



Request for proposal For Setting up of Public Bicycle Sharing including Design, Build, Finance, Operate and Maintain through Public Private Partnership (PPP) at designated locations under “Smart City Mission” at Puducherry City

Volume II: Scope of Work and Technical Specifications



RFP for Public Bicycle sharing on PPP Mode

Tender No: 007/PSCDL/2019

July 2019

Puducherry Smart City Development Limited



Table of Contents

1	Background.....	5
2	Scope of Work.....	6
2.1	General.....	6
2.2	Bicycle.....	6
2.3	Docking Stations.....	7
2.4	Installation of docking stations.....	8
2.5	Fleet size.....	9
2.6	Number of Docks.....	10
2.7	Device for Check in and check out.....	11
2.8	Central Control System.....	11
2.9	Timeliness.....	12
2.9.1	User Generation Campaign and Formal Launch of the system:.....	13
2.9.2	Procurement of hardware and software.....	13
2.10	Minimum Hours of Operation.....	13
2.11	Redistribution.....	14
2.11.1	Marketing.....	14
2.12	Depots/ Workshops.....	15
2.13	Registration of Users.....	15
2.14	Fare Collection System.....	15
2.14.1	Revision of User Charge.....	17
2.14.2	IT system.....	17
2.15	Advertisement Space.....	18
2.16	Maintenance.....	18
2.17	Data Reporting.....	18
2.18	User Information System.....	19
2.19	Website.....	19
2.20	Smart phone applications.....	20
2.21	User Accounts.....	21
2.22	Fee payment system.....	21
2.23	Customer service kiosk.....	22
2.24	Marketing and User Education.....	22
2.25	Advertisements on the radio and print media.....	23
2.26	Training and Testing Period.....	23
2.27	Liquidated Damages (Key Performance Indicators).....	23



2.27.1	Payment to the Concessionaire.....	24
2.27.2	Customer service.....	25
2.28	Damages and replacement of assets	25
2.29	Transition & Closure	26
2.30	Legal	26
2.31	Contract Period	26
2.31.1	Commencement of Operation Date	27
3	Minimum Technical Specifications.....	28
3.1	Bicycles.....	28
3.2	Docking Station.....	29
3.3	Central Control System	30
3.4	Redistribution vehicles	31
3.5	Space for Depots/ Workshop/Control Center (to be provided by PSCDL)	31
3.7	Registration System	32
3.8	User Information System.....	32
3.9	Website-	32
3.10	Fee payment system.....	33
4	Summary of responsibilities.....	34
4.1	Concessionaire	34
4.2	PSCDL	34



Abbreviations

Term	Definition
ABD	Area Based Development
CCC	Command Control Center
CEO	Chief Executive Officer
Day	Calendar day
DPR	Detailed Project Report
GIS	Geographic Information System
GoI	Government of India
GoP	Government of Puducherry
GPRS	General Packet Radio Services
INR	Indian Rupee
LLP	Limited Liability Partnership
Ltd.	Limited
O&M	Operation and Maintenance
PMC	Project Management Consultant
PPP	Public Private Partnership
PSCDL	Puducherry Smart City Development Limited
PWD	Public Works Department
RFP	Request for Proposal
Sq.Km	Square Kilometre
ULB	Urban Local Body



1 Background

With the India Smart Cities Challenge, the Government of India took the first step towards realizing its vision of building and short listed 100 smart cities in the country. In the 1st round of Smart Cities competition 20 cities were selected, another 13 cities were selected in the fast-track round and 27 more cities were selected in 2nd Round. Under Indian Smart Cities Mission, the projects focus is on retrofitting and redevelopment a selected area within the city known as Area-Based Development (ABD). Additionally, projects at PAN City level has also been taken up. The projects focus is multi-sectoral.

Puducherry is now working on implementation plan to convert the Smart City Proposal (SCP) ideas into reality, beginning with retrofitting and redevelopment of the ABD that will catalyze future scalability to entire city and projects at PAN City. Boulevard and its surrounding area has been selected as ABD area in Puducherry. Puducherry was selected vide Lr. No K-15016/157/2015-SC-1, dated 28.06.17 by MoUD as one among the 30 cities and ranked 8th position in the 3rd round of Smart City Challenge, thus Puducherry stands in 68th Position out of 100 smart cities in India. Further the Puducherry Government as per Smart City Mission Guidelines formed a Special Purpose Vehicle (SPV) called Puducherry Smart City Development Limited (PSCDL) Vide G.O. MS.No.15/LAS/2017-18 dated 23/08/2017. in order to design, develop, implement and manage Smart City Projects.

“Puducherry” is the French interpretation of the original name “Puducheri” meaning “new settlement”. Puducherry is the capital city of The Union Territory of Puducherry and is one of the most popular tourist destinations in South India, with over 16.5 lakh annual visitors from India and abroad. It is surrounded by Bay of Bengal on east and South Arcot district of Tamil Nadu on other three sides. Puducherry is one of the major tourism destination center in south India. It has one of the oldest Ports in the world. It is served by five main roads which radiate to Puducherry, Vellore, Tirukoilure and Thanjavur. It is also the terminal of the railway line which connects Puducherry with Southern Railway broad gauge system. The city is connected with Villupuram and Thanjavur by NH 32, Vellore by SH-4 & SH-5, Tiruvanamali by NH-32& NH77 and Puducherry through East Coast road and NH32.

Puducherry Municipality spread is around 19.46 Sq.km and includes 42 wards. According to 2011 Census, the City population is around 2,44, 377. ABD area is around 5.94 sq.km with a population of around 1,14, 239. The ABD area covers 30% of the Municipal area and 51% of the City Population.

The Smart city plan for Puducherry revolves around the vision of “Transforming Puducherry into



a global tourism destination by leveraging its heritage, cultural, spiritual and educational advantages. Enhance the quality of life of the citizens by providing efficient urban mobility, smart civic infrastructure, smart service delivery and participative decision making”.

2 Scope of Work

2.1 General

The scope of work is to design, procure, install, operate and maintain Public Bicycle Sharing System with Electric and Non Electric Bicycles at Puducherry. It is required that the Public Bicycle Sharing System to be provided with the following specifications:

- a) The bicycles to be comfortable, commuter-style with specially designed parts and sizes that discourage theft and resale.
- b) A fully automated locking system that allows users to check electric Bicycles easily in or out of Bicycle- docking stations.
- c) A wireless tracking system, such as GPS, that locates where an bicycle is picked up and returned and identifies the user.
- d) Real-time monitoring of station occupancy rates through wireless communications, such as general packet radio service (GPRS)
- e) Real-time user information through various platforms, including the web, mobile phones and/or on site terminals.
- f) The concessionaire will develop an operating manual for the Public Bicycle Sharing indicating cycle design, customer information, fee collection procedures, Enforcement procedures, Safety procedures, Maintenance procedures, IT system and communication protocols and Data security among others.
- g) The basic and minimum technical standards with which the Public Bicycle Sharing would work has been listed along with the roles and responsibilities of the Concessionaire and other related Government agencies . The Concessionaire’s Scope of work includes:

2.2 Bicycle

- a) The concessionaire will provide and maintain Bicycles for Public Bicycle Sharing. 70 % of the total bicycles will be Non electric bicycles and 30 % of the fleet will be electric Bicycles.
- b) The concessionaire may increase the percentage of electric bicycles and with prior approval from PSCDL
- c) Technical specifications for the Bicycles (Non electric and Electric) should at least meet the “Minimum Technical Standards” as given in Section 3 - Volume II of this RFP.
- d) The concessionaire will procure such Bicycles manufactured not earlier than six (6) months



before the date of signing of the Concessionaire Agreement between PSCDL and the concessionaire. The Bicycles for PSCDL shall not have been put to commercial use anywhere previous to the Commercial Operations Date, except as provided in this RFP.

- e) The Bidder will present prototype of Bicycles (Non electric and Electric) for the Public Bicycle Sharing System to PSCDL for inspection. PSCDL will have the right to review all perks of Bicycles/electric Bicycles / station / docks, the hardware and software to ensure they meet all the technical criteria as specified in the RFP. A prototype which may have features over and above the prescribed minimum standards, will be accepted by PSCDL.
- f) If PSCDL find any discrepancy between the prototype electric bicycles for PSCDL and the technical specifications of the electric Bicycles submitted in the technical bids by the bidder, and then the bidder will have to replace the prototype with in 15 days as per the direction of PSCDL. The final designs will be subject to approval from PSCDL. After receiving approval on the final design, the Bidder have to proceed to manufacture/ acquire the Electric Bicycles, Stations, docks, etc.

2.3 Docking Stations

- a) PSCDL has identified the tentative locations, sizes, and the necessary street space for station installation. The Service Provider will be responsible for surveying the site; conducting public outreach to gather input from the public to verify station locations and sizes; develop detailed installation drawings.
- b) Technical specifications for the station specific equipment's, docks hardware and software components of the Public Bicycle Sharing System in PSCDL area should at least meet the "Minimum Technical Standards" as given in Section 3 - Volume II of this RFP. The station shall be Modular type automated docks.
- c) The concessionaire will procure such equipment manufactured not earlier than six (6) months before the date of signing of the Concessionaire Agreement between PSCDL and the Bidder. The equipments shall not have been put to commercial use anywhere previous to the deployment in this project.
- d) The Bidder will present prototype Station for the Public Bicycle Sharing System to PSCDL for inspection. PSCDL will have the right to review all station equipments hardware and software to ensure they meet all the technical criteria as specified. A prototype which may have features over and above the prescribed minimum standards, will be accepted by PSCDL.
- e) If PSCDL find any discrepancy between the prototype of station for PSCDL Project and the



technical specifications submitted by bidder in their technical bids, then the Bidder will have to replace the prototype within 15 days as per the direction of PSCDL. The final designs will be subject to approval from PSCDL. After receiving approval on the final design, the Bidder may proceed to manufacture/ acquire the Stations / station equipments hardware and software.

- f) The Bidder will make suggestions on the colours and branding of the Bicycles docking stations. These recommendations may be considered by PSCDL. The final decision rests on PSCDL
- g) The docking stations should have facility to charge the electric Bicycles. Alternatively, charging infrastructure can be made available in depot/workshop where batteries can be charged and swapped with depleted batteries in the vehicles

2.4 Installation of docking stations

- a) The project will be implemented in 2 phases and in the first phase of the project the concessionaire will be required to establish Public Bicycle Sharing System in the ABD area to commence with and after looking the performance of the system the phase 2 of the project covering nearby areas will be implemented within 1 year of introduction of the phase 1 System.
- b) The Phase 1 of the project would focus on the locations which have very high probability of attracting the users/tourists. This would create a positive impact on the project and the image of cycling will built. The details of Phase 1 and Phase 2 are provided in the table below.

Study Area boundary	Phase	No of Locations	No of Cycles	No of Docks
ABD Area and nearby traffic attracting locations	Phase 1	19	208	312
Puducherry Municipality and nearby traffic attracting locations	Phase 2	21	184	276
	Total	41	400	588

- c) The Stations will be categorized into two sizes:
 - i. Medium stations with 24 docks to accommodate 16 cycles
 - ii. Small stations with 12 docks to accommodate 8 cycles
- d) The list of tentative locations with number of cycles that will be required are attached in the



Annexure – Location Map of Tentative Locations

- e) For expansion and better performance of the system, the Concessionaire can suggest the locations and size of the docking stations depending on requirement and performance. The locations for the docking stations will be frozen based on the space availability and in consultation with the stakeholders such as PSCDL, municipality and PWD. The final decision on the station location, number of stations and size rests with PSCDL.
- f) The Concessionaire will conduct site surveys and provide detailed drawings for each station showing the layout and positioning of the station relative to existing street elements.
- g) The Concessionaire will submit the proposed station positions and layouts to PSCDL for approval. The PSCDL will clear the approved site within 15 days of receiving complete proposal from the Concessionaire and will create a paved, level surface thereafter on which the Concessionaire may install the Station.
- h) Foundation and other infrastructure work will be the responsibility of the concessionaire. The complete implementation of PBS in Phase 1 area shall be completed in six months from the date of signing of the agreement.

2.5 Fleet size

- a) Concessionaire will maintain the Fleet to match the Authorized Fleet (for phase 1 and phase 2) requirements as per the timeline mentioned in the below table:

<i>Milestone</i>	<i>Authorized Fleet (f)</i>
Phase 1 :Within 6 months of signing Of the Concessionaire Agreement	208 Bicycles
Phase 2: Within 24 months of signing Of the Concessionaire Agreement	Phase 1 + 184 Cycles

- b) After 12 Payment Periods, PSCDL will review the Authorized Fleet at the end of every quarter (3 months) and revise the Authorized Fleet as follows:
 - i. If $r / f > 6$, the Authorized Fleet size may be increased by an increment specified by PSCDL within 60 days of the end of the previous payment period.
 - ii. If $r / f \leq 6$, the Authorized Fleet will remain the same.

Where 'r' is the average number of Rides during the previous payment period and 'f' is the Authorized Fleet during the previous 30 days.

- c) .The Concessionaire will present the plan for number of additional stations and their



locations, including expanding it to newer areas adjoining the existing coverage area. PSCDL will review and approve the plan in consultation with relevant agencies.

- d) However, PSCDL has the discretion to impose a cap on the quantum of Authorized Fleet. Payments will be determined based on the actual number of Bicycles in operation during the corresponding Payment Period.
- e) In addition to the above-mentioned mandatory increase in size of the Authorized Fleet, the concessionaire is free to increase the number of Bicycles/ docking stations as per PBS system requirement with approval from PSCDL.
- f) The concessionaire will be required to pay licence fee for the bicycles deployed in the Authorized Fleet or bicycles in actual operation, whichever is more depending on the financial bid of the concessionaire.

2.6 Number of Docks

- a) The number of docks at each station should be more than the number of authorized Bicycles at each station, to ensure availability of excess docking space, to accommodate peak hour demand. The Concessionaire will maintain a system docking capacity as follows:

$$d \geq 1.5 * f$$

Where,

d is the number of docks at each station designated for the bicycles of the system, and

f is the Authorized Fleet at the station

The dock to bicycle ratio should hold true even at the system level. That is, at the system level-

$$D \geq 1.5 * F$$

Where,

D is the Total number of docks in the system

F is the Total Authorized Fleet size for the system

- b) Each station should comply with the technical standards as specified in Section 3 - Volume II of this RFP. However if Concessionaire wants to increase the number of Station as per its requirements, same can be done at the cost of concessionaire after a written prior approval from PSCDL.
- a) The concessionaire will be required to pay licence fee for the Bicycles deployed in the authorised fleet or bicycles in actual operation, whichever is more, as the case may be, depending on the financial bid of the concessionaire. The system proposed by the Concessionaire will install Stations as per the timelines.



-
- b) If required, PSCDL may ask the concessionaire to install additional station(s) with Bicycles depending on its requirement. The concessionaire shall install such additional stations within 30 days of receipt of letter in writing from PSCDL. Concessionaire will pay the licence fee to PSCDL, at the same rates as every electric/non electric Bicycle in every such additional station(s).

2.7 Device for Check in and check out

- a) The hardware required at the station to validate the user into the system and out of the system will be connected to the central control system.
- b) Functionalities of the equipment is listed in the Technical specifications given in Section 3 - Volume II of this RFP.

2.8 Central Control System

- a) The concessionaire should provide a Central control system which can on a real time basis monitor the operations of the system (all its components).
- b) The central control system provides the backbone of the PBS system.
- c) The Control Centre will constitute PSCDL's single point of contact to enable PSCDL to coordinate with the Concessionaire in the course of the day-to- day operation and management of the Public Bicycle Sharing System by PSCDL.
- d) The Concessionaire shall ensure that the Control Centre is staffed by an adequate number of appropriately qualified personnel and further that there is due coordination between the staff at the Concessionaire control centre and PSCDL.
- e) The space required for the Control Centre will be made available by PSCDL, subject to availability of space.

The concessionaire should:

- a) provide software to aid in monitoring of the system including details like total and in operation bicycles, docks at each station, etc.
- b) provide Software which will be able to aid the concessionaire in tracking stations and enabling efficient redistribution of Bicycles across stations.
- c) provide Software which will be able to help in system planning and expansion.
- d) procure software and hardware for the processing of customer payments via different modes.
- e) procure the hardware and software, which should meet the "Minimum Technical Standards" as given in Section 3 - Volume II of this RFP.
- f) provide a physically staffed central control room to house the central control system,



which will have computer terminals and communications equipment allowing Concessionaire staff to monitor system status.

- g) borne maintenance, payment of electricity bill and all other related expense of the space provided.

2.9 Timeliness

The Concessionaire will be expected to meet the following timeline:

Task	Task to be completed within the end of the indicated month, measured from the date of approval
Demonstrate initial prototype for Docking stations and Bicycles and review	1
Submit marketing plan for review.	2
Finalization of station locations/size and fleet	2
Submit beta website for review.	2
Demonstrate final prototype of Cycles	2
Back office systems operational.	3
Submit redistribution and maintenance plans for review	3
User generation campaign	5
Website information and subscription sections operational.	5
Training and Testing of System	4-6
Begin accepting applications for registration+ partial System launch	5
Install Phase 1 docking stations /200 Cycles+ system launch	5-6
Performance review of Phase 1 of the system	12
Submit station siting plans for remaining Stations for review(Phase 2)	13-14
Install and operate remaining 196 cycles(Phase 2)	15-18



based on the performance of Phase I (With approval from PSCDL)	
Full System launch	18

2.9.1 User Generation Campaign and Formal Launch of the system:

Within six months from the date of signing of the agreement, the concessionaire will start the Commercial Operations after formal launch of the PBS system. At least four weeks User Generation Campaign shall be undertaken by the Concessionaire before /after formal launch of the system, During this period the concessionaire should actively try to engage the people of Puducherry in understanding the operations of a PBS and also generate memberships to the system.

2.9.2 Procurement of hardware and software

- a) Procure Cycles as per the Authorized Fleet size set by PSCDL, each of which shall comply with the technical standards specified in the tender document.
- b) Procure and maintain Standby Bicycles to ensure that the operational Fleet size remains above the Authorised Fleet.
- c) Procure software and install, operate, and maintain an IT system, including a control centre, to aid in monitoring, planning, and the redistribution of Bicycles.
- d) Procure such equipment manufactured not earlier than six (6) months before the date of signing of the Concessionaire Agreement between PSCDL and the Concessionaire. The equipment shall not have been put to commercial use anywhere previous to the Commencement of Operations.
- e) Procure software and hardware for the processing of customer payments via cash (at kiosks/customer care centres), credit card, net banking, mobile-based banking systems, and other media.
- f) Operate only such equipment that meets the technical criteria at all times during the Contract Period.

2.10 Minimum Hours of Operation

- a) The system will run in two shifts for a period of at least 16 hours every day preferably from 6:00am to 10:00 pm.
- b) If the concessionaire decides to expand the number of operating hours beyond 16 hours, then



it is mandatory that the time period 6:00 am to 10:00 pm falls within the operating hours of the system.

- c) If the concessionaire has any suggestions on change in time of operations, such a request will be put forth to PSCDL, who will have the final authority to decide.

2.11 Redistribution

- a) The Concessionaire shall ensure that the Bicycles are redistributed on a regular basis between stations to ensure that no station is either empty (without any Bicycles) or full (with no free dock available) for an extended period of time.
- b) The concessionaire should provide adequate number of vehicles which are used only for the purpose of redistribution of Bicycles across stations.

2.11.1 Marketing

- a) The Concessionaire will be responsible for carrying out ongoing marketing activities to promote use of the Public Bicycle Sharing System. Before and after the Commencement Date, the Concessionaire will carry out marketing activities as specified in the Technical Specifications.
- b) During the period of contract after the Commencement Date, the Concessionaire will set up as many numbers of manned kiosks to facilitate the cycle users. The kiosks will provide print material on how the Public Bicycle Sharing System works, conduct live demonstrations, and carry out other activities to inform potential users about the Public Bicycle Sharing System. The kiosks will also accept Membership applications and assist with user payments, top up or recharge of amounts
- c) The Service Provider will be expected to spend an amount on print and radio advertisements equivalent to at least 5 per cent of the combined value of Payments during the first year after signing of the Service Provider Agreement and 2 per cent during years 2 through 7.
- d) For any complaint registration by users, provisions shall be made by the Service Provider in Mobile App and web portal. Dedicated Whatsapp number shall be provided to citizens for any complaints/suggestions/feedback with regards to biPublic Bicycle Sharing System. The same shall be monitored by the service Provider and adequate responses shall be delivered to citizens within 48 hours.
- e) From at least two months before the Commencement Date through the end of the contract, the Service Provider will carry out marketing activities, as per defined in the Service Provider Agreement, including but not limited to the following:



- f) Establish and maintain a Facebook page with system updates, promotions, and other information.
- g) Establish and maintain a Twitter feed with system updates, promotions, and other information.
- h) Establish and maintain a blog on the Public Bicycle Sharing System website with news, interesting stories, and other features.

2.12 Depots/ Workshops

- a) PSCDL shall provide adequate Depot/Workshop space for spare Bicycles, Stations, Electric Bicycles repair, and Parking space for redistribution vehicles, subject to availability of space. Such space should only be used for the purpose prescribed in this RFP document, and not for any other purpose.
- b) The Concessionaire shall source and install the maintenance equipment as necessary. Major repairs of the Electric Bicycles and Stations which cannot be carried out on the site shall be carried out at the depot/ workshop space developed by the concessionaire.
- c) Such location should be accessible and appropriately equipped to manage the Public Bicycle Sharing System. Equipment for maintenance & repair of Electric Bicycles is to be borne by the concessionaire.

2.13 Registration of Users

- a) Registration is a prerequisite to gain access to the Public Bicycle Sharing System. All users are required to register with the system using a valid ID proof (Aadhar Card / Driving License/Voters ID basis for Indian Citizens and on Passport basis for foreign nationals) either through website, mobile Phone App or at kiosks/customer service centres.
- b) For customers who don't have a Smartphone, the Concessionaire shall provide customer care to register. A few centres around the city will be identified by the Concessionaire with PSCDL's approval to facilitate the System users. The user can go to the nearest customer service centre to register with valid ID proof, pay security deposit (as specified by Concessionaire), pay cash to top up or recharge the account at the customer service centres/kiosks.

2.14 Fare Collection System

- a) A fully digital fare collection system using different payment gateways like internet



banking/credit/debit cards/ mobile wallets etc and across different platforms like web, mobile app, on-site terminal should be deployed.

- b) No additional fees may be collected by the Concessionaire or the staff. Tipping or any exchange of money for preferential service are prohibited and any staff engaging in such a practice should be disciplined accordingly.
- c) All user payments including security deposits, membership fees shall be credited in full to an escrow account established by PSCDL. The Concessionaire shall not retain user fee revenue nor shall it have any right in relation to the fees collected. Concessionaire shall at no point of time, directly or indirectly, partake any portion of the user fees. All the payment instruments must comply with the PPI clause (Pre-paid Payment Instruments Clause) of RBI as revised from time to time.
- d) The Fare structure (Subscription Fees, Usage fees, etc.) have been determined by PSCDL and is detailed out in below
- e) Membership Fees

	Membership Subscription fees	Amount In Rs.	Benefit
Membership Fees	Daily membership subscription fees	49	Free ride of 30 mins for a day for electric and non electric bicycles
(Exclusive of GST)	Monthly membership subscription fees	249	2 free rides of 30 mins per day for electric and non electric bicycles
	Three month membership subscription fees	499	2 free rides of 30 mins per day for electric and non electric bicycles
10% hike in Membership Subscription fees after every 3 years of operation			

- f) Usage Fees:

Fees	Type of Cycle		Amount In Rs for First 30 minutes	Amount In Rs for Every additional 30 minutes
Usage fees (Exclusive of GST)	Normal Cycle	Member	0	5
		Non Member	5	10
	Electric	Member	20	30



	Cycle			
		Non Member	25	40
10% hike in Usage Fees after every 3 years of operation				

2.14.1 Revision of User Charge

The User Charge and membership fees shall be reviewed and revised once in every 3 years at ten percent (10%)

2.14.2 IT system

The Concessionaire will provide real-time information access and periodic summary reports in an electronic format specified by PSCDL containing but not limited to the following information:

- i. Fleet size
- ii. For each Station/ parking area
 - a. Hourly data on number of cycles parked in each location
 - b. Status: full or empty
 - c. Operational status
- iii. For each Cycle:
 - a. Operational status: in service, out of order, etc.
 - b. Number of Rides taken on the Cycle during its lifetime and since last maintenance
- iv. Trip Data
 - a. Number of Rides taken using the system
 - b. Record of each Ride taken using the system, including the user ID, origin, and destination, start time, end time, and cycle ID.
- v. Geospatial location of stations and bicycle location with time-stamps
- vi. Develop online Web-based Portal and Mobile Application to provide information on Puducherry Public Bicycle Sharing System, 'know how' on user registration, station locations, navigation services, payment mechanism through various modes, and feedback services.
- vii. Not carry out any other commercial activities on or near Public Bicycle Sharing System facilities unless explicitly approved by PSCDL.



2.15 Advertisement Space

- a) The Concessionaire will only use available designated branding/advertising spaces on the Electric Bicycles, docking stations and redistribution vehicle as per approved by PSCDL and defined herein RFP.
- b) The rights to advertising, sponsorship, naming, and branding rights associated with the system will remain with the Concessionaire but PSCDL will have the final right of approval on the same. The specifications of the advertisement panel are given in system specifications detailed in Section 3

2.16 Maintenance

- a) The Concessionaire needs to ensure that the Bicycles and all other assets of the system are regularly maintained on a regular basis on global standards basis in a workman like manner.
- b) The Concessionaire is required to do a maintenance check on every station of the system at least once a week to ensure the quality of the station infrastructure and the Bicycles/Electric Bicycles of the system.
- c) The Maintenance checks are not to be conducted during hours of operation of the system Electric Bicycles which require more than on- station maintenance and such electric Bicycles should be taken to the Depot for repairs and be replaced with Bicycles/Electric Bicycles from the stand by fleet to ensure that the maintenance do not clash with regular operations of the system.
- d) Information of the problems that were addressed at each station with regard to Electric/Non electric bicycles and other infrastructure needs to be properly recorded and entered into the central data base.
- e) The exact maintenance schedule will be finalized in consultation with PSCDL time to time by the concessionaire and final decision of PSCDL in this regards is binding on concessionaire.

2.17 Data Reporting

- a) The concessionaire shall make available all the data pertaining to the Operation & Maintenance of the Project real-time that can be accessed by the PSCDL or its representative. The real-time data shall be in such a format that the PSCDL shall be able to evaluate the performance of the Concessionaire against the Service Levels set forth in this Agreement.
- b) The concessionaire shall no later than 7 (seven) days after the close of each month, furnish to the PSCDL a monthly report stating in reasonable detail the condition of the Project including



its compliance with Service Level Benchmarks. In particular, such report shall separately identify and state in reasonable detail the defects and deficiencies that require rectification. This report will help PSCDL to understand how much service charge accrues to the concessionaire for that month's operation standards.

- c) The concessionaire shall no later than 14 (fourteen) days after the close of each quarter furnish to PSCDL a Quarterly report stating in reasonable detail the compliance with service level benchmarks and other details which will aid in making expansion plans of the system. This will include details of stations with maximum and lowest demand, time of the day when there is maximum demand, steps that can be taken to improve user experience and quality of service including potential location where the E-PBS system can be expanded to.
- d) PSCDL may request the concessionaire for any additional information other than the real-time data if need be.
- e) PSCDL will have complete ownership on the data on real time basis

2.18 User Information System

- a) Concessionaire need to develop an Integrated Website for PBS and establish a smart-phone app for the system which will help users both static and real time information about the system.
- b) Concessionaire shall provide adequate mechanism for integration of such App with Proposed PSCDL mobile App.
- c) Also, enabling provisions be made in the system to integrate such information with any other system of PSCDL, etc. and concessionaire will provide adequate support for same without any extra cost.

2.19 Website

- a) The Service Provider will develop a website on Open standard platform and integrate with any other portal products such as HTML, XML, web services and WSRP. The website shall be browser independent and responsive to run on all leading browsers.
- b) The Service Provider will create a website with the following functionality:
 - i. Create and manage upto date all applications, content, data and information to Puducherry Public Bicycle Sharing System on online portal as well as mobile app throughout the contract period.
 - ii. Provides a user account section with the ability to create a user account, modify the



-
- user profile, to purchase memberships and recharge user accounts.
- iii. Available in Tamil and English.
 - iv. The website must consistently have a page speed score of 75+/100 for both desktop and mobile site for a visitor load of 500 simultaneous transactions per hour.
 - v. Ability to handle 5000 page views per day.
 - vi. Typical 3 click request for most information on the website.
 - vii. The entire website must be embeddable within the PSCDL website or at a location so directed by PSCDL. In which case, all the functionality must happen within the frame and must not redirect user to another website.
 - viii. A section on frequently Asked Questions (FAQs) related to Cycle sharing, and their related responses.
 - ix. The website should have an uptime of 99% as specified by PSCDL.
 - x. Has point-of-sale ability Displays real-time station status overlay on a map: name of station, number of Bicycles, and number of available docks.
 - xi. Allows users to track their usage (other innovative applications are encouraged).
 - xii. Specially designed versions for multiple computing devices (desktop computers, smartphones, and tablets).

2.20 Smart phone applications

- a) The Service Provider will create smart phone applications compatible with major Smart phone operating systems including iOS, Android, and Windows used by the membership base (as calculated through membership surveys) along with a Vendor Agnostic Web Service. The development shall be done in a Hybrid Integrated Development Environment (IDE) for consistency in feature roll outs.
- b) The Smartphone application shall be developed to have the following functionality:
- c) Real-time station information: name of nearby station, number of Bicycles available, number of available docks.
- d) Allows users to view membership status and recharge their accounts.
- e) Provides a user account section with the ability to create a user account, modify the user profile, to purchase memberships and recharge user accounts.
- f) Responsive interface to facilitate use on a wide range of devices with different sizes.
- g) Provide the User with option to select a specific button on their cell phone to set as SOS short-



cut, when pressed and help continuously for a certain amount of time

- h) Available as well support unicode and be multilingual in at least English and Tamil
- i) Typical response time shall be 2-3 seconds or as per the industry standards.
- j) A section on frequently Asked Questions (FAQs) related to Cycle sharing, and their related responses.
- k) Must be scalable and technically adaptable to integrate with common mobility/smart card in future.

2.21 User Accounts

- a) The Service Provider will provide the option of User Accounts for frequent System users. Depending on the need, the system will allow User to create a temporary or permanent account.
- b) The User Accounts will have the following features:
 - i. Ability to open an account online, through a smartphone app, or at a customer service kiosk.
 - ii. Required data to open an account include the user's name, address, and mobile number.
 - iii. Ability to recharge the account using net banking, credit and debit cards, coupons, and other electronic wallets, via online portal or smart phone application.

2.22 Fee payment system

- a) The Service Provider will create a fee payment system by which users can make payment using a mobile phone SMS or smartphone application.
- b) The payment system will:
 - i. Register the beginning and end of a cycle sharing trip through a text message or through a smartphone application.
 - ii. Send an alert when the duration of the trip is about to exceed the user's balance.
 - iii. Send a response/confirmation message for all user actions.
 - iv. The Users can make payment alternatively at the Customer centres/kiosks. The Service Provider WILL NOT collect cash from users as payment of fee and all transactions shall be through the online platform.
- c) The service provider should ensure that facilitators are available at site for the initial period of three months to help users with the payment system.



2.23 Customer service kiosk

- a) The Service Provider will maintain a customer service kiosk at a facility provided (Control Center) by PSCDL meeting the following standards:
 - i. Communicates real-time with the Control Centre.
 - ii. Staff proficient in English and Tamil.
 - iii. Allows users to apply for memberships, obtain information on their membership status, and recharge their accounts.
 - iv. Can provide printed material in Tamil and English explaining how to subscribe to the system and maps showing station locations.

2.24 Marketing and User Education

- a) The Concessionaire will be responsible for carrying out ongoing marketing activities to promote use of the Public Bicycle Sharing System PSCDL and user education of the system.
- b) Before and after the Commercial Operations Date, the Concessionaire will carry out marketing activities to promote the system and increase membership.
- c) Carry out marketing activities to promote use of the Public Bicycle Sharing System using the following channels but not limited to: Website, Facebook, Outdoor Advertisements, Merchant Co-Branding, Advertisement in local newspapers.
- a) The Service Provider is encouraged to use a variety of traditional and more innovative marketing techniques
- d) The Service Provider will carry out marketing activities, as per defined in the Service Provider Agreement, including but not limited to the following:
 - e) Establish and maintain a Facebook page with system updates, promotions, and other information.
 - f) Establish and maintain a Twitter feed with system updates, promotions, and other information.
 - g) Establish and maintain a blog on the Public Bicycle Sharing System website with news, interesting stories, and other features.
 - h) Launch phase for three months starting on the Commencement Date including:
 - i) Marketing events and temporary customer service kiosks at popular cycle parking stations.
 - j) Membership drive to encourage people to set up User Accounts.
 - k) Outreach to business associations, resident welfare associations, and other local



stakeholders.

2.25 Advertisements on the radio and print media.

- a) The Service Provider will be expected to spend an amount on print and radio advertisements equivalent to at least 5 per cent of the combined value of Payments during the first year after signing of the Service Provider Agreement and 2 per cent during years 2 through 7.
- b) For any complaint registration by users, provisions shall be made by the Service Provider in Mobile App and web portal. Dedicated Whatsapp number shall be provided to citizens for any complaints/suggestions/feedback with regards to Public Bicycle Sharing System. The same shall be monitored by the service Provider and adequate responses shall be delivered to citizens within 48 hours.

2.26 Training and Testing Period

- a) The Concessionaire is required to conduct on ground test of the system components for at least three weeks prior to the formal launch of the system or Commercial Operations Date. During this period, the Concessionaire shall make available the following equipment:
- b) Staff required for operations and maintenance of the entire Public Bicycle Sharing System.
- c) At least 10 Stations (with at least 80 cycles with an average of 8 cycles per station), the Control Centre, and a Depot for the purpose of training and testing of operations.
- d) PSCDL and Concessionaire shall use this period to understand the intricacies of operations and fine-tune the Public Bicycle Sharing System. No fines shall be applicable during this period. The Authorized Fleet requirement is not applicable in this period. No user fee will be charged from the customer during the training and testing period.

2.27 Liquidated Damages (Key Performance Indicators)

- a) PSCDL or its authorized agents may conduct random spot checks for cleanliness and operating condition of the system.
- b) LD shall be applied by PSCDL on the Concessionaire for various parameters better defined in the table below.
- c) LD metrics are measured from 0:00 on the first day of the Payment Period until 23:59 on the last day of the payment period.
- d) PSCDL may add/delete/change/modify the parameters, provided that at least Thirty (30) day



prior notice shall be given to the Concessionaire before such parameters are applied.

- e) A representative schedule of penalties is presented below.

Parameters	Threshold value	Liquidated Damages
Availability of cycles for users to access during the day	≥ 95%	Rs. 100 per cycle per hour
Number of complaints addressed and resolved in 24 hours	≥ 95%	Rs. 100 per cycle per hour
Unauthorized release of customer data		Rs.10,000 per subscription
Unauthorized release of system data		Rs.10,000 per cycle
Unauthorised use of advertisement space at stations/assigned parking areas		Rs.5,000 per violation per day

2.27.1 Payment to the Concessionaire

- a) All user payments including security deposits, membership fees shall be credited in full to an escrow account established by PSCDL. The Concessionaire shall not retain user fee revenue nor shall it have any right in relation to the fees collected. Concessionaire shall at no point of time, directly or indirectly, partake any portion of the user fees. All the payment instruments must comply with the PPI clause (Pre-paid Payment Instruments Clause) of RBI as revised from time to time.
- b) PSCDL will, within a period of seven days from receipt of the invoice, verify the invoice against the records that it has on the Public Bicycle Sharing System and make the payments (adjusted against any errors or fines or other adjustments as may be applicable against the Invoice under the terms of the Contract). All payments shall be made through electronic transfer by PSCDL to the designated account of the Concessionaire after deducting any tax deductions at source that PSCDL may be obliged to deduct under Indian law.
- c) Seventy percent (70%) of payment from escrow account will be auto credited to the concessionaire during every payment period. Remaining thirty percent (30%) will be credited within fourteen working days after deductions of any penalties towards the concessionaire by PSCDL.
- d) Payment to the Concessionaire will be calculated as follows:



Payment = (k+d)-i

Where

- 'k' is user membership Fees in a month
- 'd' is the usage fees collected in a month
- 'i' is the penalties.

Payment for penalties shall be calculated as described in the following section.

2.27.2 Customer service

- a) Establish customer service platforms for the Public Bicycle Sharing System, including a call centre, website, smart phone applications, and physical kiosk, to disseminate information, assist with registrations and payments, and address grievances.
- b) Carry out marketing activities to promote use of the Public Bicycle Sharing System using the following channels but not limited to:
 - i. Website
 - ii. Facebook
 - iii. Outdoor Advertisements
 - iv. Merchant Co-Branding
 - v. Advertisement in local newspapers

2.28 Damages and replacement of assets

- a) The Concessionaire shall be liable to repair, rectify, or replace any assets, including Bicycles terminals, etc, at its own cost, unless specifically excluded by PSCDL or under Force Majeure Conditions. These include:
- b) Damage to Project Asset due to regular wear and tear under field conditions, or breach of its maintenance obligations or any other obligations specified in this Agreement and/ or omission of act by the Concessionaire.
- c) Loses due to theft of Bicycles while Bicycles are check out by Members, or due to acts of vandalism.
- d) The Concessionaire may take out an insurance policy to cover such losses and the payment of the insurance premium will be the liability of the Concessionaire.
- e) Damages due to negligent driving or accidents by Concessionaire personnel or authorised representatives on street shall be the liability of the Concessionaire. Any fines levied against the Concessionaire or any of its staff or subcontractors by traffic police or any competent authority will be borne directly by the Concessionaire. PSCDL claims no liability for such



infractions.

- f) PSCDL shall not be liable to make any other payments such as those arising from maintenance or operations of the Public Bicycle Sharing System other than the payments described in this section.
- g) The Concessionaire shall be compensated for damages to Public Bicycle Sharing System equipment where the liability is traced to PSCDL.

2.29 Transition & Closure

- a) During the closure of the contract, in order to provide a seamless experience for the citizens, PSCDL shall decide that a period no greater than 6 months shall be identified as an overlap period or a transition period where in the project can be moved on to the next concessionaire or transitioned to the staffs deputed by PSCDL. This will be the last 6 months of the contract duration. During this period depending on the quality of service record and roll-out plan for the next Cycle Sharing plan, the vendor may be asked to at PSCDL's discretion to either extend the service for a year or wind up operations in a phased manner.
- b) The vendor is obligated to attend all the meetings called for the transfer of service and shall accord all the necessary help to the next Concessionaire.
- c) This clause does not indicate an automatic diminished responsibility during the closing 180 days. It is intended to provide for a seamless transfer only.

2.30 Legal

- a) The concessionaire shall bear all applicable National, State and local taxes on purchase of equipment. bear all the risk incurred on vandalism/theft of the system-Electric Bicycles, docks, terminals and other components within the station premises & vandalism and loss of Electric Bicycle which has been rented out.
- b) bear all applicable insurance, including vehicle insurance of other components of the system and passenger insurance as required under:
- c) Any Financing Agreements of Laws of India.
- d) Such Insurances as may be necessary in accordance with the Prudent Utility Practices.
- e) comply with all legal and statutory compliances as per applicable laws, including labour laws.

2.31 Contract Period

- a) This Contract is being granted for the installation and operation of the Puducherry Public Bicycle Sharing System for a Contract Period of Seven (7) years from the Commencement of



Operations Date (COD), excluding Six (6) month period required for mobilization and system installation. If the Concessionaire completes the contract period successfully, then PSCDL may consider extending the contract for a further duration.

- b) If the PSCDL is interested in expanding the system within contract period, the Concessionaire can accept/reject the proposal within 2 weeks. In case the Concessionaire is unable to fulfil the requirements, the PSCDL will have authority to invite new Concessionaires for the expanded system.
- c) The Concessionaire shall make available for Service the entire Public Bicycle Sharing System and the entire Fleet from Commencement of Operations until such time as the Contract Period expires, subject to the Assured Fleet Availability during the Contract Period.

2.31.1 Commencement of Operation Date

- a) Concessionaire shall deploy all the maintenance, operations and management staff required for operations and maintenance during the Training and Testing Period. At the end of the Training and Testing Period, the Concessionaire shall deploy adequate numbers of maintenance, operations and management staff required for operations and maintenance of the Bicycle Sharing System as per the standards specified in this RFP.
- b) Any delay or failure in such deployment shall leads to Liquidated Damages.



3 Minimum Technical Specifications

The minimum technical specifications for electric Bicycle, station, dock, Advertisement panels, Central Control System, re-distribution vehicles, depots/workshops, registration system, user information system are given below:

3.1 Bicycles

S.No	Electric Bicycle Specifications
1	Bicycle design for gender neutral ease of ingress and egress
2	Visible difference of the Electric Bicycle from regular Electric Bicycle in the market through design, specially designed parts and sizes that discourage theft and resale
3	Electric Motor Power: Minimum 250W Speed: 25kmph Range: minimum 40 km per charge Tire Size: As per best market policy Front Brake: Drum Brake Rear Brake: Drum Brake
4	Sturdy, lightweight Frame
5	Kick Stand
6	Luggage compartment to carry minimum capacity up to 8 kg
7	Ad Space on the sides of the Electric Bicycle - one side branding of E-PBS scheme other side advertisement
8	Rust and Graffiti Resistant
9	Enclosed mechanisms
10	Always on front light and rear LED lights
11	Audible horn
12	Yellow, Orange, Red a reflective chrome colour. Reflectors on wheels, body, and both ends of the electric Bicycle.
13	Comfortable seat fixed to the body of the electric Bicycle
14	Tubeless tyre with wide profile, should be avoided to protect against theft
15	In-built GPS for communication with central server with anti theft alarm.



S.No	Non electric Bicycle Specifications
1	Bicycle design for gender neutral ease of ingress and egress
2	Visible difference of the Electric Bicycle from regular Electric Bicycle in the market through design, specially designed parts and sizes that discourage theft and resale
3	Smart technology including GPS and wireless connectivity
4	Sturdy, lightweight Frame
5	Kick Stand
6	Luggage compartment to carry minimum capacity up to 8 kg
7	Ad Space on the sides of the Electric Bicycle - one side branding of E-PBS scheme other side advertisement
8	Rust and Graffiti Resistant
9	Enclosed mechanisms
10	Always on front light and rear LED lights
11	Audible horn
12	Flat pedals.
13	All gears, braking mechanisms, cables and parts are fully enclosed from weather and are tamper-proof.
14	Simple, intuitive front and rear braking system with enclosed wiring
15	Chain-less or fully enclosed drive train.
16	Estimated lifespan of 7 years with 8 rides per day.
17	Guarantee of replacement of Bicycles and parts for a period of 7 years.

3.2 Docking Station

S.No.	Station - Minimum Specifications
1.	Docking stations capable of docking both normal and electric bicycles on flat concrete ground
2.	Modular signage to clearly identify the station from far - easy to construct and dismantle. Station location can easily be changed.



3.	Station size to be in multiples of electric Bicycles - space for each electric Bicycle to be approximately 2 meters long and 1 to 1.5 mtr width based on actual dimension of the Bicycle space feasibility.
4.	Fully automated stations where Bicycles can be checked in and out without keys are preferable using mobile app with QR Code or OTP. Attendants/CCTV cameras etc may be incorporated by the Concessionaire for ensuring safety.
5.	Advertisement Panel: <ol style="list-style-type: none"> i. One panel of size 30 x 5 Ft above the bicycle docks ii. One side panels of size 8 x 4 Ft with information's of Public Bicycle Sharing System/fares and one side for advertisements
6.	Rust and Graffiti Resistant design of advertising panels
7.	Modular station that do not require excavation and trenching.
8.	Station should not impede pedestrian or vehicular traffic

3.3 Central Control System

S. Central Control System- Minimum Specifications	
No.	
1.	Connected to all the registration centres and station check in and check out equipment and docks at the stations
2.	Able to compile information at station level and system level
3.	Real time monitoring of station occupancy rates through wireless communications.
4.	Able to use the Bicycle and dock availability information to make decision on redistribution of Electric Bicycles
5.	To be integrated with central command and control room of PSCDL. Able to provide real time information of the system to PSCDL
6.	Able to receive and save all records on a searchable database
7.	Guarantees data security as per Indian law and international best practices
8.	Open book policy i.e. PSCDL shall have access to all data collected and transmitted by the system. All data is the property of PSCDL



9	Central Computer System should be upgraded and maintained real time.
10.	The Contractor will provide reports to PSCDL in accordance with an agreed upon schedule or on request.
11.	Physically staffed Office space housing the central control system
12.	Computer terminals and communications equipment allowing Concessionaire staff to monitor system status
13.	Call centre clause: The concessionaire shall provide a call centre number for queries and feedback for the system.
14.	Real time monitoring of station occupancy rates through wireless communication such as GPRS
15	Real time user information through various platforms including Web, Mobile Phones and onsite terminal

3.4 Redistribution vehicles

S.No.	Redistribution Vehicles- Minimum Specifications
1	Designed to ensure transfer of Bicycles with minimal damage
2	Follows the same brand guidelines for the entire system. Should look like a part of the rest of the system
3	Advertisement cladding on the redistribution vehicle is allowed.

3.5 Space for Depots/ Workshop/Control Center (to be provided by PSCDL)

Sl no.	Space for Depots/ Workshop - subject to availability
1	Space to store extra/ back up Bicycles for the system
2	Space to store backup check in/ check-out devices and other equipment
3	Space to undertake repair of Electric Bicycles of the system
4	Space to store the required tools for repairs and maintenance



3.7 Registration System

S. No. Registration System- Fully digital - Minimum Specifications	
1	Enabled to collect ID proofs and other required documents to register a user to the system
2	Enabled with the required equipment or technology to issue a new user id to new Customer- online.
3	Enabled to issue access with user id and information for ID proofs - online
4	Enabled to collect and return security deposits.
5	Enabled to handle electronic (including card) and cash transactions for subscription fees and top up of smart cards.
6	Enabled to link the transactions to the relevant user id.

3.8 User Information System

S.No. Smart Phone App- Minimum qualification	
1	SmartPhone apps provided for at least the Android and IOS Operating System
2	Should be able to provide information about the system- static and real time for the ease of the user
3	Should be linked to Google maps
4	Should integrate information of the Public BiPublic Bicycle Sharing System with the Proposed Unified card/app by PSCDL under smart Cities Mission
5	Should have enabling feature to integrate the information of PBS System with other systems.

3.9 Website-

S.No. Website- Minimum requirement	
1	The Service Provider will develop a website on Open standard platform and integrate with any other portal products such as HTML, XML, web services and WSRP. The website shall be browser independent and responsive to run on all leading browsers.



2	Provides a user account section with the ability to create a user account, modify the user profile, to purchase memberships and recharge user accounts.
3	Available in Tamil and English.
4	3 click request for most information on the website.
5	A section on frequently Asked Questions (FAQs) related to Cycle sharing, and their related responses.
6	The website should have an uptime of 99% as specified by PSCDL
7	Has point-of-sale ability Displays real-time station status overlay on a map: name of station, number of Bicycles, and number of available docks.

3.10 Fee payment system

S.No.	Fee payment system
1	The Service Provider will create a fee payment system by which users can make payment using a smartphone application. The payment system will:
2	Register the beginning and end of a cycle sharing trip through a text message or through a smartphone application.
3	Send an alert when the duration of the trip is about to exceed the user's balance.
4	Send a response/confirmation message for all user actions.
5	The Users can make payment alternatively at the Customer centres/kiosks. The Service Provider WILL NOT collect cash from users as payment of fee and all transactions shall be through the online platform.
6	The service provider should ensure that facilitators are available at site for the initial period of three months to help users with the payment system.



4 Summary of responsibilities

The following list is a representative but not exhaustive summary of the respective responsibilities of the Concessionaire and PSCDL.

4.1 Concessionaire

- Design, procurement, installation, operation and maintenance of Bicycles and docking Stations.
- Station siting plans and system expansion plans
- Electricity supply for Stations.
- Redistribution of Bicycles.
- Maintenance of Bicycles and Stations.
- Customer service, including processing of Subscriptions and user payments, dissemination of system information, and complaint redressal.
- Space and equipment for maintenance of System equipment.
- Customer information systems including Station signage, system website and smart phone applications.
- System marketing.
- Concessionaire has to provide staffs on each of the designated cycle parking stations to facilitate the users in using the system for at least 3 months.
- Civil work.

4.2 PSCDL

- ✓ Approving Specification of Cycles, Station locations and sizes.
- ✓ Approving Specification of System branding/Advertisement.
- ✓ Providing Land for Stations without rent.
- ✓ Verifying the Specification of service levels are met.
- ✓ Review of Concessionaire plans for station siting, redistribution, maintenance, marketing, and other activities.
- ✓ Review of quarterly operations report and Farebox revenue.
- ✓ Providing space for control center/Customer registration kiosk and Ware house without rent.