of this RFP. The terms of this RFP, along with any subsequent amendments at any stage, shall become part of this Agreement.
10. **“Selected Bidder”** shall mean the Bidder who has emerged as preferred bidder in terms of this RFP and has been issued the Letter of Acceptance (LoA) by SSCDL and awarded the work under this RFP.
11. **“Master System Integrator(MSI)”** means lead bidder responding to RFP

1. **“Letter of Acceptance”** or **“LOA”** means the letter issued by SSCDL to the Successful Bidder to undertake and execute the project in conformity with the terms and conditions set forth in the RFP and any subsequent amendments thereof.
2. **“Performance Guarantee”** shall mean the Bank Guarantee furnished by a successful Bidder for punctual and due performance of its duties as per terms and conditions of this RFP.
3. **“RFP”** or **“Tender”** shall mean this RFP document which comprises of the following sections: Disclaimer, Instructions to Bidders, Scope of Services, Draft License Agreement, Service Level Agreement, Forms of Bid which include any applicable Appendix.
4. **Technical Proposal Evaluation Criteria** shall have a meaning specified in clause 6.2 of this RFP.
5. **Key Personnel** means the members assigned to this project who will implement the project and form the core team. Certain experienced, professional members who are essential for successful accomplishment of the work to be performed under this contract. The resumes of these personnel will be submitted for evaluation of the proposal and such personnel shall not be removed from the contract work or replaced without compliance.

Any other term(s), not defined herein above but defined elsewhere in this RFP shall have the meaning(s) ascribed to such term(s) therein and shall be deemed to have been included in this Section.

III. GLOSSARY

#	Abbreviations	Description
1.	AMC	Annual Maintenance Contract
2.	BoQ	Bill of Quantity
3.	CEO	Chief Executive Officer
4.	CPU	Central Processing Unit
5.	CST	Central Sales Tax
6.	DD	Demand Draft
7.	EMD	Earnest Money Deposit
8.	IT	Information Technology
9.	Lol	Letter of Intent
10.	SLA	Service Level Agreement
11.	SMC	Surat Municipal Corporation
12.	SSCDL	Surat Smart City Development Limited
13.	SP	Service Provider
14.	OEM	Original Equipment Manufacturer
15.	RFP	Request For Proposal
16.	WO	Work Order
17.	NDA	Non-Disclosure Agreement
18.	GIS	Geographical Information System
19.	GPS	Global Positioning System
20.	RFID	Radio Frequency Identification
21.	VTMS	Vehicle Tracking & Monitoring System
22.	SWM	Solid Waste Management
23.	SMAC / CCC	Surat Smart City Center / Command & Control Center
24.	UAT	User Acceptance Test
25.	TS	Transfer Station
26.	POI	Point of Interest
27.	TPM	Time Place Movement

IV. NOTICE INVITING REQUEST FOR PROPOSAL

	<p align="center">Surat Smart City Development Limited (SSCDL) 115, Smart City Cell, Surat Municipal Corporation - Head Quarter, Muglisara, Main Road, Surat - 395003, Gujarat. Notice Inviting RFP for Smart Solid Waste Management Solution for Surat City [RFP No.: SSCDL-SMARTSWM-RFP-01-2017]</p>	
<p>Surat Smart City Development Ltd (SSCDL) invited RFP for Smart Solid Waste Management Solution for Surat City from the bidder meeting the basic eligibility criteria as stated in the bid document.</p>		
<p>Bid Fee (Non-refundable)</p>	<p>INR 6000 (Six Thousand Only) by Demand Draft or Banker's Cheque</p>	
<p>Date of Issue of the Bid Document</p>	<p>14/06/2017</p>	
<p>Pre-bid Conference by Submission of queries by email</p>	<p>By e-mail to it@suratsmartcity.com on or before 20/06/2017 18:00 hrs</p>	
<p>Price Bid Submission</p>	<p>To be submitted online only on https://smc.nprocure.com on or before 28/06/2017 up to 18:00 hrs</p>	
<p>Technical Bid Submission (in Hard Copy) filled-in Technical Bid along with Bid Fee, EMD, Solvency Certificate and other documents.</p>	<p>In sealed envelope, strictly by RPAD/Postal Speed Post on or before 01/07/2017 up to 18:00 hrs. To the Chief Accountant, Surat Municipal Corporation, Muglisara, Surat – 395003, Gujarat.</p>	
<p>Earnest Money Deposit (EMD)</p>	<p>INR 2,00,000/- (Rupees Two Lakhs only) by Demand Draft or Banker's Cheque</p>	
<p>RFP Document Availability</p>	<p>https://smc.nprocure.com, http://suratsmartcity.com, https://www.suratmunicipal.gov.in</p>	
<p>The right to accept/reject any or all bid(s) received is reserved without assigning any reason thereof.</p>		
<p align="right">General Manager (IT) Surat Smart City Development Ltd.</p>		

A. INTRODUCTION AND BACKGROUND

1. INTRODUCTION

1.1 ABOUT SURAT

Located in western part of India in the state of Gujarat, Surat is referred as the silk city and the diamond city. It has the most vibrant present and an equally varied heritage of the past. Surat is also known as economic capital of Gujarat and is having one of the highest growth rates amongst Asian cities. As per the Census 2011, it is the eighth largest city in the country with population of 4.48 million. On the scale of population growth, Surat is the fastest growing city in Asia and holds 4th rank in the world. On the economic front, Surat holds top most position with highest per house-hold income in the country.

Surat has also been selected as one of twenty Indian cities (in the first round of selection) to be developed as a smart city under Smart Cities Mission.

1.2 ABOUT SURAT MUNICIPAL CORPORATION

Surat Municipal Corporation is a local self-government which has come into being under the Bombay Provincial Municipal Act, 1949. It carries out all the obligatory functions and discretionary functions entrusted by the BPMC Act, 1949. It became one of the first municipalities of India in 1852 AD, and a municipal corporation in 1966.

The administration of SMC with the help of the people and elected members of the city has transformed Surat to one of the cleanest cities of India. SMC has taken all necessary steps to make the city a better place to live with all amenities. SMC has taken up many path breaking initiatives and these efforts have been acknowledged at national and international level.

Solid Waste Management department in SMC performs the following:

1. To devise a system of storage of waste and segregation of recyclable waste at source.
2. To improve system of primary collection of waste.
3. To devise more efficient system of day to day cleaning, conventionally and mechanically.
4. To devise system to eliminate practices of throwing garbage on the road causing nuisance & health threat.
5. To modernize the system of community waste storage & synchronize the system of primary collection as well as transportation of waste.
6. To eliminate manual handling of waste and open transportation vehicles.
7. To improve the system of transportation of waste by ensuring "handling waste only once".
8. To reduce quantity of waste going to landfill site by adopting suitable technology.
9. Land to be acquired for other landfill disposal site.

10. To derive income from the processing of waste.
11. To ensure safe disposal of waste including bio-medical wastes.
12. To do institutional strengthening.
13. To have public participation.

More Information regarding SMC and the services provided by SMC can be found on SMC's website at www.suratmunicipal.org.

1.3 ABOUT SURAT SMART CITY DEVELOPMENT LIMITED (SSCDL)

As per the Government of India's guidelines, Surat Municipal Corporation has formed a separate Special Purpose Vehicle (SPV) as Surat Smart City Development Ltd. (SSCDL) for the implementation of projects under the smart city mission for the city of Surat. This SPV shall carry end to end responsibility for vendor selection, implementation, and operationalization of various smart city projects.

2. Project Background

Surat Municipal Corporation is responsible for collection and disposal of Solid Waste Management across 326 sq.km city area. SMC has taken various initiatives in the field of Solid Waste Management to make the city clean. The efforts of SMC has been acknowledged at various level and Surat is considered to be one of the cleanest cities of India. Surat has secured 6th position in the Swachh Sarvekshan-2016 and 4th position the Swachh Sarvekshan-2017 conducted by MoUD.

2.1 EXISTING PROCESS

The average quantity of M.S.W. collection is 1750 M.T. The Solid Waste Management process is broadly divided into three (3) stages described below:

2.1.1 Primary Collection

The primary waste collection activity in Surat is carried out using various methods like,

- a) **Door to Door garbage collection system:** Garbage is collected from individual household under Door to Door Garbage Collection System. The activity for Door to Door garbage collection is outsourced to different agencies.
 - Individual vehicles are assigned designated area with specified time to visit individual household to collect garbage.
 - A vehicle traverses through the route and collects the garbage from individual households.
 - Collected waste is transferred to transfer stations.
 - At transfer station the vehicle in and out time is noted and weight is registered on entry and exit.
 - The payment to the contractor is based on the tonnage.

- b) **Container lifting:** Another method for garbage collection is large Storage Bins which are placed at fixed locations in the city for waste collection. Bins are lifted on pre-defined frequency. Empty Bin will be placed by the truck and Bin having garbage is lifted by the truck which disposes garbage at transfer stations. The activity of container lifting is carried out by SMC using its own vehicles and is also outsourced.
- Individual vehicles are assigned to collect the containers at a scheduled time.
 - These vehicles carries empty container and pickup the filled up container.
 - These containers are taken to the transfer station.
 - At transfer station the vehicle in and out time is noted and weight is registered on entry and exit.
 - The payment to the contractor is based on the trip.
- SMC has placed approximately 1100 containers across Surat city. SMC owned and contractor vehicles collects garbage from these containers on periodic basis.
- c) **Night scraping & brushing activity:** Commercial areas and area which has heavy traffic during day time where cleaning activity is not possible during day are covered under Night Scrapping and brushing activity. The scrap/garbage collected during this activity is transferred to primary transfer station by contractor's vehicle. The vehicle information and the weight at the time of entry and exit is registered at transfer station.
- d) **Hotel-Kitchen waste management:** Separate vehicles are assigned to collect hotel waste from various hotels across Surat City.
- e) **Sweeping during day time:** SMC workers carry out sweeping activity on designated locations during day time in two shifts. In morning shift, individual sweeping is done by workers and in afternoon shift, group safai is carried out. The garbage collected by these workers is dumped in the nearest container
- f) **Society Anudan:** To promote cleanliness among citizens, SMC has started a scheme under which, a society receives grant for appointing a person to perform safai in the society. The garbage collected by these workers is dumped in the nearest container

2.1.2 Secondary transportation

Municipal Solid Waste collected through different primary collection sources reaches to the Semi-closed Body Transfer Station of the respective zone. From here, it is being sent to the final disposal site through close body container in a mechanically compacted way.

- The secondary transportation activity is outsourced to various agencies.
- Secondary transport vehicle with compactor visits the semi closed body transfer station and collects the waste.
- The secondary transport vehicle collects the slip from the primary transfer station.
- The collected waste is transported to the final disposal site.

- At transfer station the vehicle in and out time is noted and weight is registered on entry and exit.
- The payment to the contractor is based on the tonnage.

2.2 CHALLENGES FACED AT PRESENT

Monitoring waste management process across city has some challenges which are mentioned below:

Door to Door Collection

1. Difficulty in monitoring whether the assigned route is visited or not by a particular vehicle.
2. Difficulty in ensuring that the vehicle attends the routes/societies at the specified time.
3. Difficulty in performance measurement of the vehicle/contractor, penalty and payment calculation.

Container Lifting

4. Difficulty in ensuring actual and timely pickup of containers.
5. Difficulty in identification of the bins.

Other Challenges

6. Manual process for calculation of SLA, penalties and payments.
7. Non-availability of on-demand reports of vehicles, total garbage collected etc.
8. Different monitoring solution for different zones causing maintenance issues
9. Independent system for vehicle tracking and weight collection process.
10. Difficulty in getting holistic view of Solid Waste Collection & Disposal activities.

3. PROJECT OBJECTIVE AND SCOPE OF WORK

2.1 OBJECTIVE

Solid Waste Management comprising of solid waste collection, transportation and disposal is a very critical activity for any ULB. SMC intends to utilize the latest technology and IT system to further strengthen the Solid Waste Management practices.

The goal of this project is to implement an Integrated and centralized Solid Waste Management monitoring and tracking solution (SWM Application). The solution will be monitored centrally from existing Smart City Center (Command & Control Center). Below are primary objectives of the Solid Waste Management (SWM) monitoring & tracking solution

1. To monitor the fleet involved in the Solid Waste Management activities in realtime, to improve per vehicle productivity, to reduce non-compliance and to optimize fleet utilization
2. To have the real-time information with regards to waste collection activity
3. To geocode and geofence stoppages/Point of Interest (POI) and routes
4. Route planning and allocation
5. Automate the transfer stations and disposal site for daily garbage inward and outward activities
6. To utilise the technology to minimize human intervention and to improve the collection efficiency
7. To full proof the system and prevent misuse of manual system and to induct transparency and accountability in operations
8. To ensure complete coverage of waste collection across Surat city
9. To have the system that helps monitor the performance and SLA for services
10. To provide management with dashboard and detailed analysis reports for decision making

2.2 PROPOSED SOLUTION

SMC invites the bids to have the Smart Solid Waste Management System that helps overcome the challenges mentioned above. The Smart Solid Waste Management Solution will broadly comprises of the following:

- Vehicle Tracking System on the Primary Collection and Secondary Transport vehicles
- RFID tags on waste collection vehicles
- RFID tags on the container bins
- RFID readers at transfer stations and disposal site
- Integration with cameras to capture image of vehicle (along with number plate) entering and exiting transfer station and disposal site
- Integration with weighing scale to capture weight data of loaded and empty vehicles

- Biometric system to authenticate user entering/capturing details of vehicle in and out at transfer stations and disposal site
- Centralized web based system for monitoring of the complete Solid Waste Collection & Disposal activities integrated with RFID readers, cameras, biometric and GPS devices.

2.3 BROAD SCOPE OF WORK

The broad scope of work will include providing the complete Smart Solid Waste Management Solution including all the software, hardware and network components on a rental basis. The agency shall be required to implement end to end solution. Following is the list of broad activities:

1. To supply, install, configure, commission and maintain the Vehicle Tracking System in SWM vehicles
2. To supply, install, configure, commission and maintain the RFID readers and RFID Tags in SWM vehicles and Container Bins.
3. To design, develop, configure and maintain the SWM application for carrying out business processes at Primary Transfer Station, Disposal Site, Solid Waste Management Department, Zone & Ward to monitor and manage the Solid Waste Management activities.
4. To integrate various hardware components of Vehicle Tracking System, RFID readers, RFID Tags, Weight Bridge, biometric device, CCTV Camera, etc. with SWM application.
5. To supply, install, configure and maintain the application server to be placed at SMC datacentre.
6. Provisioning of customizable reports required for day to day and periodic monitoring and MIS purpose.
7. Facility to generate alerts for specific events on the screen and also by SMS.
8. To make available the data as per the formats and as per time intervals given by SMC.

2.4 SCOPE OF WORK IN DETAIL

The successful bidder shall be required to carry out the following Scope of Work.:

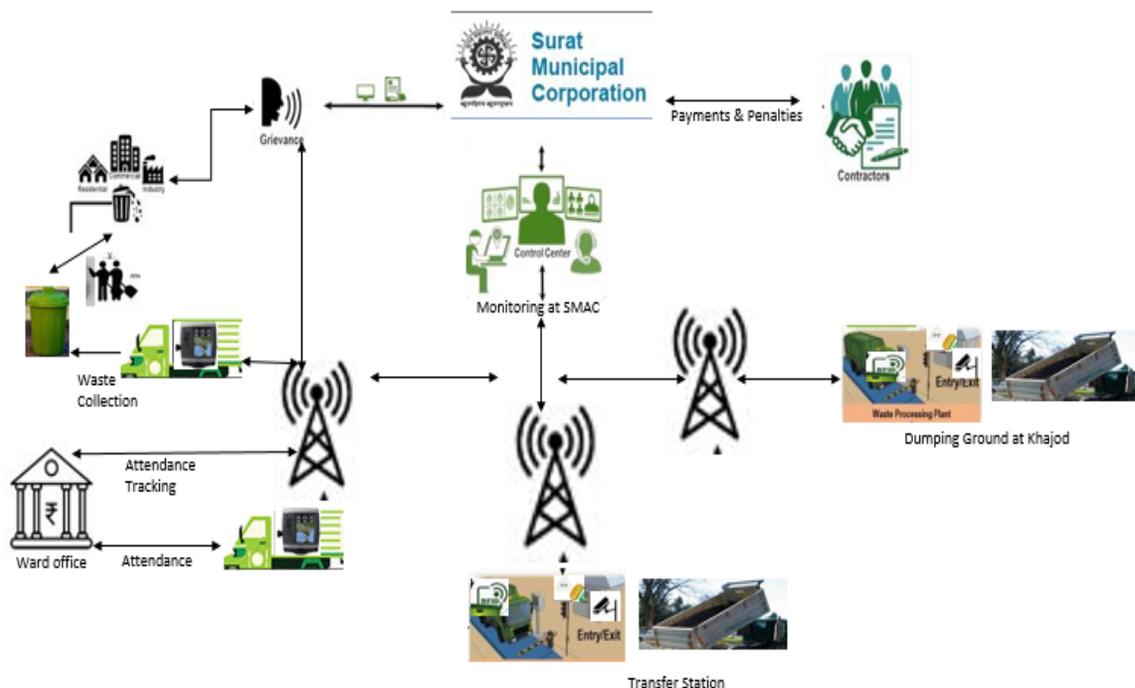
- 1 Supply, install, configure, commission and maintain 600 nos. of GPS devices, 650 nos. of RFID TAGs (Sticker Type), 1200 nos. of RFID TAG (Metal mount Type), 11 nos. of RFID readers, 11 nos. of Biometric Fingerprint devices, Necessary hardware for Software Application hosting at SMC Data Centre along with Software Application System and keeping 5% of devices as spare.
- 2 The scope also include 5 years comprehensive warranty of all hardware supplied by the bidder.
- 3 Design, development of GPS Based Application software (Vehicle Tracking System) integrated with GPS, RFID devices, Weigh Bridge on server side for monitoring of Vehicle movement, route tracking and GIS based MIS reports as per formats requested by the SMC authorities.

- 4 Design, develop, configure and implement SWM application incorporating the requirements and existing business process and integrating the same with the various hardware components provided as part of this contract and other as specified in this RFP.
- 5 To make available one Programmer for the first two years from the date of Post Go Live Support (PGLS) and one Hardware Engineer during the support period of five years Post Go Live Support (PGLS).
 - 5.1 The programmer/developer will be responsible to carry out necessary changes in the application, provide application level support to the users, and coordinate with users for easy and early adaptation of the system. The bidder will be required to provide necessary back office support to the appointed programmer/developer for necessary changes/enhancements in the application during the support period.
 - 5.2 The hardware engineer will be responsible to resolve any hardware related issues, field level issues, will manage the spares required to be stationed at Surat. He will also coordinate with with bidder's back office team for necessary replacement of hardware or support issues for resolving problems if any. The hardware engineer will be the point of contact for SMC users for any issues related to the application including hardware. The hardware engineer will provide field level support related to the solution and will also carry out preventive and breakdown maintenance for the hardware provided. The hardware engineer will also ensure that the server & storage deployed at SMC are functioning with optimum performance.
- 6 Maintenance of the complete setup including SWM application and hardware components and other components (including sensors) and its wiring for each vehicle/location during the contract period.
- 7 To impart training to SMC / Contractor's staff as and when required.
- 8 SIM Card: The successful bidder shall be required to install SIM cards in the VTMS unit and the cost of the same should be included in the quarterly Annual Maintenance Support Bills. The successful bidder will be required to propose SIM Card data plan and get it approved from SMC. SIMs are to be procured in the name of the selected bidder. The payment will be made based on the invoice raised by the service provider. The cost of the SIM charges not be included in the price bid.
- 9 Collection of Information related to the Door to Door Garbage Collection Point of interests, Bins locations, and dump yards from respective offices and its mapping on application.
- 10 Registration of vehicles, locations and other information.
- 11 To provide onsite and offsite support with regards to the application as well as hardware at any SMC locations.
- 12 Collecting non-working devices from Field and providing them with Functional Devices configured working devices.
- 13 Development and maintenance of Smart Solid Waste Management Solution including its Mobile App, database, etc. during the contract period.

- 14 Deployment and maintenance of suitable server with sufficient storage capacity in SMC Data Centre or any other place specified by SMC for deployment of the Application.
- 15 MIS & GIS reports design and development.
- 16 Development of software to generate payment sheets every month with provision for penalties and Testing of all modules & Security.
- 17 Scheduling and managing backups.
- 18 Promptly fixing bugs/issues identified in the application throughout the contract period.
- 19 Providing training and handholding to nominated Staff in operation of Devices and solution. Providing user manual & Training Manual in Gujarati and English and various manuals including Systems Administration Manuals, Installation Manuals, Operational Manuals and Maintenance Manuals.
- 20 Implementing the department change requirements, if any, for time to time.
- 21 Resolving effectively and within the stipulated time frame, all complaints related to the functioning of the devices/software through a well-managed help desk and service centres. Registering complaints from field and coordinating with respective field support personnel and maintenance team and issue status update.
- 22 Designing of Monitoring App for designated officials for Real time monitoring of vehicles; Trip Reports & Vehicle Day Summary. The Mobile App will also have functionality to mark Vehicle Attendance at Ward level at the start of the day.
- 23 Generation of Various reports defined by the SMC.

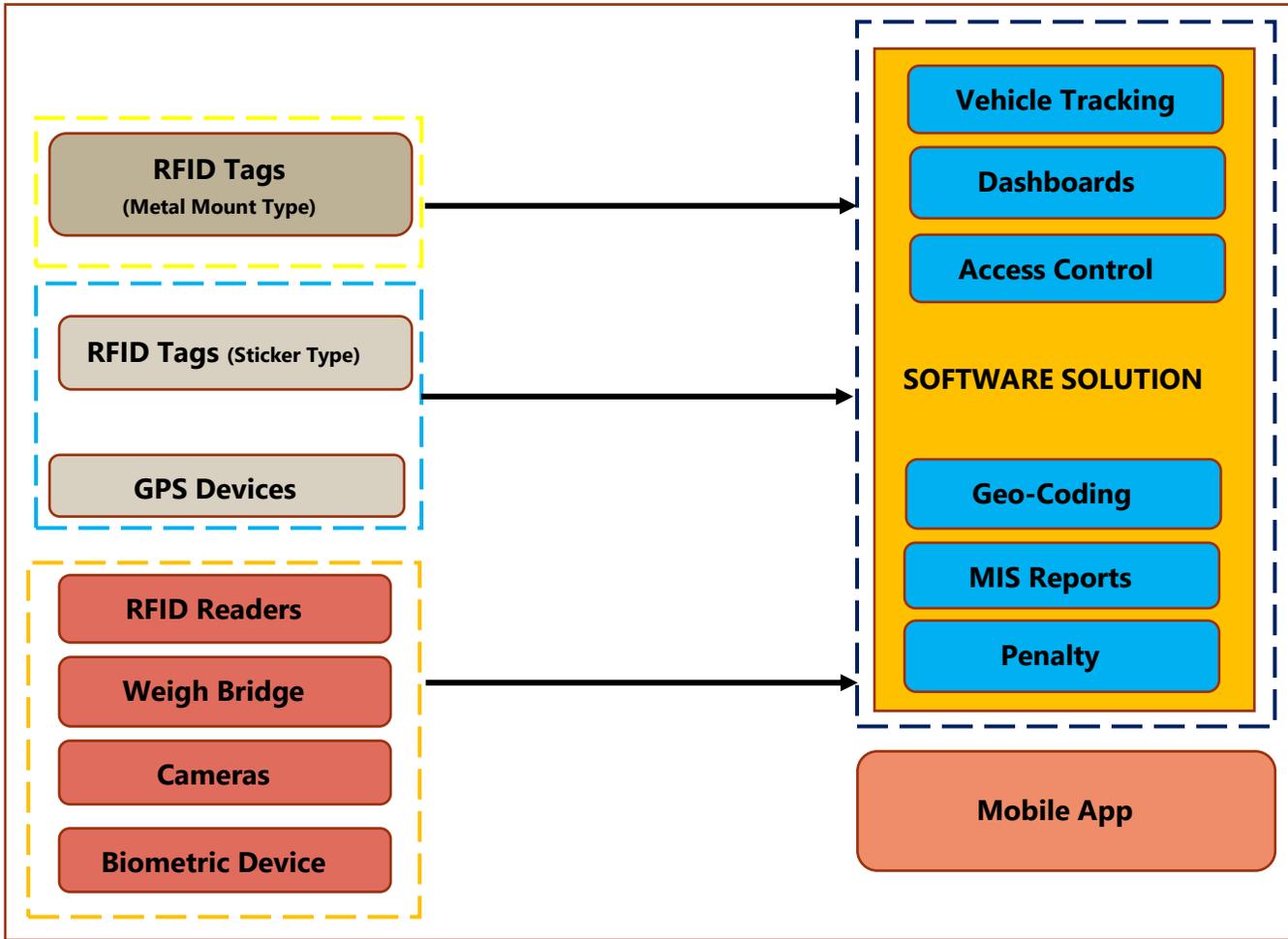
2.4.1 System Context

Below figure explains high level system context for Solid Waste Management in Surat City



2.4.2 Reference Architecture

Below diagram provides software and hardware components involved in entire ecosystem.



- On Vehicles
- At Transfer Stations
- At SMAC, TS & Dumping Ground, Ward offices and Zonal Check posts
- At ward offices and zonal check post for Driver Attendance
- On Container Bins

2.4.3 Functional Requirements and Specifications

For the purpose of implementing the Smart Solid Waste Management Solution, the selected bidder shall be required to provide the hardware and software solution. The following section covers the broad requirements of the software solution. The requirements shall be finalised as per the Project Phases as specified in Section-2.7.2.

2.4.3.1 Transfer Station and Disposal site

At present, broadly the following activities are carried out at the Transfer Station and Disposal Site. Bidder is required to implement an integrated application covering these activities.

- a. As per existing process at Surat, after collecting waste from different spots, vehicle enters a static transfer station located at every zone.
- b. At transfer station, weight of the waste is calculated and captured on entry of the vehicle. The image of the vehicle is also captured.
- c. The waste vehicle is emptied at transfer station and weight is again calculated before vehicle leaves the transfer station.
- d. The difference of the weight calculated at entry and exit is the total weight of the waste carried by the vehicle.
- e. For the missed Point of Interests (POIs), the operator monitoring the vehicle tracking system notifies the concern supervisor of area to make necessary arrangements to cover the missed POI.
- f. Based on total garbage collected by contractor and the number of POI missed by the contractor vehicles, the amount payable to contractor is calculated after deduction of penalty.
- g. The waste collected at transfer station is transferred to the disposal site Khajod using secondary transport vehicles – compactors.
- h. After disposal of waste at transfer station the compactor vehicles enters the disposal site at Khajod.
- i. The weight of the vehicle is registered when vehicle enters the disposal site.
- j. The compactor vehicle is emptied at disposal site and weight is again calculated before vehicle leaves the disposal site.
- k. The difference of the weight calculated at entry and exit is the total weight of the waste carried by the vehicle.

2.4.3.1.1 Requirement of Hardware at Transfer station and disposal site

1. **RFID Readers:** - The RFID reader should be installed at transfer stations and disposal site. These readers would fetch vehicle details automatically from RFID tags placed on each vehicle in such a way that supervisor would not have to enter vehicle details manually.
2. **Cameras:** - The cameras is placed at each transfer station and disposal site to monitor entry and exit of vehicles. The cameras would be used to capture image of vehicle (with number plate visible) directly in the system at the time of saving record.
3. **Biometric devices:** - This device will be used to scan finger print of the supervisor stationed at Transfer Station and disposal site to authenticate user and ensure his/her availability.

4. **Weigh Bridge System:** - This device will be used to calculate weigh of the waste collected by vehicle entering and existing Transfer Station and disposal site
5. **Hardware Integration:** The hardware specified above is required to be integrated with the software application. The application should be a completely integrated application and user should not be required to access separate application to perform required task for specific hardware.

2.4.3.1.2 Indicative Requirement of Software Solution at Transfer station and Disposal site

1. Login:

- 1.1 A login screen should be displayed using which user can enter user name and password. Along with user name and password, solution should integrate with existing biometric device that will capture registered user's finger print. The user should be allowed to log in only when combination of user name, password, and finger print matches.
- 1.2 The software solution should have forgot password mechanism which can be used in case registered user forgets password. The temporary password should be sent to user's registered mobile number. After logging in with temporary password, user should have option to change the password.

2. Data Entry & Reporting Module

- 2.1 The software solution should correlate, concatenate, and display vehicle information captured by RFID reader, weight of the waste calculated by weigh bridge system, image (captured by camera) of the vehicle entering transfer station on the desktop screen of the operator stationed at transfer station.
- 2.2 When a vehicle arrives at transfer station and once the data is captured by RFID reader and weigh bridge system, necessary vehicle details should be displayed on user screen along with a "capture" button on click of which camera should be able to capture image of vehicle (with number plate visible in the image). Once all the details are available from hardware devices (RFID reader, weigh bridge system, camera) on dashboard, supervisor should be able to validate the same and store details in the centralized database by clicking "submit" button on the screen.
- 2.3 In case multiple vehicles are in range of RFID reader, a list of vehicles along with select option should appear from where supervisor can select details of appropriate vehicle. In case a supervisor makes a mistake in selecting a vehicle, an option to revert the selection should be provided to operator at transfer station to correct the entry. Necessary details of such changes should be maintained in backend application and a report summarizing such changes should be made available on daily basis.
- 2.4 For the vehicles bringing the container bins, the system should capture the vehicle information and container information along with other information. To identify from where the container has been lifted, the operator should be provided with the option to select the container spots depending on the zone. Provisions should also be made to handle situations

where in more than one container lifting vehicle are in que and are identified by the RFID reader.

- 2.5 Apart from above, other vehicles from SMC and contractors are also engaged in primary collection activity for other activities like night scraping & brushing, hotel waste collection, garden waste, etc. Necessary provisions should be there in the system to capture vehicle details for such activities. Necessary reports w.r.t. this should be made available in the system to monitor daily activities and periodic performance.
- 2.6 The garbage at primary transport station will be brought by different vehicles like Door to Door Vehicle, Container Lifting Vehicle, SMC owned vehicle, etc. System should allow mapping of vehicles based on its type. Depending on the type of the vehicle necessary parameters to be captured at the transfer station / disposal site based on the requirement,
- 2.7 The module should have a print functionality where supervisor at transfer station can print acknowledgement receipt containing details like vehicle details, weight of the waste, contractor details etc. In case it is required to reprint the acknowledgement receipt, the system should have provision for reprinting of receipt with necessary marking on the receipt about reprinting of receipt. The receipt should also print the date and time of print, login user details, etc.
- 2.8 The user should have option to generate day end report summarizing the daily activity like number of vehicles visited the transfer station, amount of weight collected at transfer station etc.
- 2.9 The software solution should be implemented in such a way that supervisor should be asked to scan finger print after specified duration like 15 minutes or 30 minutes to ensure availability of the designated user.
- 2.10 The operator working at the transfer station works in shifts. The system should have provision for generating day wise and shift wise summary and reports.
- 2.11 The system and flow should be designed in such a way that the operator needs to make minimum input and the completion of transaction takes minimum time.

2.4.3.2 Admin Module

Admin module will provide functionality of creating and managing users, roles, masters, etc. It shall also enable various other administrative tasks like deletion of records, insertion of records, updation of records, etc. Indicative list of requirements for the module for Admin/Managers is as under:

1. User & Role Management Module
 - a. The software solution should have facility to register users capturing necessary user details. The registration module will be integrated with SMC's HRMS module to capture user details based on employee ID. Necessary fingerprint details for fingerprint authentication should be captured to complete the registration of user.
 - b. Define roles and associated privileges
 - c. Create/Edit/Delete user role with specific privileges (The solution should have capability to show/hide screens based on user roles.)

- d. The administrator user should have feature to reset password for users.
2. Create & Manage masters pertaining to zone, wards
3. Create & Manage routes (TPM)
4. Created & Manage Contracts
 - a. Create/Edit/Delete Contacts with details of SLA, payments and penalty
5. Create & Manage Vehicles
 - a. Create/Edit/Delete Vehicles
 - b. Create/Edit/Delete schedule for specific vehicle / group of vehicle
 - c. Mapping of Zone/Ward/Group/Sub Group/ Contract / Vehicle with Contractor
 - d. Mapping of drivers with specific vehicles with contact details
 - e. Management of vehicles with history including start date and end date of specific vehicle in use.
6. Create & Manage RFID Readers and Tags
 - f. Create/Edit/Delete RFID Readers in system
 - g. Mapping of RFID Readers with specific group/location
 - h. Create/Edit/Delete RFID Tags in system
 - i. Mapping of RFID Tags with vehicles
 - j. Updation of RFID Tags on vehicles with history management (in case RFID Tag gets damaged, it will be required to install new RFID Tag on vehicle and necessary details of new RFID tag will be required to be mapped against the vehicle. While the new Tag details are updated against the vehicle, the older Tag details should be maintained as history for specific vehicle)
7. Upon specific user request, the admin user/manager should have functionality to revert/alter any transactional record. Necessary audit trails should be maintained in the solution.
8. Create/Edit/Delete group and sub group for various parameters like vehicle type, zone & wards, contractors, etc.
9. Create/Edit/Delete locations
10. Mapping of users, groups and vehicles to specific location
11. Mapping of users to specific group
12. Mapping of Vehicles to specific group
13. Define and manage allowed threshold (delay) for garbage collection coverage for specific vehicle / group of vehicle

2.4.3.4 Geo-Coding/Tagging Functionality

- 1 Geocoding / surveying of the following components shall be done by the implementing agency:
 - a Waste Collection points (POIs) & Routes
 - b Bin locations
 - c Zone Offices
 - d Ward offices
 - e Disposal sites

- f Transfer stations
 - g Societies/localities
 - h Others (as per SMC request)
- 2 The Geo-tagged locations should be mapped with the location list prepared by admin/managers
 - 3 The accuracy of these locations should be 3 to 5 meters. The implementing agency shall use these locations over the maps and shall deliver the same to SMC in open source formats like ESRI formats or any other standard GIS format.
 - 4 Dynamic Route Management: Ability to create and assign routes based on the landmarks and stoppages with option to assign single or multiple vehicles on the route created.

2.4.3.5 Vehicle Management & Tracking Module

- 1 Facility to Create & Manage Vehicle master capturing details like type of vehicle, owner entity, registration no., etc.
- 2 Ability to map the RFID tag, GPS device, driver with a particular vehicle
- 3 Ability to display information available from GPS devices installed on vehicles onto GIS map
- 4 The vehicles and its route should be color coded for easy identification on map.
- 5 Facility to view all or selected vehicles based on vehicle no. / contractor / zone / etc.
- 6 User should have option to select a vehicle based on which corresponding route of vehicle should be displayed on the map. User should have an option to view history (with an option to select a specific date or a date range) of vehicle travelled on the route along with the details of irregularities (missed POI) in covering the specified route.
- 7 The map should display real time movement of vehicle along with status of vehicles like ideal, moving, etc.
- 8 The solution should display designated POIs along the routes displayed on map.
- 9 Real Time Tracking – should provide real time information on vehicle status based on user defined criteria like location, speed, time, etc.
- 10 The solution should have capability to replay a trip of any vehicle displaying the trip replay on map.
- 11 Device Tampering Alert: In case of tampering of any equipment, component of vehicle tracking system etc., alert should be given through SMS/ On-screen Pop Up Alert with Sound on about 4 to 5 relevant Mobile Nos. or as suggested by SMC.
- 12 Route Deviation/Excess Stoppage Alert: In case of deviation of vehicle from pre-defined routes or excess stoppage of vehicle beyond a specified time duration alert should be given through SMS on about 4 to 5 relevant Mobile Nos. or as suggested by SMC.
- 13 Facility to see vehicle specific or category specific alerts
- 14 Missed POI Alert: In case a POI is missed by a vehicle, the alert should be given on dashboard.
- 15 Vehicle wise missed POI report should be visible on screen as well in report format for a specific day or date range.
- 16 Facility to enable or disable any alerts for specific vehicle or group.

- 17 The real time location of the vehicle should be available on the MAP with the details like - Vehicle information, Location, Speed, Time Stamp, Distance travelled, Idle time

2.4.3.6 Route / Time Place Movement (TPM) Mapping & Management Module

1 Time Place Movement (TPM) mapping

- a. Facility to define route and waste collecting points on map
- b. All routes and its collection points should be accurately mapped (for tabular / map report, analysis)
- c. Facility to define the schedule for each route and POI there in, with respect to its collection in terms of start time, end time and grace period if any.
- d. Facility to assign a specific or multiple route to a particular contractor / vehicle / driver
- e. Administration of defined route as per new / updated requirement.

2 Time Place Movement (TPM) Monitoring

- a. Monitoring the route attendance by designated vehicle in terms of in time, out time and duration.
- b. Monitoring of vehicle movement & stopping points with time stamps
- c. Route and collecting points should be displayed on the city map. e.g. Society name, Apartment name, Complex name is to be displayed in reports as well as on map,
- d. Through GPS movement, entry / exit and stoppages of vehicle should be monitored.
- e. Every collecting point is mapped with the stoppage time interval. If vehicle stops at least for defined stoppage time at that collection point, it can be assumed that waste is collected from that point.
- f. Alert should be configurable for notifying incidence of missed route, missed POI, on missing time schedule.

3 Generate route performance report

2.4.3.7 Entity/Contractor Management Module

- 1 Facility to create new entity / contractor with contract details (contract start date, end date, zone, wards, etc.)
- 2 Defining of payment terms, SLA, etc.
- 3 Map vehicles to contractors
- 4 Map drivers to contractors

2.4.3.8 Payment & Penalty Calculation Module

The payment to the contractor is based on the tonnage of waste collected / transported, no. of trips, etc. The contractor is required to provide the services as per the SLAs defined. The payment and penalty calculation should be possible through this system. The contractors are awarded payment based on certain condition. Also, penalties are calculated based on certain conditions. The solution should have business rule configuration module where penalty conditions can be configured. These business rules should be taken into consideration while calculating final payment amount to be paid to the contractor. This module should enable to generate payment reports capturing performance

of the contractor depending on various performance SLAs and KPIs like missed POI, tonnage collected, time schedule compliance, no. of trips, route compliance, etc.

e.g. for the Door to Door Garbage Collection penalties are levied if the vehicles do not start and end the collection activity in time, if the vehicle misses any society/building (missed POI), if the contractor has not deployed the no. of vehicles defined for a particular zone, etc.

2.4.3.9 Dashboard & Reporting Requirements

Dashboard feature should give a quick and easy view to know overall fleet status on real time basis. It should display status information of waste collections across entire city. The solution should have option to customize dashboard based on user role. The dashboard of operator can be different from the dashboard of higher officials. The Dashboard view should provide the following information. The features mentioned below are indicative in nature and will be finalized at the time of finalizing the System Requirements Specifications Document (SRS).

- 1 Ward/zone wise collections
- 2 Contractor wise activity report
- 3 Category wise (D2D, Container Lifting, etc.) activity report
- 4 Summary of the activity at Transport Station / Disposal Site like no. of vehicle trips, weightage collected, etc.
- 5 Daily, weekly, monthly collection dashboard
- 6 Granular information about all mapped routes and waste vehicles travelling on the route
- 7 Status of waste collecting vehicle (running/idle etc.) in the form of chart (e.g. pie chart)
- 8 Detailed information about vehicles (e.g. company name, vehicle number, driver details etc.)
- 9 The solution should have alert dashboard where all generated alerts (e.g. missed POI) should be displayed and corresponding SOPs should be triggered (This will require pre entry of payment and penalty applicable in case of missed POI, vehicle absent etc. which is not covered.)
- 10 The dashboards should be customizable where operator monitoring the solution can filter out columns/fields required as and when necessary.
- 11 The dashboards should have sort option on all columns
- 12 It should be easy to create additional dashboard without major custom coding to meet functional requirements
- 13 The dashboard should have a print functionality where operator at transfer station can print a receipt using the data displayed on the dashboard.

MIS Reports & GIS Reports

- 1 MIS Reports at various levels (Zone, Ward, Location...) for various periods (Daily, weekly, monthly)
- 2 Verification Report & Exception reports to be developed
- 3 GIS Report on Master Data at various levels (Zone, Circle...) for various periods (Daily, weekly and monthly), and Verification Report & Exception reports to be developed.
- 4 Capturing the GPS Coordinates of the location of data capture is recorded for validation.
- 5 Date wise, Zone wise, Route wise, collection points served, not served.
- 6 Date wise, Zone wise, Route wise number of vehicles (with vehicle details) used.

- 7 Date wise, Zone wise, Route wise list of vehicles transferred / not transferred garbage to Transfer Station.
 - 8 Date wise, Zone wise, Route wise details of garbage collected
 - 9 Date wise, Zone wise, Route wise list of vehicles violated their routes.
 - 10 Vehicle wise, date wise vehicle in operation / not in operation details.
 - 11 Date wise, vehicle wise number of trips at disposal site.
 - 12 Date wise list of abnormal vehicles whose number of entries into dump yard not matches.
 - 13 List of vehicles present into dump yard at any moment.
 - 14 Date wise, Zone wise list of vehicles with nonfunctional GPS.
 - 15 Display of real time / archived vehicle traversal route on the map (Scheduled / Actual).
 - 16 Display of Geo-fence, Geo-locations on the map.
 - 17 Vehicle summary report (vehicle id, first and last collection points, Collection start time and end time for the day, Total distance travelled, Total no of speed violations, Maximum speed attained throughout journey, Graphical as well as tabular display of total collection points served and points not served by selected vehicle for any particular day.
 - 18 Show all collection point with their scheduled serve time
 - 19 Stoppage Report (Halt Start Time, End Time, Halt Location, and total Halt time for any selected vehicle for specific date)
 - 20 Vehicle History (Total distance covered, alerts, violations, average speed, high speed between start and end date (on weekly and monthly basis) for Vehicle).
 - 21 Payment report for Contractors (Based on weight/trips per vehicle per day)
 - 22 Penalty report for Contractors (Based on weight/trips per vehicle per day)
- The Report list is generic and actual list of MIS reports will be finalized during implementation.

2.4.3.10 Mobile App

The selected bidder shall be required to develop a mobile app for android and iOS. The app shall enable monitoring of the activities as well as transactions.

As a part of waste collection process, the driver of contracted vehicle must mark attendance at SMC office. (The door to door garbage collection vehicles usually mark their attendance at respective ward office and the container lifting vehicle usually mark their attendance at zone office). A mobile app should be developed to mark attendance of the vehicle. The indicative requirements are as under:

1. The mobile app should have a login screen using which registered user can enter user name and password.
2. After supervisor logs in, the mobile app should have a user interface where the supervisor stationed at zonal check post and ward office should be able to select vehicle number from a dropdown containing list of vehicle numbers of the vehicles that are assigned (supposed to mark attendance) at that particular zonal check post/ward office.

3. After confirming the selected vehicle number of the arrived vehicle by manually observing the vehicle number plate, supervisor should be able to submit attendance in the centralized database.
4. If a spare vehicle is assigned a duty in case of unavailability of regular vehicle, the app should allow to assign the duty to the spare vehicle by selection from the list of spare vehicles.
5. "Assigned vehicle number list" should be modifiable in such a way that any update/deletion/addition of vehicle number can be performed from backend.

Mobile app should also allow to monitor the solid waste collection and disposal activity to higher officers. The higher officials should be able to view the activities for a specific ward, zone and SMC as a whole. The mobile app should have dashboard to display reports of arrived vehicles by zone/ward. These reports will be observed by SMC officers registered to use the mobile app. Actual list of reports will be finalized during implementation

2.4.3.11 Others

1. The solution should have capability to integrate with Email and SMS gateway to send Email and SMS. SMC will provide email and SMS gateway with necessary api. SMS and Email gateway integration will be the responsibility of bidder.
2. Provision for capturing complaint information with regards to the Solid Waste Management activity.
3. The solution should be accessible from smart devices (e.g. iOS/android cell phones, tablets etc.)
4. The bidder will be required to implement necessary data archival policy for the solution. Bidder to archive historic data as defined by SMC and to make available the archived data in usable format on requirement of SMC.
5. **Internal & External Integrations:** The required application should be developed with latest technologies and should be open with integrations with other applications/portals of the Department. The captured data may be required to be integrated with various internal & external interfaces.
6. The solution should be scalable and should not have any restrictions on number of users using the solution, licenses, number of vehicles getting tracked and hardware devices integrated.

2.4.3.12 Application Hosting

The solution shall be hosted in SMC data center. The integrated data available from all software applications mentioned above should be available in a central database on a central server located at SMC datacenter i.e. all software solutions mentioned above should use a central database to store data. The data should be stored in such a way that whenever required it can be queried and made available in report format.

SMC will provide the hardware and network infrastructure at Transfer Station and disposal site of SMC which include the desktop computers, printers, connectivity to SMC data center and power.

Procurement, installation, configuration, hardening of server infrastructure (e.g. CPU, operating system, RAM, storage, etc.) that will host the software application should be provisioned by the selected bidder. SMC will provide only necessary rack space at SMC Datacenter. Necessary network infrastructure within SMC Datacenter will also be provided by SMC. The hardware infrastructure should be able to sustain required load and should support all functional as well as non-functional requirements. All hardware infrastructure proposed to be installed at SMC Data Center should be from OEMs who are amongst top 5 for worldwide market share in terms of revenue as per IDC latest published quarterly report or present in latest magic quadrant of Gartner. Bidder is expected to attach the report along with technical bid.

2.4.3.13 Hardware Specifications

2.4.3.13.1 RFID Tag and Reader Specifications

#	Parameter	Particulars
I. RFID Reader (with Controller) Specifications		
1	Protocol	EPC Gen 2, ISO 18000-6C and shall comply with the general conformance requirements of the standard
2	Frequency	UHF 865 MHZ to 867 MHZ as per EPC Gen 2 standards
3	Communication	Ethernet/ Serial communication (EIA standard RS 232 C / RS 485)
4	RF Power maximum	1 W – transmitted & 4 W – EIRP (Equivalent Isotopically Radiated Power)
5	Reading distance	Minimum 8 meters, with the Transceiver mounted typically at a height of 6 m above the road surface, the coverage of the antenna shall not exceed a diameter of 3.6m.
6	Reading Speed	Software Programmable Average Reading per 64Bits : <6ms
7	Reading Clue	Buzzer
8	Antenna	Circularly Polarized
9	Visual diagnostics	The Transceiver shall have LED indicators for sense, transmit Fault and Power which shall be visible clearly to the operator on ground while the system is operational
10	Enclosure	Light weight enclosure for the RFID Transceiver and circularly polarized antenna
11	Environmental	IP 65 or better
12	Relative Humidity	95% Condensing
13	Operating Temperature	-20°C to 55°C
14	Air Interface & Adaptive Noise Features	The Transceiver technology employed should have the capability to optimize read rates for the vehicle identification application and adapt to instantaneous noise and interference level
15	Application capability	1. Should have read reliability exceeding 99.5% in the distance range specified.

		2. Diagnostic and Reporting Tools
16	Upgradeability	The firmware should be upgradable to support future protocols.

II. RFID TAG (Sticker Type) Specifications

1.	Power	Tags should be passive. RFID tags should be rewritable. It should allow writing of information like vehicle number, contractor details etc.
2.	Operating Frequency	865-868MHz
3.	Data Transfer Rate	At least 512 kbps under ideal conditions & 64 to 512 kbps under field conditions
4.	Tag Id	Unique Id given by a chip manufacturer (64 bits or 8 bytes)
5.	Protocol	EPC Gen 2, ISO 18000-6C
6.	Dimensions (including the substrate/backing)	Maximum area occupied on the windshield shall be 50 Sq. cm.
7.	Material	Plastic substrate with printed antenna
8.	Physical printing of Tag ID on the Tag	The Tag ID shall be physically printed on the Tag using the Hexadecimal numbering system and shall be adequately clear for easy visual recognition
9.	Location & Installation	<p>The RFID Tag shall be installed at a fixed location on the inside of the Windshield of the vehicle. (location to be optimized for each class of vehicle during testing)</p> <p>The RFID Tag shall have a self-adhesive backing with which it can be fixed to inside of the windshield. The adhesive shall be such that</p> <ul style="list-style-type: none"> • It allows reliable and accurate reading of the Tag by the Transceiver located at a specified distance. • The RFID chip and/ or the antenna get irreparably damaged when an attempt is made to remove the installed Tag from the windshield by any means. After such an attempt the Tag shall become inoperable.
10.	Tag Memory (minimum)	Unique Tag ID – 64 bits, EPC memory – 240 bits

11.	Data Retention	10 Years minimum with UV protection for normal sunlight exposure and ambient temperature of 45 Degree Celsius
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III. RFID TAG (Metal mount Type) Specifications

1.	Chip Type	<ol style="list-style-type: none"> 1. UHF Class 1 Gen 2 2. EPC 96 bit extendable up to 480 bits 3. User Memory 512 bit 4. Data retention of 50 years 5. Write endurance 100,000 cycles
2.	Operating Frequency	865-868MHz
3.	Operating Range	6 to 10 meters when mounted on Metallic surface
4.	Operating mode	Passive (battery-less transponder)
5.	Storage Temperature	-20°C to +85°C
6.	Operating Temperature	-20°C to +85°C
7.	Ingress Protection	IP 66
8.	Mounting	Rugged construction for high durability with Screw holes for mounting with Screws on a metallic surface

2.4.3.13.2 Vehicle Tracking GPS Device Specifications

The table below provides indicative specifications to which GPS device must be conformant.

#	Parameter	Requirement
1	GPS Channels	Parallel GPS Receiver -20-Channel or more
2	Input Voltage Range	5.5V - 36V
3	Average current	90 to 100mA
4	Standards	WGS-84 Standard compliant Outputs as per NMEA 0183
5	Average current with Battery charging	125 to 135mA
6	Battery Specification	Lithium-ion
7	Battery Backup Time	3 hrs. or more in active mode
8	GPS	Cold Start <55 sec Warm Start < 40 sec Hot Start < 10 sec
9	GPS Sensitivity	Tracking -157 dBm navigation -154 dBm Acquisition -142 dBm
10	Antenna	Internal Antenna for GPS and GPRS

11	Horizontal Position Accuracy	Up to 10 meter
12	Digital Inputs	3 minimum
13	Digital outputs	2 minimum
14	Analog Inputs	2 minimum
15	Over speed	User Settable Speed limit, SMS alert packet when speed cross over speed limit(maximum)
16	Parameters Setting Through SMS	APN, live ip1, live ip2, unit id, server reconnect frequency, server change frequency, geofence control, over speed control, movement control, SMS serving numbers, UTC time configuration, factory setting, digital output control, memory data erase
17	EEPROM	2Mbit
18	GPS Track Recording and Resending	Built in 2MBit large flash memory to store data when out of GPRS radio coverage. Automatically resend Non- GPRS coverage data when device goes into GPRS coverage
19	Power Supply	External & Internal Battery
20	Battery Status	Battery Health indication
21	GPS based Speed Measurement Range	up to 180 KMPH
22	Factory setting	Switch for default factory setting
23	Data send frequency settable	Adjustable up to 8 seconds or more
24	LED status	Power
25	USB for parameter configuration	Required
26	Multi IP connection two server	Primary, Secondary
27	AGPS supported	Required
28	Operating Temperature	-10°C to +50°C
29	Storage Temperature	-10°C to +50°C
30	Humidity	95% non-condensing
31	Protection	IP 65 or above (With heat resistant, Vibration proof, tamper proof, Water Splash proof)
32	API/SDK	Should provide API's protocols and necessary documentation for integration purpose.
33	Connection	USB/RS232 port
34	GPRS	<ol style="list-style-type: none"> 1 In- Built Triband GPRS module/Modem 2 Multi Slot GPRS 3 GPRS class 10 or Above 4 Should support – SMS, Voice, Data, GPRS, TCP/IP

2.4.3.13.3 Weigh Bridge System

As a part of solution integration with existing weigh bridge system is required. SMC will provide required SDK of weigh bridge system for the integration.

Weigh Bridge Make and Model: - Keli Load Cell SQB A 30T

The bidder should make sure that proposed software solution can be integrated with available weigh bridge system and SDKs.

2.4.3.13.4 Biometric device

As a part of solution, to ensure the presence of designated staff, it is required to validate the same using the biometric finger print scanner. The selected bidder will be required to provide the same at the transfer stations, check post and the disposal site as part of the contract.

The successful bidder should suggest a suitable biometric device complying to CE standard and meet all the functional requirements. The selected bidder should get approval from SMC for the suggested device.

2.4.3.13.5 CCTV Camera

As a part of solution integration with existing CCTV Camera is required. SMC will provide required SDK of CCTV Camera for the integration.

Weigh Bridge Make and Model: - Hikvision IR Mini Bullet (DS-2CD2010F-I)

2.5 NON-FUNCTIONAL REQUIREMENTS OF SOFTWARE SOLUTION

Non-Functional requirements of an IT system are quality requirements or constraints of the system that must be satisfied. These requirements address major operational and functional areas of the system in order to ensure the robustness of the system. The Non-Functional Requirements established for the Integrated monitoring and tracking system are described in this section of the document. The main areas addressed are:

1. Capacity Estimates and Planning
2. Performance
 - a. Response Time
 - b. Throughput
3. Scalability
4. Availability (including recoverability and reliability)
5. Security
6. Disaster Recovery

These Non-Functional Requirements should be used:

- a) As a basis for system sizing and estimates of cost.
- b) To assess the viability of the proposed IT system components.
- c) To drive the design of the operational models.
- d) As an input to component design.

Details of the NFRs are as follows:

- 1. Capacity Estimates & Planning-** The architecture of the system must support the current anticipated load of more than 30 concurrent users. The solution is expected to provide acceptable level of performance under peak load.
- 2. Performance-** Response Time requirements define the time to complete a specific system task or process. The time interval, or response time, can be expressed as an exact measurement of time or as an acceptable range. The following table provides response time bands for the most significant user-system interaction within the different classes of transaction present in the system.

Frequency of Use	Target Average End-to-End Response Time (seconds)
Simple Page / Screen Load	1 – 4
Complex Page / Screen Load	5 – 8

Simple Page / Screen Load – Example: Screen to screen transition during static page / screen load

Complex Page / Screen Load – Example: Delivery of a dynamic page / screen that is populated with information from various tables in database (e.g. complex report).

During Inception and requirement analysis phase, architecturally significant use cases should be mapped to one of these response time bands and agreed upon by Bidder.

- 3. Scalability-** Scalability is the ability to expand the system architecture to accommodate more users and vehicles, more transactions and more data as additional users and data are added in the future. The existing systems should be extensible up to additional 50% of existing capacity without necessarily having to replace them. System should be able to scale horizontally and vertically.
- 4. Availability-** Availability requirements address the time a system must be available (up and running) to service user requests. Availability is the acceptable and agreed-to level of service during scheduled periods.
The following table has grouped different service levels bands based on how critical the overall availability of the system is to system users.

Requirement	Critical	High	Medium	Low
Availability	99.9%	99%	98%	97%

Mean Time to Repair (MTTR)	2 – 4 hours	8 hours	16 hours	32 hours
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The bidder shall be responsible for designing and implementing high availability for the solution. All the components proposed like DB, OS, Application server should support high availability.

5. Maintainability- Smart Waste Management Solution should be easy to maintain. Technical design should not be monolithic in such a way that any change/repair of a single module affects entire application which needs to be tested every time. Design should be modular so that only affected module needs to be deployed and tested in case of any change in that module.

6. Browser Requirements- Solution should support page display using the following browsers.

- (a) IE version 8.x and above
- (b) Firefox version 50.x and above
- (c) Chrome version 48.x and above
- (d) Safari version 10.x and above

7. Security- Various security related requirements are categorized as follows:

- (a) Directory services
- (b) Authentication
- (c) Authorization

8. Directory Services-

- (a) System should have capability for integration with active directory supporting LDAP.

9. Authentication-

- a) System should support a password based authentication.
- b) System should support multiple password policies that can be applied to different categories of users. Specifically, the use of strong passwords for some users and weaker passwords for other users is required.
- c) System should support password storage and transmission using strong encryption.
- d) Authentication technologies utilized must be industry standards.
- e) User accounts must contain a unique ID.
- f) System should allow administrators the ability to create, delete and manage user accounts.
- g) System should have configurable password restrictions and policies.

10. Authorization-

- (a) System should support a role based access control model.
- (b) System should support the creation of user roles.
- (c) System should support delegated administration of role assignment and management

11. Testing

Performance testing to measure and ensure performance (and scalability) of the application, network emulation capabilities to test real world load scenarios and network conditions along with regression testing across releases will be required as part of the project. Any test tool required for the testing will be responsibility of Implementation Agency.

2.6 POST IMPLEMENTATION SUPPORT AND MAINTENANCE

The following section describes post go live support requirements, service management and support requirements and enduring support requirements.

2.6.1 Post Go-Live Support

As part of the delivery of the solution it is expected that the Bidder shall provide Post Go Live Support ("PGLS") for the Solution for 5 years following project completion. The Post Go Live Support ("PGLS") will start after completion of 3 months of Hypercare Support after Go Live.

The PGLS will run after completion of 3 months of Hypercare Support after Go Live through to the end of the 5 years' post releases completion timeline. The Bidder shall provide appropriate levels of on-site and off-site support as necessary. The Bidder's PGLS team shall be responsible for the continued delivery of stable systems, development, and operational support.

This includes a preventive maintenance program, managing releases, monitoring and system health checks and incident management. It is expected that out of hours support will be provided as needed.

Support of the system is key to establishing system and process stability within SWM Monitoring and Tracking ecosystem following the deployment. Over and above the technical support required in this period, it is expected that support efforts shall target improving end-user familiarization with new applications and processes to enhance adoption and aid transition of new processes to a business-as-usual status.

The support provides a defined window of time for knowledge sharing and the transitioning of ownership of support to SMC/SSCDL and/or SMC/SSCDL nominated parties.

The purpose of the PGLS period is to accelerate business stabilization, through the following objectives:

1. To measure, and communicate, how performance is stabilizing against expectations;
2. To inform decision making about how performance issues should be resolved;
3. To prioritize and coordinate efforts to where they will have the most impact;
4. To monitor the impact of any changes until stabilization is achieved;
5. To help determine when the solution is able to transition to the enduring support model;
6. The PGLS team should have flexibility to scale up/down;
7. To ensure timely resolution of incidents;
8. When incidents occur, to restore normal service as quickly as possible to minimize business impact;
9. To ensure that incidents and service requests are processed consistently and that none are lost;

10. To direct support resources where most required;
11. To provide information that allows support processes to be optimized, the number of incidents to be reduced, and management planning to be carried out.

After Go Live bidder shall provide 3 months Hyper Care Support followed by 5 years support. Necessary transition needs to be taken care by the bidder during these transitions. Warranty support for the solution will be provided for the 3 months Hyper Care Support period or until all defects in the Solution for which the Bidder shall be responsible are resolved, whichever is longer.

Defects include those that were known prior to Go-Live and any new defects that materialize in operation during Warranty.

A defect can only be resolved if:

1. Test passes
2. A valid workaround is approved by SMC/SSCDL
3. Alternate resolution is approved by SMC/SSCDL

A Warranty Defect can be defined as: any defects in the technical performance or functionality of any aspect of the Solution when assessed by reference to the Acceptance Criteria which are identified or known on the date of Acceptance or which arise during the Warranty Period.

The Bidder shall work to ensure that all defects and issues are resolved in line with agreed processes and procedures.

2.6.2 Service Transition

Each transition phase should be supported and tracked by a clearly defined and agreed Transition Plan. The transition plan should outline who the current owner is, the future owner will be, key stake holders and the date of the transition and measure the progress of the transition based on agreed handover criteria.

2.6.3 Service Management Support Process

Any citizen complaint pertaining to Solid Waste Management will be registered through SMC's complaint management system and will not be the responsibility of the bidder.

The SMC admin team/ L1 support help desk is envisaged to log tickets for issues noticed in the solution by the operators/others. Any complaints received related to the solution implemented by bidder will be registered through an ITSSM tool. The SLA / KPI will trigger once the ticket is generated through ITSSM tool. Bidder is not required to provide ITSSM tool.

The Bidder will be responsible for:

- 1) the diagnosis and repair required to close the problem;
- 2) documenting all actions in the ticket logs;
- 3) performing root cause analysis, as required;
- 4) working with other vendors, as appropriate, to attempt to resolve problems;
- 5) contacting other support groups or organizations, as required.

The Support team to follow all the ITIL processes namely

- 1) Incident Management,
- 2) Service Management to cover Minor Enhancements: Effort <20 hours. Handled as pre-paid enhancements with a limited effort up to a total of 60 hours /month,
- 3) Problem Management
- 4) Change Management

The dedicated programmer/developer requested onsite for first two years during the support period will be responsible for enhancements and developments required during the deployment period.

2.7 KPIS & SLAS

2.7.1 Timelines & Deliverables

The selected bidder shall be required to adhere to the timelines as specified in Section-2.7.2. The development process will be reviewed regularly as per the time schedule. The implementation must be completed as per the milestones. Subsequent to Go-Live, hyper-care for 3 months and post implementation support for 5 years will start.

2.7.2 Project phases and deliverables

The deliverables as per the releases with milestones are mentioned below:

Milestone #	Project Phase	Deliverables	Timelines (in days)
Milestone 0	Initiation	Team mobilization	T+0
Milestone 1	Requirement Gathering & Analysis	<ol style="list-style-type: none"> 1. Detailed release plan for the project 2. Requirement Gathering & Analysis Document 3. Wireframe 4. Development cum Test environment set up 	T+15
Milestone 2	Architecture & Design	<ol style="list-style-type: none"> 1. Architecture Document 2. Detailed Level Design Document 3. Solution Prototype 	T+25
Milestone 3	Installation & Configuration of devices	<ol style="list-style-type: none"> 1 Installation & Configuration of devices 2 Production environment set up 	T + 65
Milestone 4	Implementation & Unit testing	<ol style="list-style-type: none"> 1 Developed solution 2 Unit test cases 3 Unit testing report 4 System Integration test cases 	T+85
	System Integration Testing	<ol style="list-style-type: none"> 1 System Integration & Performance test report 	T+95
Milestone 5	User Acceptance Testing	<ol style="list-style-type: none"> 1 Regression Testing (if required) 2 User Acceptance Testing Reports 	T+105

Milestone 6	Go Live	1 Solution Go Live & Deployment Document	T+110
Milestone 7	Hyper-Care	1 Three-month hyper-care support	T+200

Note:

1. The bidder can identify various independent activities under different milestones and can initiate them in parallel to achieve the implementation timelines.
2. For delay of every day per milestone, a penalty of 1% of payment for corresponding/relevant milestone would be deducted, provided the delay is attributable to the vendor. The decision of SMC/SSCDL will be binding in this regard.

2.7.3 Payment Schedule

A. Payment Schedule for Installation and Configuration of Hardware

Phase	Release
Delivery of the product (hardware)	30%
Installation & Commissioning	30%
Go-Live	20%
Completion of 1 st year of Support	5%
Completion of 2 nd year of Support	5%
Completion of 3 rd year of Support	5%
Completion of 4 th year of Support	5%

B. Payment Schedule for Software Solution

Milestone #	Project Phase	Release
Milestone 1	Requirement Gathering & Analysis	10%
Milestone 2	Architecture & Design	10%
Milestone 4	System Integration Testing	30%
Milestone 5	User Acceptance Testing	10%
Milestone 6	Go Live	10 %
Milestone 7	Hyper Care Support	20%
Milestone 8	Completion of 1 st year of Support	5%
Milestone 9	Completion of 2 nd year of Support	5%

Hypercare deliverable will include closing of all issues reported with Go-Live along with minor enhancements arising due to those defects. This % implies the percentage of total implementation cost as specified by the vendor.

Monthly Progress Reports/MIS to be submitted every month or as and when desired by SMC indicating the activities remaining/completed and progress as against the scheduled tasks / activities.

2.7.4 Payment Schedule for Support Phase

The payment to the Selected Bidder shall be on quarterly basis post completion of respective quarter. The payment shall be made on quarterly basis after deducting necessary penalties as per KPI & SLA calculations.

2.7.5 KPIs

The vendor who is awarded the contract will be measured on certain KPIs and SLAs during the support phase. This is to ensure that they are accountable for their tasks and only get compensated if their work is of high quality and bears maximum efficiency. Some basic parameters in KPI and SLA are mentioned below. Vendor will provide daily/monthly reports for these parameters.

2.7.5.1 KPIs of Software Application & Measurement

#	Performance Indicator	Below Acceptable Levels	Frequency of Report
1	Availability of Application-Uptime	<=98%	Monthly
2	Average Response Time	>5 seconds	Monthly
3	Security Breach	>0	Monthly
4	Number of incident tickets per month*	>5	Monthly
5	Number of UAT defects (Applicable for implementation phase only)	>20	During UAT phase
6	Backlog count	>10%	Monthly

2.7.5.2 KPIs of hardware devices & Measurement

1. GPS Device

#	Performance Indicator	Below Acceptable Levels	Frequency of Report
1.	Availability of device uptime	<98.5%	Monthly
2.	Accuracy of the location tracking	>10 meter	Monthly
3.	Problem resolution time for the incidents due to GPS device malfunctioning including wiring issues	> 6 hours	Monthly
4.	Number of incident tickets per month*	>5	Monthly
5.	Number of UAT defects (Applicable for implementation phase only)	>5	During UAT phase

2. RFID Reader

#	Performance Indicator	Below Acceptable Levels	Frequency of Report
1.	Availability of device uptime	<98.5%	Monthly
2.	Problem resolution time for the incidents due to RFID reader malfunctioning including wiring issues	> 2 hours	Monthly
3.	Number of incident tickets per month*	>5	Monthly
4.	Number of UAT defects (Applicable for implementation phase only)	>5	During UAT phase

3. Biometric Device

#	Performance Indicator	Below Acceptable Levels	Frequency of Report
1.	Availability of device uptime	<98.5%	Monthly
2.	Problem resolution time for the incidents due to biometric device malfunctioning including wiring issues	> 6 hours	Monthly
3.	Number of incident tickets per month*	>5	Monthly
4.	Number of UAT defects (Applicable for implementation phase only)	>5	During UAT phase

4. RFID Tag

#	Performance Indicator	Below Acceptable Levels	Frequency of Report
1.	Availability of device uptime	<98.5%	Monthly
2.	Problem resolution time for the incidents in case RFID tag becomes nonfunctional and replacement needs to be provided	> 2 hours	Monthly

2.7.6 Monthly Penalty for Missed KPIs

- a) Penalty for missed KPIs for 1st instance in a particular month: No penalty
- b) Penalty for missed KPIs (up to 3) in a particular month: 5% deduction of relevant (implementation/support) monthly cost
- c) Penalty for missed KPIs (more than 3) in a particular month: 10% deduction of relevant (implementation/support) monthly cost

How KPIs would be measured?

No.	Performance Indicator	Measurement Methods
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1.	Availability of devices-Uptime	The proportion of the time that the hardware devices are up and running
2.	Accuracy of the location tracking	Accuracy of location details transferred by GPS tracking device to software application
3.	Number of incident tickets per month	Number of incidents received per month
4.	Number of UAT defects (Applicable for implementation phase only)	Number of UAT defects in all hardware devices

2.7.7 Service Level Agreements and Penalty

SLAs will be measured during the support phase and implementation phase as defined in the section "Timelines & Deliverables"

A. Severity Levels for software application

Severity levels are defined using two dimensions: impact and urgency

a) Impact is classified into 4 categories:

1. Extensive: Either no or extremely limited workaround is available requiring very intense incident support; Extremely inconvenient to the SMC/SSCDL OR >10% of users impacted by incident
2. Significant: Limited workaround available that requires intense level of incident support; very inconvenient to the SMC/SSCDL and high incident occurrence risk OR >5% & <=10% of users impacted by incident
3. Moderate: >2% & <=5% of users impacted by incident
4. Minor: <=2% of users impacted by incident

b) Urgency is classified into 4 categories:

1. Critical: If not dealt with immediately the service will escalate many times over within a short time-period.
2. High: If not dealt with in the very near future (within the half day) the service will escalate severely till solved
3. Medium: If not dealt with in the near future (within 2 days) it will impede business/ IT processes
4. Low: All others

B. Severity Levels for hardware devices

Similar to software applications, for hardware devices, the Severity levels are defined using two dimensions: impact and urgency

The devices which impact the day to day payment and penalty calculation for Solid waste Management like GPS devices, biometric devices, RFID readers may have higher urgency than Bin RFID Tags. Impact will be based upon number of such devices not working and/or suitable work around being available. For first three years the hardware devices are supposed to be covered by onsite replacement warranty followed by maintenance support for remaining period. The SLA defined below will decide the number of hours within which such replacement/ support will be required.

a) Impact is classified into 4 categories:

1. Extensive: Either no or extremely limited workaround is available requiring very intense incident support; Extremely inconvenient to the SMC/SSCDL OR $\geq 50\%$ of total number of devices are not working or partially working.
2. Significant: Limited workaround available that requires intense level of incident support; very inconvenient to the SMC/SSCDL and high incident occurrence risk OR $\geq 30\%$ & $< 50\%$ of total number of devices are not working or partially working.
3. Moderate: When atleast 50% of features of devices are working and $\geq 5\%$ & $< 30\%$ of such devices are impacted
4. Minor: \leq When number of devices impacted are less than 5%, which would then be replaced by buffer stock.

b) Urgency is classified into 4 categories:

1. Critical: If not dealt with immediately the service will escalate many times over within a short time-period. Like, impact is critical if RFID readers are not working and business process cannot be executed.
2. High: If not dealt with in the very near future (within the half day) the service will escalate severely till solved
3. Medium: If not dealt with in the near future (within 2 days) it will impede business/ IT processes
4. Low: All others

Severity Levels (P1/P2/P3/P4) are decided based on these two dimensions through the following grid:

	Impact			
Urgency	Extensive	Significant	Moderate	Minor
Critical	P1	P1	P1	P1
High	P1	P2	P2	P2
Medium	P2	P2	P3	P4
Low	P2	P2	P3	P4

Applications Support	Expected	Minimum	Measurement Window	Penalty (% of Monthly Support Cost)
Incident Response Time				
P1 Severity Level Incidents Responded within 15 mins	99.00%	95.00%	Monthly	0.5%
P2 Severity Level Incidents Responded within 30 mins	99.00%	95.00%	Monthly	0.5%
P3 Severity Level Incidents Responded within 90 mins	99.00%	95.00%	Monthly	0.5%
P4 Severity Level Incidents Responded within 120 mins	99.00%	95.00%	Monthly	0.5%
Incident Resolution Time				
P1 Severity Level Incidents Resolved as agreed	2 Hours	4 Hours	Monthly	2% (for every P1 incidents breaching SLA) beyond which 1% per hour per incident
P2 Severity Level Incidents Resolved as agreed	8 Hours	8 Hours	Monthly	1% (beyond three P2 incidents breaching SLA) beyond which 0.5% per hour per incident
P3 Severity Level Incidents Resolved as agreed	16 Hours	16 Hours	Monthly	0.5% (beyond five P3 incidents in a month) beyond which 0.25% per hour per incident
P4 Severity Level Incidents Resolved as agreed	32 Hours	32 Hours	Monthly	0.5% (for ten P4 incidents in a month) beyond which 0.25% per hour per incident

The SLAs are subject to review and revision by SSCDL at regular intervals. The hours considered for SLA calculation of any P1 severity ticket is 24*7 while for all other types of tickets it will be calculated based on business hours of SMC.

2.7.7.1 SLA Change Process

The parties may amend this SLA by mutual agreement. Changes can be proposed by either party. The bidder representative may initiate an SLA review at least half yearly which is subject to approval from SSCDL.

The bidder representative will maintain and distribute current copies of the SLA document as directed by SSCDL. Additional copies of the current SLA will be available at all times to authorized parties.

2.7.7.2 Version Control

All negotiated SLA changes will require changing the version control number. As appropriate, minor changes may be accumulated for periodic release (e.g. every quarter) or for release when a critical threshold of change has occurred.

2.7.7.3 Management Escalation Procedures

The purpose of this escalation process is to provide a quick and orderly method of notifying both parties that an issue is not being successfully resolved at the lowest possible management level. Implementing this procedure ensures that SSCDL and Bidder's management are communicating at the appropriate levels.

- a) Escalation should take place on an exception basis and only if successful issue resolution cannot be achieved in a reasonable time frame.
- b) Either SSCDL or bidder can initiate the procedure
- c) Escalation will be one level at a time

2.7.8 Penalty

- a) In case the overall support of the bidder to the SSCDL is not found sufficient or satisfactory, the same will also amount to failure and attract a penalty generally up to 10% of the consideration of Contract. The penalty will be proportionate to the time period for which the support is not found to be sufficient or satisfactory.
- b) In case the bidder fails to be compliant with SLAs and KPIs requirements at regular intervals as mentioned above, penalty will be imposed generally up to 10% of the consideration of contract depending upon the nature of failure or the short-fall.
- c) In case a serious bug / flaw / error is found in a system or the system is not found working as intended/ satisfactorily / properly due to the software developed then in that case, generally a penalty of up to 10% of the consideration of contract will be imposed. The penalty will be proportionate to the delay in amending the bug / flaw / error, etc. after the date of report.
- d) In case the support of the bidder's staff to the SMC is not found sufficient or satisfactory, the same will also amount to failure and attract a penalty generally up to 10% of the consideration of Contract. The penalty will be proportionate to the time period for which the support is not found to be sufficient or satisfactory.

- e) In case of unavailability of the solution for the lack of proper configuration /administration / maintenance of the system by the bidder's staff at SMC a direct penalty of 10% of the consideration of Contract will be imposed, charged.
- f) In case the bidder fails to deliver service as depicted in the scope of work, penalty will be imposed generally up to 10% of the consideration of contract depending upon the nature of failure or the short-fall.
- g) The cumulative value of penalties stated under the above clauses [a to f] could be up to 10% of the consideration of the contract.
- h) The decision of CEO/Chairman of SSCDL will be final and binding in case of the percentage of penalty to be applied, imposed in all the above cases to the bidder.
- i) In case of continued failure or short-falls from the established standard, the contract shall be terminated and no payments will be made nor will any damages be paid to the bidder besides forfeiting Security Deposit.

2.7.9 Limitation of Liability

- a) Except in case of gross negligence or willful misconduct on the part of the bidder or on the part of any person or Firm acting on behalf of the bidder in carrying out the Services, the Bidder, with respect to damage caused by the Bidder to the SSCDL/SMC's property, shall not be liable to the SSCDL/SMC:
 - I. for any indirect or consequential loss or damage; and
 - II. for any direct loss or damage that exceeds a fixed amount equal to contract value.
- b) This limitation of bidder shall not affect the bidder's liability, if any, for damage to Third Parties caused by the bidder or any person or Firm acting on behalf of the bidder in carrying out the Services or any obligation of the bidder to indemnify the Authority with respect to intellectual property rights infringement claims.

B. INSTRUCTION TO BIDDERS

3 GENERAL

3.1 INTRODUCTION TO THIS BID PROPOSAL

SSSCDL intends to invite proposals through this RFP. The Technical Bid along with EMD & Bid Fee in the name of "Surat Smart City Development Ltd" is to be submitted in hardcopy whereas the Price Bid is to be submitted online on <https://smc.nprocure.com>.

3.2 BID AVAILABILITY & VALIDITY

Bid documents can be downloaded from the web site <https://smc.nprocure.com> up to the date and time mentioned in the Online RFP Notice "SSCDL-SMARTSWM-RFP-01-2017".

The proposal should be valid for acceptance for a minimum period of 180 days from the Bid Due Date/Bid Submission Date (the "Proposal Validity Period"). If required, Authority may request the bidder to have it extended for a further period.

3.3 GOVERNING LAW AND JURISDICTION

The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Surat shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the Bidding Process.

3.4 AUTHORITY'S RIGHT TO ACCEPT AND REJECT ANY PROPOSALS OR ALL PROPOSALS

- a) Authority reserves the right to accept or reject any Proposal and annul the bidding process/ Proposal Evaluation Process and reject any/all Proposals at any time, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the ground for Authority's action.
- b) Without prejudice to the generality of Clause (a), the Authority reserves the right to reject any Proposal/Bid if:
 - 1) at any time, a material misrepresentation is made or discovered, or
 - 2) The Bidder does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Proposal.

- 3) Bidder submitted conditional Proposal/Bid.
- c) If such disqualification/ rejection occurs after the Proposals have been opened and the Selected Bidder as per award criteria gets disqualified/ rejected, then the Authority reserves the right to consider the next best Preferred Bidder, or take any other measure as may be fit in the sole discretion of the Authority, including annulment of the Selection Process.

3.5 EARNEST MONEY DEPOSIT (EMD)

- (a) Earnest Money Deposit (EMD) of amount Rs. 2,00,000 (Rupees Two Lakhs only) should be paid in the form of Demand Draft of any nationalized / scheduled banks, payable at Surat in the favor of the **“Surat Smart City Development Limited”**.
- (b) Any bid not accompanied with valid Earnest Money Deposit in the acceptable amount, form and validity period will be summarily rejected by the Authority as being non-responsive and bids of such Bidder shall not be evaluated further.
- (c) No interest will be payable by the Authority on the Earnest Money Deposit.
- (d) The EMD of unsuccessful Bidders will be returned by the Authority, without any Interest, as promptly as possible on acceptance of the Proposal of the Selected Bidder or when the Authority cancels the Bidding Process.
- (e) The Selected Bidder’s EMD will be returned, without any interest, upon the Selected Bidder signing the Agreement and furnishing the Security Deposit in accordance with the provision thereof.
- (f) The EMD shall be forfeited and appropriated by the Authority as damages without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise, under the following conditions:
- 1) If a Bidder submits a non-responsive Proposal;
 - 2) If a Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice, or restrictive practice;
 - 3) If a Bidder withdraws its Proposal during the Proposal Validity Period as specified in this RFP and as extended by mutual consent of the respective Bidder(s) and the Authority;
 - 4) In the case of Successful Bidder, if it fails within the specified time limit –
 - i to sign and return the duplicate copy of LOA
 - ii to sign the Agreement within the time period specified by the Authority.
 - iii to furnish the Security Deposit along with the signed copy of LOA; or
 - 5) In case the Successful Bidder, having signed the Contract, commits any breach thereof prior to furnishing the Security Deposit.

3.6 DUE DILIGENCE

The Bidders are encouraged to examine and familiarize themselves fully about the nature of assignment, scope of work, all instructions, forms, terms and conditions of RFP, local conditions and

any other matter considered relevant by them before submitting the Bid by paying a visit to the site, sending written queries to the Authority, and attending a Pre-Bid meeting.

3.7 ACKNOWLEDGEMENT BY BIDDER

- a) It shall be deemed that by submitting the Bid, the Bidder has:
- 1) made a complete and careful examination of the RFP
 - 2) received all relevant information requested from the Authority;
 - 3) accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the Authority
 - 4) acknowledged that it does not have a Conflict of Interest
 - 5) agreed to be bound by the undertakings provided by it under and in terms hereof.
- b) The Authority shall not be liable for any omission, mistake, or error in respect of or any of the above or on account of any matter or thing arising out of or concerning or relating to the RFP or the Bidding Process, including any error or mistake therein or in any information or data given by the Authority.

3.8 COST OF BIDDING

All costs and expenses (whether in terms of time or money) incurred by the bidder in any way associated with the development, preparation and submission of the Bid and bidder's participation in the Bid Process, including but not limited to attendance at meetings, discussions, demonstrations, etc. and providing any additional information required by Authority, will be borne entirely and exclusively by the bidder.

3.9 BID FEE

All Bidders must submit non-refundable Bid Fee of Rs. 6000 (Six Thousand Only) by Demand Draft or Banker's Cheque in favour of the "Surat Smart City Development Limited" payable at Surat.

3.10 SCHEDULE OF BIDDING PROCESS

The Authority shall endeavor to adhere to the bidding schedule as specified in table below:

Date of Issue of the Bid Document	14/06/2017
Pre-bid Conference by Submission of queries by email	By e-mail to it@suratsmartcity.com on or before 20/06/2017, 18:00 hrs
Date of SSCDL's Response to Queries	By 23/06/2017

Price Bid Submission	To be submitted online only on https://smc.nprocure.com on or before 28/06/2017
Technical Bid Submission (in Hard Copy) filled-in Technical Bid along with Bid Fee, EMD, Solvency Certificate and other documents.	In sealed envelope, strictly by RPAD/Postal Speed Post on or before 01/07/2017, up to 18:00 hrs. to the Chief Accountant, Surat Municipal Corporation, Muglisara, Surat – 395003, Gujarat.
Date, Time and Venue for Opening of Financial Bid	The technically qualified bidders will be notified with the date and time of the Financial Bid Opening.
Signing of Agreement	Within 15 days from the date of issuance of LOA

3.11 TERMS & CONDITIONS OF THE TENDER

- 3.11.1 Selected Bidder shall undertake project on Design-Develop-Maintain-Transfer basis.
- 3.11.2 Selected Bidder shall design, develop, maintain, and transfer the project during the Contract Period. Provided in the event of earlier termination of the Contract, this period shall be ending with the date of termination of the Contract (the "License Period/Contract Period").
- 3.11.3 At the end of the hyper care phase the Implementation Agency shall transfer ownership of all code developed along with updated documentation for Smart Solid Waste Management Solution Project to authority at no cost to authority. The agency shall also transfer the source code along with updated documentation on completion of each year during the contract period at no cost to authority.
- 3.11.4 The eligible and technically qualified bidder having the lowest price (L1) shall be considered the Selected Bidder as per the terms of this RFP.
- 3.11.5 Mounting of the VTMS unit, RFID tags, RFID readers at secured location so as to avert any tampering.
- 3.11.6 Selected agency needs to carry out necessary wiring in a tamper proof manner so as to avoid accidental or intentional damage to it. The wiring of VTMS should be done in a tamper proof manner with steel armoured coil protection.
- 3.11.7 The overall fitting should withstand rough use.
- 3.11.8 SMC is having GIS application and wish to collect and plot the data collected through this tender on this GIS map. In this regard, the successful bidder shall be required to share the data of all the vehicles (both SMC owned and Contractor's) and other map data like the

routes, societies, zone, ward, etc. in the format specified by SMC in a secure manner on the periodicity specified by SMC. The data sharing mechanism should be automated to avoid manual intervention.

- 3.11.9 It shall be the responsibility of the bidder to make necessary adjustments / repairs / developments / maintenance to keep the systems up and running and in good working condition.
- 3.11.10 The contract period shall cover proactive, preventive, breakdown maintenance of hardware & software support for entire Smart Solid Waste Management Solution.
- 3.11.11 The vehicles to be mounted with VTMS unit and RFID tags under this contract shall be of different make and they may be situated at different locations within the city limit. The bidder shall provide comprehensive support covering all hardware and wiring pertaining to VTMS and RFID tags including the replacement. In case VTMS unit / RFID tag is having problem or is not functional, the bidder shall be required to repair or replace the same within the time limit specified.
- 3.11.12 The RFID readers are to be installed at different primary collection sites and disposal site. The contractor needs to maintain all the hardware and software components spread across different sites.
- 3.11.13 In case if breakdown/ maintenance work is required to be carried out during non-working days/ hours, the bidder shall attend the task(s) during this period at no extra payment.
- 3.11.14 Bidder shall be responsible for maintenance / replacement of each and every spares / components including wiring, battery, etc. for the contract period.
- 3.11.15 Necessary cost for license (if any) for map usage will be the responsibility of bidder.
- 3.11.16 The payment to the selected Bidder shall start based on milestones defined in the RFP.
- 3.11.17 In case of Termination due to Selected Bidder's Event of Default, the Authority shall have right;
- To forfeit the Security Deposit in full.
 - To appoint another Bidder. In such case, selected bidder will need to handover to SSCDL or appointed agency as per RFP.
- 3.11.18 Performance and fulfillment of its roles & responsibilities and obligations as per the provisions specified in RFP and Addenda & Corrigenda if any.
- 3.11.19 **Termination / Withdrawal:** SSCDL reserves the right to withdraw/ terminate the agency of applicant in any of following circumstances:
- Agency becomes insolvent, bankrupt, resolution is passed for the winding up of the applicant organization

- Information provided to SSCDL is found to be incorrect;
 - Delivery conditions are not met within the specified time period;
 - Misleading claims about the agency are made;
 - Clear evidence is received that agency has breached copyright laws/ plagiarized from another source;
- 3.11.20 If the agency does not execute the contract to the satisfaction of the SSCDL then the SSCDL may invoke any or all of the following clauses.
- Forfeit the Security Deposit Amount
 - Terminate the contract without any liability of SSCDL towards the agency.
- 3.11.21 SMC/SSCDL reserves the right to discontinue the specific or all services if the same is either not required or not delivered as per the expectation. In such case the proportionate payment will be made after deducting applicable penalty if any.
- 3.11.22 The Service Provider shall be responsible and take required insurance for all of their representations working on the site at their own cost. SSCDL/SMC will not be responsible for any loss or damage to any of the representatives of the Service Provider during the said contract.
- 3.11.23 If any equipment or service issue during the contract period is found to be under repeated failures of same nature due to poor configuration or servicing or replacement of inferior parts or when troubleshooting is found to have been performed in piecemeal by the bidder the same will be considered as an inefficient attendance, such instances will also be subject to levy of penalties but at double the penalty rate.
- 3.11.24 The liability as to any damages and/or loss otherwise to any movable or immovable properties, assets during loading, unloading or otherwise during the contract period, whether knowingly or unknowingly done or occurred shall be made good forthwith to SMC/SSCDL by the Awardee agency upon a communication made therefore.
- 3.11.25 Should the awarded bidder fail to deliver the scope of work in due time or failed to operate / maintain the particular link/links for particular time during contract period , SSCDL/SMC reserves the right to get the work done from third party at the bidder's risk and cost including the link provision and replacement of faulty components/equipment.
- 3.11.26 The bidder will be bound by the details furnished by him/her to SSCDL/SMC, while submitting the tender or at subsequent stage. In case, any of such documents furnished by the agency is found to be false at any stage, it would be deemed to be a breach of terms of contract making him/her liable to legal action besides termination of contract.
- 3.11.27 **Intellectual Property Rights:** SSCDL shall remain the owner of all the source code, architecture and design documents along with wireframes/prototype referred as "Smart

Solid Waste Management Solution artifacts “conceptualized, created, and implemented by the selected agency under this engagement. All analytical models, dictionaries and libraries created as a result of this engagement would be SSCDL proprietary, and all requisite Intellectual Property Rights shall be transferred to SSCDL at the time of completion of the contract period. All intellectual property rights in the Smart Solid Waste Management Solution artifacts whether in tangible or intangible form shall belong to SSCDL and the selected agency has no right to assign, license, sell, or use any content conceptualized, created and implemented under this engagement and/or accompanying Agreement to any third party under any circumstances. All the Smart Solid Waste Management Solution artifacts conceptualized, created, and implemented by the selected agency whether in tangible or intangible form shall bear relevant copyright notices in the name of SSCDL. The selected agency shall take all such appropriate legal actions to safeguard violation of SSCDL’s intellectual property rights, if any.

- 3.11.28 Training would be conducted by the Implementation Agency to the Operators/supervisors employed by SMC/SSDCL to monitor the solution in SMAC/Transfer Stations/Disposal site. Also, training of mobile app needs to be provided to supervisors at zonal check posts and ward offices for attendance. Along with this training needs to be provided to SMC employees/department HODs that will be monitoring MIS reports.
- 3.11.29 The bidder should arrange their own Laptops/Computers, software etc. SSCDL would provide only space, electricity and connectivity for operations. Vendor represents and warrants that its collection, access, use, storage, disposal, and disclosure of SSCDL’s Information does and will comply with all applicable SMC’s privacy and data protection laws, as well as all other applicable regulations and directives.
- 3.11.30 **Indemnification:** Implementation Agency (the "Indemnifying Party") at its expense and to the maximum extent permitted by law, undertakes to indemnify, defend and hold harmless SSCDL (the "Indemnified Party") from and against all losses, liabilities, costs, damages and expenses and will reimburse such fees and expenses as they are incurred, including in connection with any claim or action threatened or brought against the Indemnified Party, attributable to the Indemnifying Party's or its representative’s negligence or willful default, including but not limited to, mismanagement of the brand SSCDL, bodily injury, death or damage to tangible personal property arising in favour of any person, corporation or other entity (including the Indemnified Party) in performance or non-performance under this Agreement; provided, however, that Indemnifying Party shall not be obligated to defend, indemnify, or hold the Indemnified Party from and against any such liabilities, costs, losses, damages and expenses to the extent caused solely by any negligent act or omission or intentional wrongdoing of such Indemnified Party. In case of any negligence or willful default by agency, leading to disrepute/ financial obligations/ penalties to SSCDL, during the course of contract or after, the media agency will be held liable.

- 3.11.31 The agency must provide a dedicated team based in Surat to service the account of the SMC/SSCDL within 20 days from the date of award of contract.
- 3.11.32 The Authority expects all the Key Personnel as specified in the resource deployment plan in the Proposal to be available during the contract period. Any substitution of Key Personnel under compelling circumstances beyond the control of the Agency and the concerned Key Personnel shall be subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority with an overlap period of minimum 15 days at agency cost.
- 3.11.33 The agency must coordinate between SCCDL, SMC departments and sister concerns of SMC to achieve the objective of Smart Waste Management Solution.
- 3.11.34 **Exit Management:** The exit process would start at the beginning of the last quarters in case contract is not extended further. At the beginning of the last quarter of the end of the contract period or in the event of termination of contract, the Implementation Agency is required to provide necessary handholding and transition support, which shall include but not limited to, conducting detailed walkthrough and demos/drills for Smart Solid Waste Management Solution project services, project documentation, etc., and addressing the queries/clarifications of new Implementation Agency selected by SSCDL. Implementation Agency shall provide support in terms of smooth handing over of its services. At the end of the Contract Period or earlier Termination of Contract due to Implementation Agency's event of default, the Implementation Agency shall transfer ownership of all code developed along with updated documentation for Smart Solid Waste Management Solution Project to Authority at no cost to Authority.

During the contract period, the Implementation Agency shall ensure that all the documentation including policies, procedures, etc. are kept up to date and the same are handed over to SMC/SSCDL during the Exit management process.

- 3.11.35 The bidder shall certify that no product quoted in the bid has its End-of-life announced. Also at the time of supplying the quoted product, if the product has reached its end of sale, then the bidder will be required to supply similar product for the same OEM with similar or higher specifications.
- 3.11.36 The bidder would remove a person from its staff at SMC/SSCDL if instructed to do so by the SMC/SSCDL within one month and provide suitable replacement with minimum overlap of 15 days. All persons deputed shall be on the payroll of the Bidder's organization.
- 3.11.37 The person deployed for the project at SMC/SSCDL will take the permission for leave of absence from SMC/SSCDL.
- 3.11.38 In case of personnel deputed at SMC/SSCDL by bidder as per the resource deployment plan is on a leave of absence for more than five days,

- then a competent substitute, fully conversant with the processes at SMC/SSCDL will have to be provided by the bidder. Thus, the bidder is required to keep other personnel employed but not deputed at SMC/SSCDL so that the vacancy of the key personnel could be kept filled in.
 - if the substitute is not provided for more than 5 days than such leaves after fifth day will be considered as if a person is not deployed by the bidder and monetary deduction will be made accordingly.
- 3.11.39 The personnel of development team as per the resource deployment plan will observe the work-time of 8 hours per day, 6 days per week (Sunday being holiday); but they will have to put in extra time whenever called for by SSCDL without any additional charges but the same may be compensated in the form of "off-hours" from the normal working schedule.
- 3.11.40 The leaves of key personnel as per the resource deployment plan should not affect the deliverables as per scheduled timelines.
- 3.11.41 Non-adherence to above clauses within the said resource deployment plan will be considered as Absence of employee. For each day, the absence of "Project Manager, Solid Waste Management SME", the authority will deduct Rs 5000, for a Programmer/Developer, Rs. 1500, for rest of the profiles, the penalty will be Rs 1000 per day.
- 3.11.42 The persons deployed by the bidder shall not claim nor shall be entitled to pay, perks, and other facilities admissible to casual, ad-hoc, regular/confirmed employees of SMC/SSCDL during the contract period or, after expiry of the contract.
- 3.11.43 The bidder's personnel shall not divulge or disclose to any person, any details of office, operation process technical know-how, administrative/ organizational matters as all are confidential/secret in nature.
- 3.11.44 The bidder's personnel's working should be polite, cordial, positive and efficient, while handling the assigned work and his/her actions shall promote goodwill and enhance the image of SMC. The bidder shall be responsible for any act of indiscipline on the part of persons deployed by him.
- 3.11.45 The bidder shall be solely responsible for the redressal of grievances/resolution of disputes relating to persons deployed. SMC shall, in no way, be responsible for settlement of such issues whatsoever.
- 3.11.46 The transportation, food, medical and other statutory requirements in respect of personnel of the service provider shall be the responsibility of the bidder.
- 3.11.47 **Force Majeure:** The bidder shall not be liable for any delay or failure of performance of any of its obligations under or arising out of this contract, if the failure or delay is the result of an event of Force Majeure. "Force Majeure" means an event beyond the control of the bidder and not involving the bidder's fault or negligence, and not foreseeable. Such events

may include, but are not restricted to, acts of the End customer in its sovereign capacity, wars or revolutions, riot or commotion, earthquake, fires, earthquake, floods, epidemics, quarantine restrictions. The bidder shall continue to perform its obligations under the Contract as far as is reasonably practical and feasible.

- 3.11.48 **Solvency certificate:** Valid Solvency Certificate amounting to minimum 20% of the consideration of the Contract from a scheduled/nationalized bank to be submitted by the bidder along with technical proposal. Bidder may resort to submitting a solvency certificate of higher value to keep its prices disguised.
- 3.11.49 During the bidding process or during the contract period, if any bidder is found involved in fraudulent and corrupt practices, SMC/SSCDL reserves the right to reject the bid or cancel the contract, forfeiting the EMD and security deposit.
- 3.11.50 The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at Surat shall have exclusive jurisdiction over all disputes arising under, pursuant to and/or in connection with the bidding process.
- 3.11.51 It shall be deemed that by submitting the Proposal, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/or claims it may have in this respect, whether actual or contingent, whether present or in future.
- 3.11.52 Nothing contained in the RFP shall be construed or interpreted as constituting a partnership between the Parties. Neither Party shall have any authority to bind the other in any manner whatsoever.
- 3.11.53 The selected bidder shall be deemed to be acting as an independent contractor of Authority and shall not be deemed an agent, legal representative, joint venture, or partner of Authority. Neither party is authorized to bind the other to any obligation, affirmation, or commitment with respect to any other person or entity.
- 3.11.54 The authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time to:
- (i) The Authority, Suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;
 - (ii) consult with any Bidder in order to receive clarification or further information;
 - (iii) retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or

(iv) Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.

3.11.55 All hardware specified as a part of proposal should have minimum three years of onsite replacement warranty followed by Annual maintenance support for contract period.

4 DOCUMENTS AND PRE-BID CONFERENCE

4.1 CLARIFICATION TO RFP DOCUMENTS

- a) The prospective Bidder requiring any clarification on the RFP Document may submit queries, via email, to "it@suratsmartcity.com" on or before 20/06/2017, 18:00 hrs.
- b) They should send in their queries on or before the above stated date to enable Authority to have adequate notice of the said queries so that the same may be addressed at the Pre-Bid Meeting. The Authority shall endeavor to respond to the queries at short span of time prior to Bid/Proposal Due Date. The responses to queries will be sent to Bidders by the Authority. The queries must be submitted in the following format only:

Request for Clarification

Request for Clarification			
Name and Address of the Organization submitting query		Name and Position of Person submitting query	Contact Details of the Organization / Authorized Representative
			Tel: Mobile: Fax: Email:
Sr. No	RFP Reference(s) (Section, Page)	Content of RFP requiring clarification	Points of clarification required

- c) The Authority shall endeavor to respond to the questions raised or clarifications sought by the Bidders. However, the Authority reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or requiring the Authority to respond to any question or to provide any clarification.
- d) The Authority may also on its own motion, if deemed necessary, issue interpretations and clarifications and amendment to all Bidders. All clarifications and interpretations issued by the Authority shall be deemed to be part of the Bidding Documents. Verbal clarifications and

information given by Authority or its employees or representatives shall not in any way or manner be binding on the Authority.

4.2 PRE-BID MEETING

There will not be a physical pre-bid meeting for this RFP. Queries received in due course of time as per clause 4.1 will be reviewed and if required the Addenda and Corrigenda will be issued pursuant to the pre-bid queries and the same will **form the part of the original bid documents** and shall override any contradicting effects in the original bid document.

4.3 AMENDMENT OF BIDDING DOCUMENTS

- a) At any time prior to the Proposal/Bid Due Date, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by a Bidder, modify the RFP by the issuance of Addenda/corrigendum. The same will form the part of the original bid documents and shall override any contradicting effects in the original bid papers.
- b) Any Addendum/Corrigendum issued hereunder will be made available on <https://smc.nprocure.com>.

5 PREPARATION AND SUBMISSION OF PROPOSALS

5.1 LANGUAGE OF PROPOSAL

The proposals prepared by the bidder shall be in the English language. The related correspondence and supporting documents in language other than English/Hindi/Gujarati must have its English translation (which is to be duly attested by the bidder). For purposes of interpretation and evaluation of the Proposal, the English translation shall govern.

5.2 PROPOSAL CURRENCY

Prices shall be expressed in Indian Rupees only.

5.3 FORMAT AND SIGNING OF PROPOSAL

- a) The Bidder shall provide all the information sought under this RFP. The Authority will evaluate only those Proposals that are received in the required formats and complete in all respects.

The Bidder shall prepare and submit the Technical Bid (together with originals/ copies of Documents required to be submitted along therewith pursuant to this RFP) along with the EMD and Bid Fee **as per clause 5.4**.

The Price Bid must be submitted online. In case, the Price Bid is submitted physically which leads to revelation of prices before the due date of opening of the Price Bid, the bid will be disqualified.

- b) The Technical Proposal and shall be typed or written in indelible ink and signed by the authorized signatory of the Bidder who shall also initial each page, preferably in blue ink and the signature of the authorized signatory shall bind the Bidder to the contract. In case of printed and published documents, only the cover shall be initialed. All the alterations, omissions, additions, or any other amendments made to the Proposal shall be initialed by the person(s) signing the Proposal. Each page of the Proposal must be numbered at the right-hand top corner.
- c) The Proposal must be properly signed by the authorized signatory (the "Authorized Signatory") as the Bidder holding the power of Attorney. If possible, such Power of Attorney shall be supported by a Board Resolution in favour of the person vesting power to the person signing the Bid.

5.4 PROPOSAL SUBMISSION FORMAT & SEALING AND MARKING OF PROPOSALS

- a) The Bid Fee and EMD of the required value and in approved format as specified in clause 3.5 shall be sealed separately in an envelope on which the following shall be super scribed:
"Envelope 1 – Bid Fee & EMD for RFP No.: "SSCDL-SMARTSWM-RFP-01-2017"
- b) The Technical Proposal shall be sealed separately in an envelope on which the following shall be super scribed:
"Envelope 2 – Technical Proposal for RFP No.: "SSCDL-SMARTSWM-RFP-01-2017"

The bidder shall submit all the relevant documents so as to ascertain the claims made. Following is the indicative list of documents that are to be submitted. The documents of Technical Proposal shall be as per the Appendix 1 of this RFP and should comprise of all documents required to be submitted as per the said Appendix 1. The checklist of Technical Proposal presented below:

Check list for documents - Technical Proposal

Sr. No.	Appendix	Particulars
1		DD/Banker's Cheque of Rs. 6000/- as Bid Fee (in separate envelop) in favor of Surat Smart City Development Limited

2	Appendix 1 Form -1.1	Covering Letter signed by authorized signatory of Bidder. Constituent documents such as MOA, AOA, Certificate of Incorporation, Service Tax Registration etc.
3	Appendix 1 Form -1.2 A	Authorization of signatory in the form of Board Resolution or Power of Attorney (POA notarized and Applicable in case of bid not being signed by the person directly authorized by the bidder), as applicable.
4	Appendix 1 Form – 1.2 B	Joint Bidding Agreement
5	Appendix 1 Form –1.3	Particulars of the Bidders (in the formats given subsequently)
6	Appendix 1 Form –1.4	Financial Capability statement
7	Appendix 1 Form -1.5	Experience Statement along with client work order with screen shots (if applicable)
8	Appendix 1 Form -1.6	Project Execution Methodology
9	Appendix 1 Form -1.7	Undertaking
10	Appendix 1 Form -1.8	Anti-Blacklisting Certificate
11	Appendix 1 Form -1.9	Non-Disclosure Agreement signed and submit to SSCDL
12	Appendix 1 Form -1.10	Curriculum Vitae of Proposed Team Members (Key Personnel)
13	Appendix 1 Form -1.11	Resource Deployment Plan
14	Appendix 1 Form -1.12	Self-declaration for Implementation Partner and Commitment to Support
15	Appendix 1 Form -1.13	Infrastructure Requirements with detailed design
16	Appendix 1 Form-1.14	Power of Attorney for Lead Member of Consortium
17	Appendix 1 Form-1.15	Affidavit
18	Appendix 1 Form -1.16	Technical Specification Compliance

19		HR letter indicating employee strength in India from authorized signatory or HR Manager
20		Original RFP documents issued along with addendums/amendments thereto, duly signed by the Bidder through its authorized signatory on all pages
21		Valid Solvency Certificate amounting 20% of the consideration of the Contract from a scheduled/nationalized bank

- c) **Outer Envelope:** Both the above stated envelopes, shall be place in a large envelope / outer envelope containing above envelopes must be sealed and super scribed

Details to be mentioned on sealed envelop	
<p><u>Tender Details</u></p> <ul style="list-style-type: none"> • Notice No.: SSCDL-SMARTSWM-RFP-01-2017 • RFP for Selection of Implementation Agency for Smart Solid Waste Management Solution Project 	<p>To, The Chief Accountant, Surat Municipal Corporation, Mahan agar Seva Sadan, Gordhandas Chokhawala Marg, Muglisara, Surat - 395 003, Gujarat, INDIA.</p>

- d) The **Price Proposal (Appendix-2)** and **Monthly Billing Rate (Appendix-4)** must be submitted online.
- e) The Bidders are required to submit its Proposal (i.e. Technical Proposal and Price Proposal) on or before the due date

If the envelopes are not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the Proposal submitted and consequent losses, if any, suffered by the Bidder. Proposals submitted by fax, telex, telegram, or e-mail shall not be entertained and shall be rejected.

5.5 PROPOSAL DUE DATE

- a) The last date and time of submission of the Proposals (the "Proposal Due Date/Bid Due Date") is specified in Schedule of Bidding Process Clause 3.10.
- b) The Authority may, in its sole discretion, extend the Proposal Due Date by issuing an Addendum uniformly for all Bidders. In such event, all rights and obligations of Authority and Bidders

previously subject to the earlier deadline will thereafter be subject to the Proposal Due Date as extended. Any such change in the Proposal Due Date shall be in the form of addenda and be made available on <https://smc.nprocure.com>.

5.6 LATE PROPOSALS

- a) Proposals not reaching to the Authority on or before the specified time limit on the Proposal Due Date will not be accepted.
- b) Authority shall not be responsible for any postal delay or non-receipt / non-delivery of any documents.

5.7 MODIFICATION AND WITHDRAWAL OF PROPOSALS

- a) Proposal once filled in, submitted shall not be allowed to be withdrawn till the validity of the bid remains in force or else the Earnest Money Deposit shall be liable for forfeiture.
- b) Any alteration/ modification in the Proposal or additional information supplied subsequent to the Proposal Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

5.8 FIRM PRICES

Prices quoted must be firm and final and shall not be subject to any upward modifications, on any account whatsoever. The proposal prices shall be indicated in India Rupees (INR) only.

5.8 QUANTITY VARIATION

- 1. SSCDL/SMC at their discretion can increase / decrease the quantity. The quoted rate will remain firm. The successful bidder shall not object to the upward or downward variation in quantity requirements.
- 2. If required additional quantity over and above may be executed on later stage, the payment for such additional quantities shall be made at tender rates which will be valid during the contract period.

C. PROPOSAL EVALUATION

6 PRE-QUALIFICATION & EVALUATION CRITERIA

6.1 PRE- QUALIFICATION CRITERIA / BASIC ELIGIBILITY CRITERIA

To be considered qualified for evaluation of Technical Proposal, each Bidder should meet pre-qualification Criteria specified hereunder.

#	Pre-Qualification Criteria	Proof Document Required	Applicable to Prime Bidder / Sole Bidder	Applicable to Consortium Partner
1.	The Bidder should be: <ul style="list-style-type: none"> A company incorporated in India under the Companies Act, 1956 (and subsequent amendments thereto) and in operation for at least 5 years as on publication of bid Registered with the Service Tax authorities 	Certificate of Incorporation / Registration Certificate Service Tax Registration Certificate	Yes	No
2.	The prime bidder should have average turnover of minimum INR 5 crores in last three financial years (FY-13-14, FY-14-15, FY-15-16)	Financial Capability Statement as in Appendix 1 Form –1.4	Yes	No
3.	In case of consortium, the second member of consortium should have average turnover of minimum INR 50 lakhs in last three financial years (FY-13-14, FY-14-15, FY-15-16)	Financial Capability Statement as in Appendix 1 Form –1.4	No	Yes
4.	Bidder should have experience of implementing software solution related to Solid Waste Management in any ULB/Government in India in	<ul style="list-style-type: none"> Provide Evidences in terms of copy work order/purchase order 	Any	Any

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	<p>last five years as on publication of RFP with minimum project value of Rs. 10 lakhs.</p> <p align="center">OR</p> <p>Bidder should have experience of implementing RFID based solution for fleet management in India for any ULB/Central /State Govt Departments/PSU in last five years as on publication of RFP with minimum project value of Rs. 10 lakhs.</p>	<p>for each of the projects undertaken</p> <ul style="list-style-type: none"> • Experience Statement as in Appendix 1 Form – 1.5 		
5.	<p>Bidder should have completed at least two order (single order) of providing GPS based vehicle tracking system with at least 100 vehicles any ULB/Central /State Govt Departments/PSU in India in last five years as on publication of RFP.</p>	<ul style="list-style-type: none"> • Provide Evidences in terms of copy work order/purchase order for each of the projects undertaken • Experience Statement as in Appendix 1 Form – 1.5 	Any	Any
6.	<p>The bidder shall be certified as CMM / CMMI Level 3 Company.</p> <p align="center">OR</p> <p>The bidder shall be certified ISO 9001 company.</p>	<ul style="list-style-type: none"> • Copy of Certificates (valid as on date of submission). 	Any	Any
7.	<p>The Bidder (All members) should not be debarred/blacklisted by any Government / PSU in India as on date of submission of bid.</p>	<p>Self-declaration / Undertaking by bidder (All members) on respective letter head as per Appendix 1 Form – 1.8</p>	Yes	Yes

6.2 TECHNICAL EVALUATION PARAMETERS

To be considered qualified for opening of Price Proposal, each Bidder should meet Technical Proposal Evaluation Criteria specified hereunder.

#	Criteria	Marks
Bidder's Experience [Total – 60 marks]		
1.	<p>Bidder should have completed project of providing GPS based vehicle tracking system with at least 100 vehicles any ULB/Central /State Govt. Departments/PSU in India in last five years as on publication of RFP.</p> <ul style="list-style-type: none"> ▶ 2 projects – 15 marks ▶ Every Additional project (max 2) – 5 marks each 	25 marks
2.	<p>Bidder should have experience of implementing software solution related to Solid Waste Management in any ULB/Government in last five years as on publication of RFP with minimum project value of Rs. 10 lakhs.</p> <ul style="list-style-type: none"> ▶ 1st project – 10 marks ▶ Every Additional project (max 2) – 5 marks each 	20 marks
3.	<p>No. of GPS devices supplied in India in last 5 years as on publication of RFP.</p> <ul style="list-style-type: none"> ▶ Minimum 400 Devices – 10 marks ▶ Minimum 600 Devices – 15 marks 	15 marks
4.	<p>Bidder should have experience of implementing RFID based solution for fleet management in India for any ULB/Central /State Govt. Departments/PSU in last five years as on publication of RFP with minimum project value of Rs. 10 lakhs.</p>	10 marks
5.	<p>Average annual turnover</p> <ul style="list-style-type: none"> ▶ Minimum 5 Crore – 3 marks ▶ Minimum 10 Crore – 4 marks ▶ Minimum 15 Crore – 5 marks 	5 marks

6.	Employee Strength in India ▶ Minimum 50 employees – 3 marks ▶ Minimum 100 employees – 4 marks ▶ Minimum 200 employees – 5 marks	5 marks
Technical Presentation [Total - 20 Marks]		
7.	Understanding of the project and explain proposed solution and architecture	10 marks
8.	Approach & Methodology for Implementation (should cover Solution Architecture, scalability, Interoperability, and modularity features considering the future expansion of the project and the detailed project execution of plan for completing it on time)	10 marks

Note:

- **The firm must submit, with its Technical Proposal, the documentary evidences (such as letter of award/PO, contract copy) clearly specifying the contract value and scope of work regarding fulfillment of above criteria for Bidder's Experience.**
- Bidder must provide the experience statement as per Annexure-1 (Form-1.5) for work done for Points-1 to 5 above. No ongoing implementation projects shall be considered in this regard.
- Bidders are required to submit letter indicating employee strength in India from authorized signatory or HR Manager for point 5 above.
- 'Clients' is in this section refers to work order issuing authority.

The minimum total technical score required shall be 60% to become eligible for opening of the Financial Proposal.

6.3 EVALUATION OF PRICE PROPOSAL

- a) The Price Proposal of only qualified Bidders passing the Responsiveness Test specified in clause 7.2, and meeting the Technical Proposal Evaluation Criteria specified in clause 6.2, shall be opened. The Price Proposal opening process is specified in clause 7.3.
- b) Bidders are required to quote online as per Price Proposal format provided in Appendix-2
- c) The Bidder quoting the lowest bid (for the opened bids, passing the minimum 60 marks criteria of Technical Evaluation) shall be considered as Lowest Bidder/ Selected Bidder and considered for award after following due process as per clause d) hereunder. In case of two bidders quoting same price, a closed bid will be requested.
- d) The Authority shall determine the responsiveness of Price Proposal of Bidder determined to be Lowest in relation to the Market rate or Authority's Internal Estimate or Good Industry Practice. In case the Price Proposal of the Selected Bidder is found seriously unbalanced by Authority in relation to the market rate or its internal estimate or Good Industry Practice, the Authority shall be entitled to solicit, at its sole discretion, detailed price analysis for any or all items specified in Price Proposal, from the Lowest and/or all Bidders to demonstrate the internal consistency of those prices. In case of the Price Proposal of the Selected Bidder, which is unrealistically lower or higher than internal estimate or market rate or Good Industry Practice and which could not be substantiated satisfactorily by the bidder, may be rejected as non-responsive.

7 EVALUATION PROCESS

7.1 OPENING OF TECHNICAL BID/PROPOSAL

- (i) The Authority shall open the Technical Proposals received to this RFP, at time, date and Place specified in Clause 3.10.
- (ii) The Authority will subsequently examine and evaluate Technical Proposals in accordance with the provisions set out hereunder in clause 7.2.

7.2 EVALUATION OF TECHNICAL BID/PROPOSAL

The Bidders shall be required to submit documents as listed in this RFP document as per clause 5.4 along with supporting documents. The Authority shall examine and evaluate the Technical Bids as per the evaluation steps specified below:

- a) ***Test of Responsiveness***

- 1) Prior to evaluation of Technical Proposals (i.e. Technical Proposal Evaluation Criteria), the Authority shall determine whether each Bid/Proposal is responsive to the requirements of the RFP. A Bid/proposal shall be considered responsive only if:
 - (i) It is submitted by the bidders fulfilling the pre-qualification criteria.
 - (ii) It is received as per the format specified in RFP and prior to Proposal Date and time.
 - (iii) Technical Proposal along with the supporting documents are received through RPAD/Speed Post only.
 - (iv) It is signed, sealed, and marked as specified in clause 5.3 and 5.4
 - (v) It contains all the information, Appendices, documents, and Authorizations in accordance with clause 5.4
 - (vi) It contains two separate sealed and marked envelopes for Bid Fee & EMD and Technical Proposal in Single Outer Envelope.
 - (vii) It contains the Bid Fee & EMD as per the amount, in formats and Validity Period as specified in RFP.
 - (viii) It does not contain any condition.
 - (ix) It is not non-responsive in terms hereof and any other conditions specified elsewhere in RFP.
- 2) The Authority reserves the right to reject any Proposal which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by the Authority in respect of such Proposal.
- 3) Evaluation of Technical Proposal Criteria of only those Bidders shall be carried out whose Bids/proposals determined to be responsive.

b) *Assessment of Technical Proposal Evaluation Criteria*

- 1) The Bidder must meet Technical Proposal Evaluation Criteria specified in clause 6.2.
- 2) Evaluation of Price Proposal of only those Bidders meeting the Technical Evaluation Criteria as above (1) shall be carried out.

7.3 OPENING OF FINANCIAL BID

- (i) The Financial Bid must be submitted online at <https://smc.nprocure.com>. The Financial Bid, if submitted physically will lead to rejection of the bid.
- (ii) The Price Proposal of only the Bidders determined to be Responsive and meeting the Technical Proposal Criteria in accordance with Clause 7.2, is declared "Technically Qualified Bidders", shall be opened in the presence of such of the Bidders and/or their authorized representatives who choose to attend.

- (iii) The Authority shall evaluate Price Proposal in accordance with the provision set forth in clause 6.3.

7.4 CLARIFICATION OF BIDS AND REQUEST FOR ADDITIONAL/ MISSING INFORMATION

To facilitate evaluation of Proposals, the Authority may, at its sole discretion, seek clarifications/documents/missing information in writing from any Bidder regarding its Proposal. The request for clarification or submission of information and the response shall be in writing. If the response from the Bidder is not received by the Authority before the expiration of the deadline prescribed in the written request, the Authority reserves the right to proceed with evaluation process at the total risk and cost of the Bidder.

7.5 VERIFICATION AND DISQUALIFICATION

- (i) The Authority reserves the right to verify all statements, information and documents submitted by the Bidder in response to the RFP and the Bidder shall, when so required by the Authority, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the Authority shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of the Authority there under.
- (ii) The Authority reserves the right to reject any Proposal and forfeit the EMD if:
- 1) At any time, a material misrepresentation in terms of misleading or false representation is made or uncovered, or
 - 2) Bidder or its parents/subsidiary/sister concerned from whom it is taking credit for meeting Qualification Criteria is blacklisted/barred by any Government Agency in India or abroad.
 - 3) The Bidder does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the Proposal.
 - 4) In case of fraudulent Bid/proposal and involved in fraudulent and corrupt practice
 - 5) A Bidder makes an effort to influence Authority in its decisions on Evaluation process/Selection process.
 - 6) While evaluating the Proposal, if it comes to Authority's knowledge expressly or implied, that some Bidders may have compounded in any manner whatsoever or otherwise joined to form an alliance resulting in distorting competitive price discovery or delaying the processing of proposal.
 - 7) A bidder who submits or participates in more than one Bid/ Proposal under this RFP.

Such misrepresentation/blacklisting shall lead to the disqualification of the Bidder. If such disqualification/ rejection occurs after the Bids/Proposals have been opened and the Selected Bidder gets disqualified / rejected, then the Authority reserves the right to:

- a. invite the remaining Bidders to submit their Bids/proposals, or
- b. take any such measure as may be deemed fit in the sole discretion of the Authority, including annulment of the Bidding Process.

(iii) In case it is found during the evaluation of Proposals or at any time before signing of the Contract or after its execution and during the period of subsistence thereof, that one or more of the prequalification/eligibility criteria/ conditions have not been met by the Bidder, or the Bidder has made material misrepresentation or has given any materially incorrect or false information, the Bidder shall be disqualified forthwith if not yet appointed as the Selected Bidder either by issue of the LOA or entering into of the Contract, and if the Successful Bidder has already been issued the LOA or has entered into the Contract, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by the Authority to the Successful Bidder or the Selected Bidder, as the case may be, without the Authority being liable in any manner whatsoever to the Successful Bidder or the Selected Bidder. In such an event, the Authority shall be entitled to forfeit the EMD, as the case may be, without prejudice to any other right or remedy that may be available to the Authority under the RFP and/or the Contract.

7.6 CONTACTS DURING PROPOSAL EVALUATION

Proposals shall be deemed to be under consideration immediately after they are opened and until such time the Authority makes official intimation of award/ rejection to the Bidders. While the Bids are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain, save and except as required under the Bidding Documents, from contacting by any means, the Authority and/ or their employees/representatives on matters related to the Bids under consideration.

7.7 CORRESPONDENCE WITH BIDDER

Save and except as provided in this RFP, the Authority shall not entertain any correspondence with any Bidder in relation to acceptance or rejection of any Bid/Proposal.

7.8 CONFIDENTIALITY

Information relating to the examination, clarification, evaluation, and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the Authority in relation to, or matters arising out of, or concerning the Bidding Process. The Authority will treat all information, submitted as part of the Proposal, in confidence and will require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Authority or as may be required by law or in connection with any legal process.

8 APPOINTMENT OF SELECTED BIDDER AND SIGNING OF AGREEMENT

8.1 SELECTION OF BIDDER

Subject to the provisions of clause 6 and clause 7, the Bidder whose Bid is

- adjudged as responsive in terms of clause 7.2(a)
- meeting the Technical Proposal Evaluation Criteria as per clause 6.2 and clause 7.2(b) and
- whose Price Proposal offered, on evaluation as per clause 6.3 has been determined to be Lowest and responsive as per clause 7.3(b),

shall be considered as the "**Selected Bidder**" for award of work after following due process including negotiation.

8.2 NOTIFICATION OF AWARD

- a) Authority shall notify the Selected Bidder(s) as the Successful Bidder through letter that its/their Bid has/have been accepted (the "**Successful Bidder(s)**"). This letter ("**Letter of Award**" / "**LOA**") shall be issued, in duplicate and shall specify the sum which the Authority shall pay to the Successful Bidder in consideration of the project scope as per the terms of Contract.
- b) Successful Bidder shall, within 7 (seven) days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the Successful Bidder is not received by the stipulated date, the Authority may, unless it consents to extension of time for submission thereof, appropriate the Earnest Money Deposit of such Bidder as damages on account of failure of the Successful Bidder to acknowledge the LOA, and the authority will take suitable actions including blacklisting of the bidder.

8.3 SIGNING OF CONTRACT AGREEMENT

- a) After acknowledgement of the LOA as aforesaid by the Successful Bidder, it shall cause the Successful Bidder, subject to furnishing the Security Deposit as per clause 8.4, to execute/sign the Agreement within fifteen (15) days from the date of LOA. The Successful Bidder shall not be entitled to seek any deviation, modification, or amendment in the Draft Contract Agreement.
- b) The Draft copy of Contract Agreement is specified in Appendix 3.
- c) The Successful Bidder shall get correct amount of Stamp Duty adjudicated, at Surat in accordance with applicable law, and submit the same in two copies duly stamped and executed within fifteen (15) days from the dispatch of Letter of Award. Stamp Duty, and any other charges as may be levied under applicable law, shall be paid by the Successful Bidder.

8.4 SECURITY DEPOSIT

- a) The successful bidder will be required to place Security Deposit at 5% of the consideration of the Contract by Demand Draft or Banker's Cheque Payable at Surat in favour of "**Surat Smart City Development Limited**" of any scheduled/nationalized bank within 10 days from the date of notice of award of contract/LOA, failing which a penalty at 0.065% of the amount of security deposit will be imposed for delay of each day. The EMD placed may be considered for conversion towards the security deposit and amount falling short of the required amount shall be payable.
- b) If the Bidder, fails to furnish the Security Deposit, it shall be lawful for the Authority to forfeit the EMD and cancel the contract or any part thereof.
- c) The Authority shall be entitled to forfeit and appropriate the amount of the Security Deposit in whole or in part:
 - i) In the event the Authority requires to recover any sum due and payable to it by the Selected Bidder including but not limited to Damages; and which the Selected Bidder has failed to pay in relation thereof; and
 - ii) In relation to Selected Bidder's Event of Default in accordance with the terms contained in the Agreement.
- d) At the end of the Contract Period, the Security Deposit shall be returned to the Selected Bidder without any interest, subject to any deductions which may be made by the Authority in respect of any outstanding dues in terms of penalties/deductions under the terms of the Contract Agreement.

8.5 ANNULMENT OF AWARD

Failure of the Successful Bidder to submission of Security Deposit and signing of Agreement as per RFP terms and any other requirements and /or the provisions of RFP and the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD.

8.6 TAX LIABILITY

- (a) The rates quoted online in Price Proposal Appendix-2 shall be exclusive of Service Tax including surcharges but inclusive of any other directly or indirectly applicable taxes. Service Tax as applicable shall be payable by the Authority to the Selected Bidder based on invoice raised and on submitting the evidence of payment of such Service Tax including surcharges. Any deviations due to change in the rate of directly applicable taxes and duties except Service Tax would be Liability of the Selected Bidder. If any other tax is introduced by the Government replacing the service tax, the same will be made applicable accordingly.

- (b) The Authority shall be entitled to deduct tax at source as may be applicable. The TDS certificate(s) shall be submitted as per the due date specified in the Income Tax Act.

D. FORMATS FOR TECHNICAL PROPOSAL

Appendix 1: CONTENTS AND FORMATS FOR TECHNICAL PROPOSALS

Form –1.1 : Covering Letter

(On letterhead of the Bidder, including full postal address, telephone, fax, email, addresses)

Date.....

To,
General Manager (IT),
Surat Smart City Development Limited (SSCDL)
115, Smart City Cell, Surat Municipal Corporation - Head Quarter,
Muglisara, Main Road, Surat - 395003, Gujarat

Dear Sir,

REF: RFP No. SSCDL-SMARTSWM-RFP-01-2017

1. Being duly authorized to represent and act on behalf of (hereinafter "the Bidder"), and having reviewed and fully understood all the information provided in the RFP document, the undersigned hereby applies as a Bidder for the Project.
2. Attached to this letter are certified copies of original documents defining:
 - (a) Incorporation as per the Companies Act along with Memorandum and Article of Association, service tax registration whichever is applicable.
 - (b) The Bidder's principal place of business; and
 - (c) The place of incorporation; or the place of registration (or Income Tax registration).
 - (e) Required Earnest Money Deposit and Bid/RFP fees as specified in RFP and all documents as specified in RFP in respective envelopes.
 - (f) Price Proposal online through <https://smc.nprocure.com>.
3. SSCDL and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application, and to seek clarification from client(s) regarding any technical aspects hereof by way of letters or otherwise from any such institutions, in order to verify statements and information provided in this application, or with regard to our resources, experience, and competence.
4. This application is made in the full understanding that:
 - (a) Our Proposal and any information submitted at the time of bidding will be subject to verification by SSCDL;

- (b) SSCDL reserves the right to reject or accept any application, cancel the qualification/Bid process, and reject all applications; and
 - (c) SSCDL shall not be liable for any such actions as at (b) above and shall be under no obligation to inform us of the grounds for the same.
5. We confirm that in the event our bid is successful resulting in award of contract, the same will be signed so as to legally bind all the concerned jointly and severally.
 6. We confirm that we agree with the terms and conditions provided in RFP. The Proposal submitted by us shall be valid for a period of Proposal Validity Period specified in RFP.
 7. The Bid Fee & Earnest Money Deposit of stipulated amount in the form of the Demand draft
 8. The undersigned declares that the statements made and the information provided in the duly completed application is complete, true and correct in every detail.

Signature of Authorized Signatory (with official seal)

Name:

Designation:

Address:

Telephone & Fax:

E-mail address:

For and on behalf of (name of consortium)

Form –1.2 A: Format for Power of Attorney for Signing of the Proposal

(On a Stamp Paper of appropriate value)

(Applicable in case of bid not being signed by the person directly authorized by Board of firm. In the latter case, please provide a copy of the relevant Board Resolution signed by Company Secretary/ Director authorizing the Signatory.)

Dated:

To,

**General Manager (IT),
Surat Smart City Development Limited (SSCDL)**

115, Smart City Cell, Surat Municipal Corporation - Head Quarter,
Muglisara, Main Road, Surat - 395003, Gujarat

Dear Sir,

REF: RFP No. SSCDL-SMARTSWM-RFP-01-2017

<Bidder's name> _____ hereby authorizes <Designated Representative's name> _____ to act as a representative of <Bidder's name> _____ for the following activities vide its Board Resolution/ Power of Attorney attached herewith.

To attend all meetings with Surat Smart City Development Limited or other entities associated with this project including Surat Municipal Corporation and to discuss, negotiate, finalize and sign any bid or agreement and contract related to RFP for selection of implementation agency for smart solid waste management within Surat City.

Yours faithfully,

<Signature of appropriate authority of the Bidder >

Name of appropriate authority of the Bidder:

<Signature and name of the Designated Representative of the Bidder for acceptance of this Power of Attorney>

For

<Name of Bidder > Encl: Board Authorization

Notarised

Form –1.2 B: Joint Bidding Agreement

The Bidder shall be required to submit Joint Bidding Agreement on Requisite Stamp Paper in case Bidder is a Consortium. Such Agreement shall specify followings

- (i) Clearly outline the proposed roles and responsibilities, if any, of both members;
- (ii) Include a statement to the effect that all members of the Consortium shall be liable jointly and severally for all obligations/Scope of Work in relation to the Project.
- (iii) The role and responsibility of any member must be commensurate with the technical/financial capabilities that such member is contributing towards meeting the qualification criteria. Each consortium member is liable to contribute resources in terms of knowledge, skills, and trained manpower commensurate with its role and responsibilities and terms of RFP.
- (iv) No change in composition of the Consortium shall be permitted during the Bidding Process and during the Contract Period, in case the Project is awarded to the Consortium.

Form –1.3: Format to Share Bidder’s Particulars

(Required from each member)

Sr. No.	Description	Details (to be filled by the responder to the RPF)
1	Name of the Agency	
2	Official address	
3	Phone No. and Fax No.	
4	Corporate Headquarters Address	
5	Phone No. and Fax No.	
6	Web Site Address	
7	Details of Agency’s Registration (Please enclose copy of the Agency registration document)	
8	Name of Registration Authority	
9	Registration Number and Year of Registration	
10	Sales Tax /VAT registration No.	
11	Permanent Account Number (PAN)	
12	Agency’s Revenue for last 3 years (Year wise)	
13	Agency’s Profitability for the last 3 years (Year wise)	
14	Registration details under the Companies Act 1956	
15	No. of years of operation in India	
16	Service Tax Registration No.	

Please submit the relevant proofs for all the details mentioned above along with your Bid response.

Contact Details of officials for future correspondence regarding the bid process:

Details	Authorised Signatory	Contact Person
Name		
Title		
Agency’s Address		
Phone		
Mobile		
Fax		
E-mail		
Signature		

Form –1.4: Financial Capability Statement

(On Statutory Auditor's or CA letterhead by each consortium member)

I hereby declare that I have scrutinized and audited the Financial statements of M/s_____. Turnover* of the bidder (name of the Bidder) as on 31st March, 2016 / 31st December, 2015 as per Audited statement is as follows:

Financial year	Turnover (INR Crore)	Net Worth (INR Crore)
2015-16		
2014-15		
2013-14		

**To be provided from latest available Audited statement*

(Signed and Sealed by the statutory auditor or CA)

Enclosure:

- (1) Copy of latest available Audited annual reports for last three years as applicable or as per Financial Year/Calendar Year followed by the bidder firm.

Form –1.5: Experience Statement
[Project Title]

(Attach separate sheet for each project)

- A. Project Brief
- B. Client (Name & Address)
- C. Cost of the Project
- D. Duration & period of the Project
- E. Roles & responsibility of the organization
- F. Whether Project executed by forming Joint venture or Consortium with other organization (In case of consortium provide share in consortium)
- G. Other features of the Project (Such as Software Tools & Technology used, total efforts in man months etc.)
- H. Country in which it was executed
- I. Provide the relevant project details as under:

Hardware

Category	Specifications	Quantity
RFID Tags		
RFID Readers		
Cameras		
GPS Devices		
Bio-Metric device		

Software

Category	Brief Description	URL/Screenshot
Vehicle Tracking/GIS Map Module		
Reports Module		
Dashboard Module		
Solid Waste Management System		
Fleet Management using RFID		

The information submitted above is true and I am aware that submitting false information will lead to rejection of our bid and SSCDL can take appropriate action in this regard.

(Sign & Stamped by authorized signatory)

Enclosure:

Purchase Order or Work Order duly authenticated/signed by the respective client be furnished.

**Form –1.6: Project execution Methodology
(Detailed Write up and presentation)**

The technical proposal should explain the solution proposed by the Bidder and should highlight its salient features (if any). The Bidders will be required to provide a Solution Overview through brief Writeup & Presentation in written form not exceeding broadly 5000 words. This solution overview is to be provided along with technical proposal and bidders will be invited to present if they meet the qualification criteria.

Sr. No.	Content of Solution Overview
1	Project Timeline, Resource Engagement plan and implementation approach
2	Monitoring and Tracking Solution Prototype Presentation by understanding the scope, Solution architecture with scalability, interoperability and modularity features
3	Specifications of Hardware to be used, in the form of presentation
4	Details of infrastructure planned as part of the project with justification based on functional requirement & volumetric specified in RFP

Supporting Documents for Technical and Project Management Evaluation Criteria should be submitted.

The writeup is required to ensure that a workable solution is proposed. SSCDL reserves the right to call the bidder for any clarifications/discussions regarding the solution and suggest binding changes in the solution if it feels such solution deviates majorly from its needs and purposes.

Form –1.7: Undertaking

(On letterhead of each member, including full postal address, telephone, fax, email, addresses)

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

Dated this ____ day of _____ 201_.

Signature

(Company Seal)

In the capacity of duly authorized to sign bids for and on behalf of:

Signed by

Authorized Signatory with designation

Form –1.8: Format for Declaration by the bidder for not being Blacklisted / Debarred

(To be submitted on a 100-rupee stamp paper by each member of consortium separately)

Anti-Blacklisting Affidavit

I M/s., (the names and addresses of the registered office) hereby certify and confirm that our company is not black-listed / debarred by any of the Government or Public Sector Units in India or abroad as on the date of the submission of the tender.

We further confirm that we are aware that our Proposal for the captioned Project would be liable for rejection in case any material misrepresentation is made or discovered with regard to the requirements of this RFP at any stage of the Bidding Process or thereafter during the agreement period. Dated thisDay of, 201_

Name of the Bidder

Signature of the Authorized person

Name of the Authorized Person

Form –1.9: Non-Disclosure Agreement

(To be given on the each bidder’s Letter Head)

WHEREAS, we, _____, having Registered Office at _____, hereinafter referred to as the Bidder, are agreeable to provide Monitoring and tracking solution for smart waste management supply, installation, Design, Development and Maintenance Project services to SSCDL, having its office at 115, Smart City Cell, Surat Municipal Corporation - Head Quarter, Muglisara, Main Road, Surat - 395003, Gujarat hereinafter referred to as the AUTHORITY and, WHEREAS, the Bidder understands that the information regarding the AUTHORITY’s business shared by the AUTHORITY in their Request for Proposal is confidential and/or proprietary to the AUTHORITY, and

WHEREAS, the Bidder understands that in the course of submission of the offer for providing **Implementation Agency for Smart Solid Waste Management Solution** and/or in the aftermath thereof, it may be necessary that the Bidder may perform certain jobs/duties on the Authority’s properties and/or have access to certain plans, documents, approvals or information of the Authority; NOW THEREFORE, in consideration of the foregoing, the Bidder agrees to all of the following conditions, in order to induce the AUTHORITY to grant the Bidder specific access to the AUTHORITY’s property/information. The Bidder will not publish or disclose to others, nor, use in any services that the Bidder performs for others, any confidential or proprietary information belonging to the AUTHORITY, unless the Bidder has first obtained the AUTHORITY’s written authorization to do so.

The Bidder agrees that notes, specifications, designs, memoranda and other data shared by the AUTHORITY or, prepared or produced by the Bidder for the purpose of submitting the offer to the AUTHORITY for the said solution, will not be disclosed to during or subsequent to submission of the offer to the AUTHORITY, to anyone outside the AUTHORITY.

The Bidder shall not, without the AUTHORITY’s written consent, disclose the contents of this Request for Proposal (Bid) or any provision thereof, or any specification, plan, pattern, sample or information (to be) furnished by or on behalf of the AUTHORITY in connection therewith, to any person(s) other than those employed/engaged by the Bidder for the purpose of submitting the offer to the Authority and/or for the performance of the Contract in the aftermath. Disclosure to any employed/engaged person(s) shall be made in confidence and shall extend only so far as necessary for the purposes of such performance.

Date:

Signature with Seal :

Name :

Designation :

Form –1.10: Curriculum Vitae of Proposed Team Members (Key Personnel)

Résumés of all the staff proposed to be deployed at SSCDL shall be attached along with the technical bid as per the format below. The bidder may submit résumés clearly specifying on the right hand top corner of the first page of that person's résumé. The details provided should help in ascertaining the eligibility of the candidate vis-à-vis the qualification and experience requirement for that post.

Sr. No.	Item	Curriculum Vitae of Proposed Team Member			
1	Name				
2	Specify role to be played in the project				
3	Name of Organization				
4	Number of years with the Current Organization				
5	Total Experience (in Years)				
6	Experience in months (Provide details regarding name of organizations worked for, Designation, responsibilities, tenure etc.)				
	Name of Organization	From	To	Designation/ Responsibilities	
6.1					
6.2...					
7	Summarized professional experience (Relevant to the Current Project) in reverse chronological order				
	From	To	Company / Project / Position / Relevant Functional, Technical, and Managerial Experience		
7.1					
7.2...					
8	Educational Background, Training / Certification including institutions, % of marks, specialization areas etc.				
	Degree	Year of Award of Degree	University	% of marks	
8.1					

8.2...				
9	Candidate's Attestation for the Resume:			
	I am available for full time assignment for the duration and location specified in this RFP at Surat.			
	Signature (in blue ink)		Date (DD/MM/YY)	
10	Bidder's Attestation for the Resume:			
	<i>[All resumes shall be individually attested by the bidder]</i>			
	Place		Signature of Authorized Person	
	Date		Designation	
	Company Stamp		Name	

Form –1.11: Resource Deployment Plan

The bidder should have a detailed resource deployment plan in place to ensure that technically qualified staff is available to deliver the project

#	Name of Staff	Area of Expertise	Implementation Period (In Months)						Total Man-Mont hs proposed	Full time / Part time	Onsite/ Offshore		
			M1	M2	M3	M4	M5	M6					
		Project Manager								Full Time	Onsite		
		Technical Lead / Sr. Developer								Full Time	Onsite		
		Solid Waste Management SME								Full Time	Onsite		
		Hardware Engineers								Full Time	Onsite		
		Programmer/Developer								Full Time	Onsite		
		Others (if any)											
#	Name of Staff	Area of Expertise	Support Period (In Months)								Total Man-Mont hs proposed	Full time / Part time	
			M1	M2	M3	M4	M5	M6	M7	Mn..			
		Programmer/Developer	Required onsite for 24 months										
		Hardware Engineer	Required throughout support period										
		Others											

Form –1.12: Format for Self-declaration for Implementation Partner and Commitment to Support

(This form has to be provided by the OEMs of the hardware and software solutions proposed on its letter head. This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the OEM.)

To,
General Manager (IT),
Surat Smart City Development Limited (SSCDL)
115, Smart City Cell, Surat Municipal Corporation - Head Quarter,
Muglisara, Main Road, Surat - 395003, Gujarat

Subject: OEM's Authorization Form

Ref: **RFP No. SSCDL-SMARTSWM-RFP-01-2017**

Dear Sir,

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

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

The list of partners in India is as follows:

Thanking you,
Yours faithfully,

(Signature)

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

Authorised Signatory

Name:

Designation:

Place:

Date:

Form –1.13: Infrastructure Requirements with detailed design

Architecture diagram detailing the landscape proposed:

The solution as part of the RFP shall be hosted at the Data Centre of Surat Municipal Corporation, whereas bidder should provide necessary hardware with designing and sizing of the same. The component details should be specified in the table format below. The same shall be optimized from performance and cost perspective.

#	Name of the Component	Purpose of the Component with Make and Model	Specifications
I	Servers		
i)	Server 1		
ii)	Server 2		
	...		
II	Storage		
n		

Justification/merits of the same highlighting:

- Reasoning for specified components over other options.
- Extent of compliance to technical requirements specified in the scope of work
- The Strategy, Approach & Methodology for installation, Configuration & housekeeping of all the key components of the project

Form-1.14: Power of Attorney for Lead Member of Consortium

<< To be printed on Rs. 100/- Stamp Paper >>

Whereas the Surat Municipal Corporation has invited applications from interested parties for the Selection for "**RFP for Selection of System Integrator for Implementation of Enterprise Resource Planning System for Surat Municipal Corporation**".

Whereasand (Collectively "Consortium") being Members of the Consortium are interested in bidding for the Project in accordance with the terms and conditions of the Request for Proposal (RFP document) and other connected documents in respect of the Project, and

Whereas, it is necessary for the Members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's bid for the Project and its execution.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

We, Having our Registered office at,
M/s,..... Having our Registered office at,
(hereinafter collectively referred to as the "Principals") do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s. having its registered office at, being one of the Members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the "Attorney"). We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and any one of us during the bidding process and, in the event the Consortium is awarded the concession/contract, during the execution of the Project and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Consortium and submission of its bid for the Project, including but not limited to signing and submission of all applications, bids and other documents and writings, participate in bidders and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the Consortium and generally to represent the Consortium in all its dealings with the SSCDL, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium's bid for the Project and/ or upon award thereof till the Concession Agreement is entered into with the SSCDL.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF, 20....

For

(Signature)

.....

(Name & Title)

For

(Signature)

.....

(Name & Title)

Witnesses:

1.

2.

(Executants)

(To be executed by all the Members of the Consortium)

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- *Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*
- *For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate*

Form-1.15: Affidavit

<< To be printed on Rs. 100/- Stamp Paper >>

(Note: The affidavit format as indicated above to be furnished on non-judicial stamp paper of INR 100 and duly notarized)

Name of work:

- I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct. I also understand that in case of wrongful / false information, Surat Smart City Development Ltd(SSCDL) is entitled to take any civil and criminal punitive action against me/us.
- The undersigned also hereby certifies that neither our firm M/s. _____ nor any of its constituents partners have abandoned any work in India nor any contract awarded to us has been rescinded during last five years, prior to the date of this bid.
- The undersigned hereby authorize(s) and request(s) any bank, person, authorities, government or public limited institutions, firm or corporation to furnish pertinent information deemed necessary and requested by the SSCDL to verify our statements or our competence and general reputation etc.
- The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the SSCDL.
- The SSCDL and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents and information submitted in connection with this bid and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Affidavit will also serve as authorization to any individual or authorized representative to any institution referred to in the supporting information to provide such information deemed necessary and requested by representative of SSCDL to verify statements and information provided in the RFP or with regard to the resources, experience and competence of the Applicant.

Signed by the Authorized Signatory of the firm

Title of the office: _____

Name of the firm: _____

Date: _____

Form –1.16: Technical Specification Compliance

- The bidder can quote item meeting or exceeding the below mentioned minimum specification.
- The bidder must clearly specify the features of the offered product vis-à-vis specification and deviation if any in the Column-C and Column-D respectively.
- The exact make and model of the product offered must be specified in the Column-E.
- **The technical spec sheet and the product brochure of the product offered should also be submitted along with technical bid.**

In case the space provided is not sufficient then a separate paper as per the format below can be annexed to the bid. The same must be duly signed and stamped.

#	Item		Matched? [Yes/No]	Deviation from Specification / Remarks if Any	Specify Make, Model
A	B		C	D	E
I. RFID Reader (with Controller) Specifications					
1.	Protocol	EPC Gen 2, ISO 18000-6C and shall comply with the general conformance requirements of the standard			
2.	Frequency	UHF 865 MHZ to 867 MHZ as per EPC Gen 2 standards			
3.	Communication	Ethernet/ Serial communication (EIA standard RS 232 C / RS 485)			
4.	RF Power maximum	1 W – transmitted & 4 W – EIRP (Equivalent Isotopically Radiated Power)			
5.	Reading distance	Minimum 8 meters, with the Transceiver mounted typically at a height of 6 m above the road surface, the coverage of the antenna shall not exceed a diameter of 3.6m.			
6.	Reading Speed	Software Programmable Average Reading per 64Bits : <6ms			
7.	Reading Clue	Buzzer			
8.	Antenna	Circularly Polarized			
9.	Visual diagnostics	The Transceiver shall have LED indicators for sense, transmit Fault and Power which shall be visible clearly to the operator on ground while the system is operational			
10.	Enclosure	Light weight enclosure for the RFID Transceiver and circularly polarized antenna			
11.	Environmental	IP 65 or better			
12.	Relative Humidity	95% Condensing			

RFP FOR SMART SOLID WASTE MANAGEMENT SOLUTION FOR SURAT CITY

#	Item		Matched? [Yes/No]	Deviation from Specification / Remarks if Any	Specify Make, Model
A	B		C	D	E
13.	Operating Temperature	-20°C to 55°C			
14.	Air Interface & Adaptive Noise Features	The Transceiver technology employed should have the capability to optimize read rates for the vehicle identification application and adapt to instantaneous noise and interference level			
15.	Application capability	1. Should have read reliability exceeding 99.5% in the distance range specified. 2. Diagnostic and Reporting Tools			
16.	Upgradeability	The firmware should be upgradable to support future protocols.			
II. RFID TAG (Sticker Type)					
1.	Power	Tags should be passive. RFID tags should be rewritable. It should allow writing of information like vehicle number, contractor details etc.			
2.	Operating Frequency	865-868MHz			
3.	Data Transfer Rate	At least 512 kbps under ideal conditions & 64 to 512 kbps under field conditions			
4.	Tag Id	Unique Id given by a chip manufacturer (64 bits or 8 bytes)			
5.	Protocol	EPC Gen 2, ISO 18000-6C			
6.	Dimensions (including the substrate / backing)	Maximum area occupied on the windshield shall be 50 Sq. cm.			
7.	Material	Plastic substrate with printed antenna			
8.	Physical printing of Tag ID on the Tag	The Tag ID shall be physically printed on the Tag using the Hexadecimal numbering system and shall be adequately clear for easy visual recognition			
9.	Location & Installation	The RFID Tag shall be installed at a fixed location on the inside of the Windshield of the vehicle. (location to be optimized for each class of vehicle during testing) The RFID Tag shall have a self-adhesive backing with which it can be fixed to inside of the windshield. The adhesive shall be such that <ul style="list-style-type: none"> It allows reliable and accurate reading of the Tag by the Transceiver located at a specified distance. 			

RFP FOR SMART SOLID WASTE MANAGEMENT SOLUTION FOR SURAT CITY

#	Item		Matched? [Yes/No]	Deviation from Specification / Remarks if Any	Specify Make, Model
A	B		C	D	E
		The RFID chip and/ or the antenna get irreparably damaged when an attempt is made to remove the installed Tag from the windshield by any means. After such an attempt the Tag shall become inoperable.			
10.	Tag Memory (minimum)	Unique Tag ID – 64 bits, EPC memory – 240 bits			
11.	Data Retention	10 Years minimum with UV protection for normal sunlight exposure and ambient temperature of 45 Deg C			
III. RFID TAG (Metal mount Type)					
1.	Chip Type	1. UHF Class 1 Gen 2 2. EPC 96 bit extendable up to 480 bits 3. User Memory 512 bit 4. Data retention of 50 years 5. Write endurance 100,000 cycles			
2.	Operating Frequency	865-868MHz			
3.	Operating Range	6 to 10 meters when mounted on Metallic surface			
4.	Operating mode	Passive (battery-less transponder)			
5.	Storage Temperature	-20°C to +85°C			
6.	Operating Temperature	-20°C to +85°C			
7.	Ingress Protection	IP 66			
8.	Mounting	Rugged construction for high durability with Screw holes for mounting with Screws on a metallic surface			
IV. Vehicle Tracking GPS Device					
1.	GPS Channels	Parallel GPS Receiver -20-Channel or more			
2.	Input Voltage Range	5.5V - 36V			
3.	Average current	90 to 100mA			
4.	Standards	WGS-84 Standard compliant Outputs as per NMEA 0183			
5.	Average current with Battery charging	125 to 135mA			

RFP FOR SMART SOLID WASTE MANAGEMENT SOLUTION FOR SURAT CITY

#	Item		Matched? [Yes/No]	Deviation from Specification / Remarks if Any	Specify Make, Model
A	B		C	D	E
6.	Battery Specification	Lithium-ion			
7.	Battery Backup Time	3 hrs. or more in active mode			
8.	GPS	Cold Start <55 sec Warm Start < 40 sec Hot Start < 10 sec			
9.	GPS Sensitivity	Tracking -157 dBm navigation -154 dBm Acquisition -142 dBm			
10.	Antenna	Internal Antenna for GPS and GPRS			
11.	Horizontal Position Accuracy	Up to 10 meter			
12.	Digital Inputs	3 minimum			
13.	Digital outputs	2 minimum			
14.	Analog Inputs	2 minimum			
15.	Over speed	User Settable Speed limit, SMS alert packet when speed cross over speed limit(maximum)			
16.	Parameters Setting Through SMS	APN, live ip1, live ip2, unit id, server reconnect frequency, server change frequency, geofence control, over speed control, movement control, SMS serving numbers, UTC time configuration, factory setting, digital output control, memory data erase			
17.	EEPROM	2Mbit			
18.	GPS Track Recording and Resending	Built in 2MBit large flash memory to store data when out of GPRS radio coverage. Automatically resend Non- GPRS coverage data when device goes into GPRS coverage			
19.	Power Supply	External & Internal Battery			
20.	Battery Status	Battery Health indication			
21.	GPS based Speed Measurement Range	up to 180 KMPH			
22.	Factory setting	Switch for default factory setting			
23.	Data send frequency settable	Adjustable up to 8 seconds or more			

RFP FOR SMART SOLID WASTE MANAGEMENT SOLUTION FOR SURAT CITY

#	Item		Matched? [Yes/No]	Deviation from Specification / Remarks if Any	Specify Make, Model
A	B		C	D	E
24.	LED status	Power			
25.	USB for parameter configuration	Required			
26.	Multi IP connection two server	Primary, Secondary			
27.	AGPS supported	Required			
28.	Operating Temperature	-10°C to +50°C			
29.	Storage Temperature	-10°C to +50°C			
30.	Humidity	95% non-condensing			
31.	Protection	IP 65 or above (With heat resistant, Vibration proof, tamper proof, Water Splash proof)			
32.	API/SDK	Should provide API's protocols and necessary documentation for integration purpose.			
33.	Connection	USB/RS232 port			
34.	GPRS	1 In- Built Triband GPRS module/Modem 2 Multi Slot GPRS 3 GPRS class 10 or Above 4 Should support – SMS, Voice, Data, GPRS, TCP/IP			
V. Biometric Fingerprint device					
1	As a part of solution, to ensure the presence of designated staff, it is required to validate the same using the biometric finger print scanner. The selected bidder will be required to provide the same at the transfer stations, check post and the disposal site as part of the contract. The bidder to suggest a suitable biometric device complying to CE standard and meet all the functional requirements.				

**CONTENTS AND FORMAT OF
PRICE PROPOSAL**

Appendix 2: CONTENT AND FORMAT OF PRICE PROPOSAL

[Note: Must be submitted online, not to be sent physically]

Date.....

To,
General Manager (IT),
Surat Smart City Development Limited (SSCDL)
115, Smart City Cell, Surat Municipal Corporation - Head Quarter,
Muglisara, Main Road, Surat - 395003, Gujarat

Subject: Submission of Price Proposal for RFP for selection of implementation agency for monitoring and tracking smart waste management solution

Dear Sir,

I/We, the undersigned Bidder, have read and examined in detail all the bidding documents in respect of selection of implementation agency for providing monitoring and tracking smart waste management solution within Surat city.

We fully understand and agree to the scope of work, our roles and responsibilities, obligations, risks involved and terms and conditions specified in RFP documents. I/We undertake to do supply, install, design, implementation, maintenance, and support of implementation agency for providing monitoring and tracking smart waste management solution Project on 'Design-Develop-Maintain-Transfer' basis as per the terms of the RFP. Following is our financial offer for contract period of 8 months, for undertaking the Monitoring and Tracking of Smart Waste Management Solution

Table-A: Price Bid

#	Item	Quantity	Rate	Total Rates (W/o Taxes)	Tax (%)	Total Amount with Taxes
A	B	C	D	E=C*D	F	G= E*(100+F)%
1.	RFID Reader (with Controller)	11				
2.	RFID TAG (Sticker Type)	650				
3.	RFID TAG (Metal mount Type)	1200				
4.	Vehicle Tracking GPS Device	600				
5.	Biometric Fingerprint device	11				
6.	Solution Cost including license cost if any	Lump sum				

7.	Annual Support Cost for first two years with one onsite Programmer and one onsite Hardware Engineer	2 years				
8.	Annual Support Cost post first two years with one onsite Hardware Engineer	3 years				
9.	Necessary hardware for application and database hosting at SMC Datacenter (Itemized details of the hardware to be provided in Appendix 1 Form 1.13 without prices)	Lump sum				
	TOTAL					

Note:

- The Prices mentioned in the Price Bid should include all applicable taxes & duties as applicable. The L1 evaluation will be done exclusive of taxes but inclusive of any duties applicable to the products. The bidder to quote the duties along with the rate of products proposed for L1 evaluation.
However, the bidder is expected to provide the tax components in commercials. The payment of taxes to the selected bidder will be done on actuals. In this regard, selected bidder is required to submit documents describing the total tax paid for this Project (for each component). The payment for tax component will be made in the subsequent billing cycle. Further, SSCDL shall be entitled to deduct tax at source or any other taxes/ cess as may be applicable.
- The quantity mentioned above is indicative in nature and may vary at the time of implementation. The rate should be valid for quantity which may lower/higher than the specified quantity. The rate will also be valid during the contract period for additional purchases if any.
- All rates/Amount should be quoted in INR
- The Authority shall be entitled to deduct tax at source as may be applicable. The TDS certificate(s) shall be submitted as per the due date specified in the Income Tax Act.
- Evaluation of Price Proposal shall be carried out as per the method specified in clause 6.3.
- The rates quoted for Annual Support charges (9) will be applicable in case of extension of support contract.

Thanking you.

Yours faithfully,

Name and Signature of the Authorized Person

Seal:

Address and contact number:

Appendix 3: CONTRACT AGREEMENT

This agreement made on the <Day> day of <Month, Year> between the GM (IT) of the Surat Smart City Development Limited, Muglisara, Surat 395003 (hereinafter called the "**Authority**") of the FIRST PART and _____ (Name of Bidder) having its registered office at _____ (Address of the company where registered) (hereinafter called "**Successful Bidder**" of the SECOND PART) through < Name of Authorized Representative>, < Designation > empowered to sign and execute the agreement as the SECOND PART which shall include successors assigns.

Whereas the FIRST PART the Authority is desirous in view of a tender (bid) notice no. SSCDL-SMARTSWM-RFP-01-2017 that the services as per the Financial quote in the proposal submitted by the bidder should be provided by the SECOND PART. <<Approving authority>> of the Authority by its resolution no. <> dated <> has accepted a tender of the Successful Bidder for the work of Monitoring and tracking solution for smart waste management Project for the sum of Rs. <> + Service Tax for a period of 5 years Post Go-Live date.

AND WHEREAS the work has been awarded to the SECOND PART vide letter <>, dated <>.

AND WHEREAS the SECOND PART has agreed for Monitoring and Tracking Solution Project vide its bid.

Now this agreement witnesseth as follows:

1. The following documents shall be deemed to form part and be read and considered as part of this agreement. viz
 - a. The said Request for Proposal – SSCDL-SMARTSWM-RFP-01-2017 of the FIRST PART.
 - b. Addendum & Corrigendum to the RFP (if any)
 - c. Technical and Financial Proposal submitted by the SECOND PART
 - d. LOA issued by FIRST PART
 - e. Non-Disclosure Agreements
2. In this agreement, words and expressions shall have the same meaning as are respectively assigned to them in the tender papers hereinabove referred to.
3. The SECOND PART will deliver the Scope of Work/Services as detailed in the RFP SSCDL-SMARTSWM-RFP-01-2017.
4. In consideration of the payments to be made by the Authority, the FIRST PART to the Successful Bidder, the SECOND PART as hereby covenants with the Authority to provide services and deliverables in conformity to the bid documents referred as per the RFP. In case of failure of the Successful Bidder to deliver the products/services, the Authority is authorized to get the work done from third party at the cost and risk of the SECOND PART.
5. The Authority and the Successful Bidder shall make payments to either party in accordance with the provisions of the Request for Proposal. All other terms and conditions shall be as per the RFP.
6. The contract shall be governed by the Laws in India and shall be subject to the **Jurisdiction of Surat.**

IN WITNESS WHEREOF the parties mentioned hereinbefore cause this agreement to be signed and hereunto set their respective hands and seals through their authorized representatives on the day, month and year first above written at SURAT.

In presence of:

1. Witness _____
Name _____

2. Witness _____
Name _____

For and on behalf of
(< Name >)
Designation of Authorized Representative
Surat Smart City Development Limited

(< Name >)
Designation of Authorized Representative
Surat Smart City Development Limited

1. Witness _____
Name _____

For and on behalf of
Successful Bidder

2. Witness _____
Name _____

(< Name >)
Designation of Authorized Representative

Sealed with the Common Seal of the Surat Smart City Development Limited in the presence of

1. _____

2. _____

Authorized Persons of SSCDL

Appendix 4: BILL OF QUANTITIES

Credentials of Team Members

Bidder to share the profiles of named key personnel (as per format described in Form 1.10 of Appendix 1) who would be assigned to the project based out of Surat working from SMC office. The Authority expects all the Key Personnel specified in the Proposal to be available during implementation.

Conditions of Eligibility for Key Personnel: Each of the Key Personnel must fulfill the Conditions of Eligibility specified below:

Key Personnel	Minimum qualification	Minimum experience	Experience required
Project Manager	B.Tech/B.E./MCA	8 years	<ul style="list-style-type: none"> Total 8 years post qualification experience, out of which minimum 2 years' experience as Project Manager or Technology Strategist. Should have solid technical background, with understanding and hands-on experience in application development, excellent client-facing, communication and leadership skills
Technical Lead or Senior Developer	B.Tech/B.E./MCA	5 years	<ul style="list-style-type: none"> Total 5 years post qualification experience, out of which minimum 2 years' experience as Technical Lead or Senior Developer. Should have necessary technical expertise, strong communication and leadership skills and ability to manage and organize a team of technical staff
Solid Waste Management SME	B.Tech/B.E. /MCA	5 years	<ul style="list-style-type: none"> Total 5 years post qualification experience, out of which minimum 2 years' experience as Solid Waste Management SME Proven experience as SME with good understanding of processes involved in Solid Waste Management Domain, Written and verbal communication, including technical writing skills, Modeling techniques and methods, understanding of software development life cycle
Hardware Engineer	Graduate	3 years	<ul style="list-style-type: none"> Total 3 years of post-qualification experience

			<ul style="list-style-type: none"> • Proven experience as an installation engineer with expertise in hardware installation and configuration
Programmer/ Developer	B.Tech/B.E. /MCA	3 years	<ul style="list-style-type: none"> • Total 3 years post qualification experience • Proven experience as a developer with a logical approach to problem solving
Tester	B.Tech/B.E. /MCA	3 years	<ul style="list-style-type: none"> • Total 3 years post qualification experience • Proven experience as tester in software application testing with background/understanding of software development life cycle

The Bidder shall have to provide billing rates for the following profile in online form along with Financial Proposal. Though the pricing is a fix bid type and billing rates will not be considered in financial evaluation, but in case additional resources are required, the below mentioned rates would be used. Based on the resource requirement for completion of the above scope of work, agency may deploy necessary resources.

Note: The cost of additional resources will not be considered for financial evaluation. If required, SMC/SSCDL may ask the bidder to deploy additional resources as per the rates specified in the table.

Monthly Billing Rate (Appendix-4) must be submitted online.

Sr. No.	Role	No. of Members	Monthly Billing Rate
1	Programmer/Developer	1	
2	Hardware Engineer	1	

Device cost along with unit price, quantity and total price required should be submitted online as part of price proposal.

#	Item	Quantity
A	B	C
1.	RFID Reader (with Controller)	11
2.	RFID TAG (Sticker Type)	650
3.	RFID TAG (Metal mount Type)	1200
4.	Vehicle Tracking GPS Device	600
5.	Biometric Fingerprint device	11
6.	Solution Cost including license cost if any	Lump sum

7.	Annual Support Cost for first two years with one onsite Programmer and one onsite Hardware Engineer	2
8.	Annual Support Cost post first two years with one onsite Hardware Engineer	3
9.	Necessary hardware for application and database hosting at SMC Datacenter (Itemized details of the hardware to be provided in Appendix 1 Form 1.13 without prices)	Lump sum

Vehicles

Zone	Door to Door Garbage Collection Vehicle	Container spot/Nuisance waste collection vehicles	Disposal Trucks	Total
East	95	10	2	107
West	56	6	3	65
South- West	56	16	3	75
South-East	52	15	18	85
North	62	10	1	73
South	52	11	2	65
Central	92	15	20	127
Total	465	83	49	597

Waste Bins

Total number of waste bins across Surat city is **1145**.
