

J&K STATE ROAD TRANSPORT CORPORATION

HEADQUARTERS, M.A.ROAD, SRINAGAR -190001

Ph. No: 0194-2457301

0194- 2475360

Expression of Interest

Expression Of Interest is invited from registered & reputed IT firms dealing in IT services for quoting their bids in sealed covers with regard to Designing, Developing, Operating & Implementing **Online Passenger Reservation System Application, Mobile App Based Vehicle Tracking and Electronic Bus Onboard Ticketing** as per the functional and technical requirements given in detail on the JKSRTC website www.jksrtc.co.in

The bid application form along with the terms & condition can be had from the office of Divisional Accounts Officer, JKSRTC Headquarters M.A Road Srinagar or JKSRTC Divisional Head Quarters, Bikram Chowk, Jammu against cash payment of Rs 3000/- (Non-Refundable) from 12.08.2017 to 25.08.2017.

The Expression of Interest can also be submitted through prescribed application form downloaded from website www.jksrtc.co.in but subjected to attachment of Demand Draft of Rs. 3000/- (Non-Refundable) payable to FACAO, JKSRTC.

The sealed bid shall be submitted in person or post by or before 26.08.2017 in the office of PA to Managing Director, JKSRTC at mentioned below address:-

**Managing Director,
Jammu & Kashmir State Road Transport Corporation-JKSRTC
M.A Road Srinagar – 190001
Phone: 0194-2472436 Fax: 0194-2472389
Email: jksrtc@gmail.com**

Queries,if any, can also be clarified through our official mail jksrtc@gmail.com.

No-JKSRTC/GM/P&S/4067

Dated:-09.08.2017

Sakeel Khan
General Manager (P&S),
JKSRTC.

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Expression of Interest

Expression OfInterest for Implementation of Online Passenger Reservation System (OPRS), Mobile App Based Vehicle Tracking and Electronic Bus On boardticketing on transaction charges basis on gross seats sold for a period of Five years released by:

Jammu & Kashmir

State Road Transport Corporation (JKSRTC)

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1. About JKSRTC

SOON AFTER INDEPENDENCE IN THE YEAR 1947 THE STATE GOVERNMENT TOOK THE CONSCIOUS DECISION TO HAVE ORGANIZED SETUP OF TRANSPORTATION IN THE STATE & ACCORDINGLY ON 5TH OF JANURARY 1948,THE GOVENMENTOF J&K ESTABLISHED A GOVERNMENT TRANSPORT UNDERTAKING WITH A FLEET OF 50 TRUCKS WHICH WERE PURCHASED FROM M/S GENERAL MOTOR CORPORATION BOMBAY.THIS ESTABLISHMENTMENT OF GOVERNMENT TRANSPORT UNDERTAKING IN THE STATE OF J&K PROVED A MILESTONE IN THE DEVELOPMENT OF THE STATE MOSTLY HAVING HILLY TERRAINS & THE GOVERNMENT INCREASED THE FLEET OF THIS ERESTWHILE GTU BY ADDING BUSSES & TRUCKS ON EVERY PASSING YEAR BESIDES GIVING THE GTU THE MONOPLY OF PLYING PASSANGER BUSES ON NATIONALIZED ROUTES.HOWEVER ON SEPTEMBER 1976 THIS EARSTWHILE GTU WAS CONVERTED INTO CORPORATION UNDER THE NAME OF JAMMU & KASHMIR STATE ROAD TRANSPORTATION-JKSRTC UNDER SECTION 3 OF “THE ROAD TRANSPORT CORPORATION ACT -1950”

AIMS

- PROVIDING OF ADEQUATE, EFFICIENT, SOCIO ECONOMIC AND CO-ORDINATED TRANSPORT SERVICE ON STATE AND INTERSTATE ROUTES;
- TIMELY TRANSPORTATION OF FOOD GRAINS AND OTHER ESSENTIAL COMMODITIES TO EVERY NOOK AND CORNER OF THE STATE;
- SHOULDERING THE RESPONSIBILITIES OF THE GOVERNMENT IN EMERGENCIES AND NATURAL CALAMITIES LIKE WAR, FLOODS, EARTH QUACKS. UNREST ETC;
- MAKING ITS ACTIVITIES ADVANTAGEOUS TO TOURISM AND TRADE AND THERE BY CONTRIBUTING TO THE ECONOMY OF THE STATE
- RELIABLE TRANSPORTATIONFOR MOVEMENT OF ARMY AND PARA MILITARY FORCES.

2. Scope of the Project

The scope of the Online Passenger Reservation System (OPRS) Project includes the following in brief:

- a) Design, Development, Operation & Implementation of Online Passenger Reservation System (OPRS) Application including the supply of requisite materials/equipment, Mobile App Based Vehicle Tracking and Electronic Bus Onboard ticketing as per the functional and technical requirements.
- b) Providing all the required hardware (Servers, Storage, Networking equipment etc.), Software licenses, hosting the hardware and application in a tier 3+ data centre, duly bearing all the costs including connectivity and hosting charges etc.
- c) The contract shall be for a period of five years in the 1st instance & shall be extendable by 2 years more subject to the good performance & approval of the Managing Director.
- d) The contract involves both capital (hardware, software license costs etc.) and operational expenses (development & maintenance, hosting charges, connectivity charges etc.) which will have to be borne entirely by the successful bidder.
- e) The hardware sizing, connectivity, and application should be so designed to support 1,000 concurrent users.
- f) Hardware, networking equipment for Data Centre and Disaster Recovery Centre should have at least 40% headroom for future expansion.
- g) Maintaining the hardware and application software, during the entire contract period.
- h) Solutions can be offered on secured, reliable & scalable Cloud Architecture also. In case the solution is offered on cloud architecture, the successful bidder will have to submit the relevant agreement for cloud facility/third party, with full details of all the hardware, software & other resources that will be made available and SLAs. The agreement shall be for the total contract period.
- i) Imparting thorough training on the usage of the application to the personnel of JKSRTC, Agents and others identified by JKSRTC.
- j) Operation and Maintenance of the systems and equipment in the Data Centre and Disaster Recovery Centre to conform to the Service Level requirements on a continuous basis, during the entire contract period of **FIVE** years.
- k) Providing 24x7 supports for the application.
- l) Integration of the application with various users and agencies as specified in the EOI.
- m) Build Android and IOS Mobile Apps to enable customers to book and cancel tickets.
- n) Build and Deploy Android based mobile App for Vehicle Tracking and Conductor On Bus Board ticketing.

3. Key Events and Dates

S.No	Event's Name	Date & time
1	Name of Project/ Work	Design, Development, Operation & Implementation of Online Passenger Reservation System Application, Mobile App Based Vehicle Tracking and Electronic Bus Onboard Ticketing as per the functional and technical requirements.
2	Issue of EOI	12.08.2017
3	Submission of Response of EOI	26.08.2017
4	Opening of Bid	29.08.2017

Note:-

1. All above events shall be held at "JKSRTC, Head Quarters, M.A Road, Srinagar, Kashmir-190001"
2. In the event of the date specified above being declared as a state holiday the due date shall be the following working day.
3. Sealed Bids received after due date and time will be summarily rejected.

4. Eligibility Criteria for Bidders

- a) The Bidder should be an Indian Company registered under the Indian Companies Act, and/or any other legal entity registered in Indian Law..
- b) Consortiums are permitted.
- c) The bidder must have legal entity certificate, for example: In case of Company – Certificate of Incorporation by Registrar of Companies, In case of unregistered partnership firm - Partnership duly notarized by Notary Public along with Certificate of Registration under Shop & Commercial Act, In case of registered partnership firm – Registered deed of Partnership with the Registrar of Firms and In case of Sole Proprietorship Concern - Certificate of Registration under Shop and Commercial Act. Entity should also be registered under relevant labour laws, Contract Act etc.
- d) The bidder should be in the business of IT services for a minimum period of 3 years.
- e) The bidder should have an average turnover of Rs.2Crores during the last three years. Audited Financial Statements have to be submitted for the last three financial years (2013-14, 2015-15 & 2015-16) along with the offer against the EOI.
- f) The bidder should have had an average annual turnover of Rs. 2Crores over the last three financial years in software consultancy, software development, its implementation and maintenance, besides system integration.
- g) The bidder should have developed and implemented a web based application with online transactions and payment gateway integration in the last three years. Documentary evidence as having developed and implemented the project along with satisfactory implementation certificate from the client shall be submitted.
- h) The bidder who has implemented Online Reservation Systems related to transport

industries or passenger transport would be preferred.

- i) A CA certificate in support of meeting the turnover criteria shall be submitted with the Technical bid, along with certified audited copies of Balance Sheets, Profit & Loss Account and Annual Reports of the last three financial years (2013-14, 2014-15 & 2015-16)
- j) The bidder should have ISO 9001:2008 Certification. The bidder must provide copy of relevant certificate issued to Bidder by the issuing authority. Also, bidder has to confirm (self-attest) that the certificate is valid as on date of bid submission.
- k) Documentary evidence in support of meeting the eligibility criteria shall be submitted along with the EOI, duly self-attested. The bidder must submit an undertaking on their letter head to the fairness of these documents in support of their claim while submitting the Bids. The Bids received without documentary evidence will be rejected outright.
- l) The bidder should not have been Black listed by any PSU/Corporation/Board or State/Central Government as on EOI release date. In this regard an affidavit must be submitted duly attested by a notary, by the bidder.
- m) The bidder shall give an undertaking for successful completion of the project.
- n) The bidder should have at least 2 IT Implementation projects with PSU/Corporation/Board or State/Central Government within the last 3 years (prior to the date of bid submission). Bidder should submitted copies of project agreements and project completion certificates.
- o) Technical Staff: The bidder company should have at-least 20 technical staff with more than One year experience in IT Software/ Hardware/ Networking at the time of bid submission.
- p) Managerial Staff: The bidder company should have at-least 5 Managerial Staff (more than One year experience in Project Management) at the time of bid submission.

5. Bid Evaluation Process

5.1 General

- a. JKSRTC will evaluate and compare the bids determined to be substantially responsive. It is JKSRTC's intent to select the bid that is most advantageous to JKSRTC and each bid will be evaluated using the criteria and process outlined in this section.
- b. Evaluation of the Technical Part of Bid will be carried out using eligibility criteria and technical evaluation. Bidders who satisfy the eligibility criteria will only be qualified for technical evaluation. Financial bids of only those bidders who are qualified in the technical evaluation will be opened and evaluated further.
- c. The shortlisted firms shall give a Demo of the prototype of the solution proposed to be provided, on the date that would be communicated.
- d. The Financial bids of all the technically qualified bidders would be opened and arranged in ascending order of quoted value (in INR). J
- e. The Managing Director, JKSRTC reserves the right to reject any or all bids and to waive informalities and minor irregularities in bids received if deemed in the best interest of JKSRTC to do so.

5.2 EOI Evaluation Committee

- a. The EOI Evaluation Committee constituted by JKSRTC shall evaluate the EOIs.
- b. The decision of the EOI Evaluation Committee in the evaluation of the Technical and Financial bids shall be final. No correspondence will be entertained outside the process of negotiation/discussion with the Committee.

5.3 Preliminary Examinations of Bids

- a. JKSRTC will examine the bids to determine whether they are complete, whether required sureties have been furnished, whether all the required documents have been submitted and properly signed, and whether the bids are generally in order.
- b. Bids submitted by agents shall have proper authorization from the bidder.
- c. In case of bids received without the required supporting documents, JKSRTC reserves the right to reject the bids.
- d. JKSRTC may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder. The decision of JKSRTC will be final and binding.

5.4 Clarifications of Bids and Review of Bidders' Proposed Deviations

To assist in the examination, evaluation and comparison of bids, JKSRTC may, at its discretion, ask the Bidders for a clarification of its Bid. The request for clarification and the response shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

5.5 Evaluation of Bids

- a. JKSRTC will form a **committee (Fourmembers)** to carry out a detailed evaluation of the Technical Bids received by it, in order to determine whether they are substantially responsive to the requirements set forth in the EOI. In order to reach such a determination, JKSRTC will examine the information supplied by the Bidders, review their demonstration of services offered and shall evaluate the same as per the evaluation criteria specified in this EOI.
- b. The Financial Bids of only the technically qualified bidders shall be opened by JKSRTC. The Financial evaluation will take into account the information supplied by the Bidders in the Financial Bid, and JKSRTC shall evaluate the same as per the evaluation criteria specified in this EOI

5.6 Evaluation & Comparison of Bids

- a. The EOI Authority will open the Technical bids in the presence of bidders' representatives who choose to attend the same.
- b. Financial bids of only the technically shortlisted bidders would be opened on the date that would be intimated later.

5.7 Technical Bid Evaluation

JKSRTC will examine and compare the technical aspects of the proposals on the basis of the information supplied by the bidders, taking into account overall completeness and

compliance with the requirements specified. The proposal that does not meet minimum acceptable standards of completeness, consistency and details will be rejected taking it as non-responsiveness.

The technical/quality evaluation parameters and scoring scheme are as given in this section.

The bidders' technical solutions proposed in the bid document are evaluated as per the requirements specified below. The demo given by the bidders will also be taken into consideration for evaluation.

The technical evaluation will be based on the major factors with their related marks indicated alongside.

5.8. Negotiations, Contract Finalization and Award

The L1 bidder (bidder quoting the lowest rate) will be called for negotiations, for awarding the contract. JKSRTC shall however reserve the right to reject all the offers and cancel the tender, after negotiations, if none of the negotiated offers are found to be financially viable. The successful bidder will have to enter into an agreement on Rs.100/- Non- Judicial Stamp Paper, as per the terms and conditions, within 15 days from the date of receipt of Letter of Intent, duly submitting Bank Guarantee for the prescribed amount, towards Security Deposit, failing which the EMD will be forfeited. The rate (transaction charges per gross seat sold) indicated in the agreement shall hold good for the entire contract period and will not be increased under any circumstances whatsoever.

Sl. No.	Technical evaluation	100
1	Demonstrated level of understanding of OPRS(Software) & its design.	40
2	Architecture & Experience in integration with third party OTA portals like www.yatra.com , www.easemytrip.com , www.makemytrip.com , www.goibibo.com	10
3	Hardware and Software proposed(VTS Via GPS)	10
4	Security	10
5	Project Planning & implementation within Stipulated time frame.	10
6	Having past experience of successfully developing and implementing online Reservation system (In one STU- 5 Marks, Two STUs- 10 Marks & Three and above STUs - 20 Marks.	20
	Total:	100

S.NO.	Technical Evaluation - Factors of assessment	Marks
1	<p data-bbox="352 230 1160 297">Live / Prototype demonstration comprising of following features</p> <ol data-bbox="352 304 1160 1832" style="list-style-type: none"> <li data-bbox="352 304 1160 927">1. The system should be conceptualized and architected in such a way that the passenger can book their tickets from —Any Where to Any Where at Any Time Point of Time keeping in mind the short term and long term goals of JKSRTC. The solution must provide a robust and customizable security solution that meets the application requirements of Anytime Anywhere Booking including e-ticketing. It is hard to anticipate all present and future requirements. An open, extensible architecture and documented application programming interfaces (APIs) enable site developers to customize an access control system to their specific requirements. A platform that will grow with additional application deployment and scales as user traffic grows, while providing the highest level of reliability is required. <li data-bbox="352 934 1160 1285">2. The administration module in the application should provide the JKSRTC stake holders the power to manage the entire traffic and operations through the system. The application should be designed in such a way that administration of all Categories of Users, e-ticket users, Rate and Fare, Flexi fares, Combi-tickets, Routes, Services, Seasons, Franchises, Bus Stations, Depots, Regions, Zones, Divisions etc., can be efficiently managed to provide the end user with a foolproof system. <li data-bbox="352 1292 1160 1532">3. The system should have the web / browser based facility for Advance Booking, Current Booking, Cancellation (full/partial), Pre/postponement, Blocking/releasing seats, levies, concessions, TIM, Mobile, ITZ cash, e-wallet etc., based ticketing. The application shall be available on mobile phones for Android, Windows & IOS etc. <li data-bbox="352 1538 1160 1644">4. Integration with Vehicle Tracking & Passenger Information System module to enable the users to see ETA & position of buses. <li data-bbox="352 1650 1160 1794">5. The system should support booking of luggage and parcel at Bus Stations and franchisee counters in respect of accompanied or unaccompanied baggage. 	40
	<ol data-bbox="352 1845 1160 2027" style="list-style-type: none"> <li data-bbox="352 1845 1160 2027">6. Integration and accessibility to various service delivery points such as Agents, Sub agents, e- Seva/Meeseva, RAJiv kiosks, TS/AP Online portal & other G2C portals, B2C franchisees and the necessary account of tickets and revenues. 	

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|--|---|--|
| | <p>7. Integration with other departments like Tourism, Other STUs, Railways etc., for providing a composite/ combined ticket.</p> <p>8. The system should provide facility to enquire about the availability of services, departure / arrival timings, booking counters, franchisees, service driver phone number etc.</p> <p>9. Facility to print various Operational, Revenue, Commission, and MIS reports for a specific period (daily, weekly, fortnightly, monthly, quarterly, half yearly, and annually) and option to generate the report based on various criteria like Bus Station wise, Service Wise, Operator Wise, Franchisee Wise, Depot Wise, Region-wise, Zone-wise, Route-wise, Sector-wise etc. Should provide reconciliation of amounts realized and amounts for tickets sold.</p> <p>10. The system should support display and printing in English, Hindi, Urdu.</p> <p>11. Facility to earmark the seats in special colour for Ladies, Senior Citizens, PHC, MLAs/MPs, Conductor, etc. and facility for blocking these seats.</p> <p>12. Facility to capture Passenger information such as name, gender, age etc., and to deduce patterns on travels related to frequency and branded services.</p> | |
| | <p>13. Centralized control of Fares, Concessions, Cancellation Slabs, etc. and access based on the role defined in the system for these functionalities and provision for multiple type of concessions like seat-wise concession, group concession, seasonal concession, etc.</p> | |
| | <p>14. The solution must provide scalable access services to the System / Solution, including scalability in terms of number of users, user groups, concurrent users, resources, and access control policies. In addition, it must be scalable to legacy and future applications / resources that are attached to the portal. The ability to transport this solution for all future web-enabled services with minimal effort reduces future implementation costs and ensures a structured / proven security environment. Multi-level user authorization and authentication with appropriate User Profiles, Rules, and Roles.</p> | |

15. The security solution must be capable of comprehensive logging of the traffic through the network and applications under its control. It should be capable of logging unauthorized access attempts to the network and the System internal resources, and attempts to login that fail. It should also be capable of notifying appropriate parties including the organization users/department users/ System Security Administrators etc. of suspicious activity, Prevention of DoS and DDoS attacks.
16. Provision shall be made for display of status notification on Arrival, Departure of Buses, availability of seats on a Service, wait list of seats on JKSRTC Portal. Such alerts must be capable of being delivered on any user devices such as mobile phones / PDA (Voice calls & SMS alerts), web notification, emails, broadcast to franchisees, call centers and IVR enabled information dissemination Facilities.
17. Facility of payment through Credit/debit cards, Net Banking, online payment through third party Payment Gateway services.
18. Facility for wait listing and allotment against cancellations.
19. Facility for providing configurable bus station-wise/Agent-wise quota seats for services.
20. Comprehensive audit trail, logging and reporting.
21. Leverage and utilize the connectivity of Bus Stations either through Leased Lines/Broad Band, through Virtual Private Network (VPN) or either through Internet.

22. Accommodation and other value added services to be incorporated in the web portal where applicable.
23. The system should support remote management. It shall be possible to monitor and tune the system remotely.
24. The OPRS system administration shall facilitate generation of various kinds of reports – HTML/Excel/Text and graphical. The reports will be of use to various stakeholders such as the Corporation, Identified Management Officials, Service Access, network, payment gateway, authentication, back office and other service providers. While some such reports could be planned in advance, the system should provide for creation of additional reports online.

25. The solution must enhance the overall management of security, by providing the officials concerned of JKSRTC an easy way to manage users and their corresponding profile information; while also maintaining the ability to manage at the application level. The centralized control should allow for web- based maintenance of organizational level controls such as user management, role management and overall administration control.
26. There shall be provision for implementing EQ / any quota system.
27. System shall facilitate booking entire bus for use of group of passengers 'tourist / Corporate or any other citizens. The information like vehicle type, hire charges and other terms and conditions shall be provided online and the system shall facilitate online booking of entire bus.
28. The provision to enter the number of passenger traveled stage wise in the bus should be made available at the destination / origin bus station.

29. System should facilitate payment for ticket booked through Credit Card, Debit Card, Netbanking, Cash deposits, Bulk payments in cash / cheque / Demand Draft in authorized Banks, ITZ Cash, NG Pay etc., and inputting data from such receipts / challans into the system, Special coupons or any other payment mechanism as and when introduced. The system shall have necessary interfaces in conformance with the standards and protocols specified by such third party payment gateway service providers. Such payments received will provide appropriate interfaces for the backend accounting and financial systems to access the payment collection data.
30. Integration with intelligent TIMs to issue tickets online in the bus.
32. In case of high demand for tickets, JKSRTC as part of its business development policy may offer reservation facility on mobile transport. The access to the reservation will have to support wireless interface to the system through an ISP.
33. The system should support printing using any printer – Dot matrix, laser, inkjet and on type numbered pre-printed or plain paper.
34. Pre-printed tickets may be made available to the franchisees and other travel agents including ISPs as per policies of JKSRTC, who will have to maintain inventory and submit requests online for Replenishments from JKSRTC.

	<p>35. The system shall facilitate capturing feedback from users of JKSRTC services and provide an option for JKSRTC management to get alerts on feedback posted on the site for immediate attention and action.</p> <p>36. The system shall provide user management services and service enrolment features to enable the user to register with the portal. It should also provide secured mechanism for user identification, transaction integrity, security and non-repudiation.</p> <p>37. Demonstration of Mobile App based Vehicle Tracking and Electronic Bus Onboard Ticketing.</p>	
2	<p>Architecture & Experience in integration with third party OTA portals</p> <p>Flexibility: The system should be adaptable to changing commercial practices, reduce the total cost of ownership.</p> <p>Open Architecture: The system should be open to allow interoperability with general-purpose software and have facility to Export/Import data files from other applications and interact with other applications as mentioned earlier.</p> <p>Object Oriented: The system design should be based on object-oriented approach.</p> <p>Integrated: The system should be fully integrated across departments and functional area and also across geographical location of sites.</p> <p>Workflow integration approach: The system should adapt workflow management techniques.</p> <p>Distributed application: The system should support functionally distributed computing, allowing distributed applications across different locations.</p> <p>Simplicity: The overall application should be developed keeping in mind simplicity as the key, so as to enable easy maintenance and operation of the application by the end user.</p> <p>Manageability: The OPRS application should cater for easy manageability by the system administrator.</p> <p>Advertisement with the traveling sites viz. www.yatra.com, www.easemytrip.com, www.makemytrip.com, www.goibibo.com & other social media viz twitter, Facebook, Whatsapp etc./TV/Radio.</p> <p>General & Adhoc queries</p>	10

	<p>Scalability: OPRS will be deployed across all the Bus Stations of the Corporation. As the Bus Stations vary in size and functionality it is a mandate requirement that the OPRS should be scalable at modular level.</p>	
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4	<p>Hardware, Software and Technology proposed: The vendor should provide the list of Hardware to be hosted in the Data Center and Disaster Recovery Center. Also they should provide the details of the network proposed to be provided; they should give in detail the provision for redundancy at all levels. Similarly, they should also detail the system Software, Application Software, Database proposed and merits of the same. The details of utilization of Hardware should also be specified such as for Database, Application, HTTP Servers, Edge Servers, mail servers, load balancers, LDAP server, SAN if any etc.,</p> <p>Solutions can be offered on secured, reliable & scalable Cloud Architecture also.</p>	10
	<p>Security</p> <ul style="list-style-type: none"> ➤ Whether technical security requirements have been addressed adequately. ➤ Perimeter Security (e.g., Firewall, IDS) 	10
	<ul style="list-style-type: none"> ➤ Host Security (Platform Hardening) ➤ Portal Security through VeriSign etc., to be provided. 	
	<ul style="list-style-type: none"> ➤ Application & Interface Security. ➤ Certification commitment (BS7799 or equivalent). ➤ Whether people & people-education security requirements have been addressed adequately. ➤ Whether physical security requirements have been addressed adequately. 	
	<ul style="list-style-type: none"> ➤ Whether the proposal includes formulation of security policy & procedures as per requirements. 	
	<ul style="list-style-type: none"> ➤ The security overlay for the access to the server must be provided centrally with suitable authentication and profiling engine. Suitable encryption mechanism must be used at the application layer. The functions shown in this document will be applicable to various users based on Role, which will be specified during Requirement analysis phase. Audit trail is must for all data updates/amendments and deletions for security audit. Encryption mechanism wherever required must be built in. Size of log file, number of entries, time sensitivity etc. will be discussed and finalized during SRS stage. 	

5	<p>Project Planning & implementation within stipulated time frame</p> <ol style="list-style-type: none"> 1. Is the overall plan in conformance with the schedule requirements? 2. All the risks of schedule overruns mitigated properly? 3. Software Engineering tools for Integrated Design & development (round trip engineering) Integrated Configuration Management Integrated Defect Management Functional, Performance and Regression Testing. 4. Reporting & Management Tools Status reporting SLA management 	10
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The EOI evaluation committee may obtain oral clarifications from the bidders. The primary function of clarifications in the evaluation process is to clarify ambiguities and uncertainties arising out of the evaluation of the bid documents. Oral clarifications provide the opportunity for the committee to state its requirements clearly and for the Bidder to more clearly state its proposal. The committee may seek inputs from their professional, technical faculties in the evaluation process.

The bidders should score minimum 70 marks in the technical evaluation for being eligible for opening of their financial bids.

The bidder who gets highest Total Technical Score as per technical evaluation parameters will be given with maximum Score of “100” and other bidders will be given with proportionally less scores. i.e. Highest technical score bidder will get more scores and lower technical score bidder will get less scores.

5.9 Financial Bid Opening

The Financial bids of only the technically qualified bidders (i.e., bids scoring minimum 70 marks in technical evaluation) will be opened for consideration. Financial bids of the remaining bidders will not be opened.

The prices once offered must remain fixed and firm and must not be subject to escalation for any reason whatsoever within the period of agreement for the OPRS project.

A proposal submitted with an adjustable price quotation or conditional proposal may be rejected as non-responsive.

6. Project Implementation Schedule

Bidder shall complete the implementation of the OPRS Project as per the EOI within 1 month from the date of award of contract as per the timetable provided below:

S.No	MILESTONE	ACTIVITY PERIOD
1	Date of Award of Contract	T1
2	Application Development	T1 + 4 Weeks
3	System Integration	T1 + 6 Weeks
4	Acceptance Testing	T1 + 8 Weeks
5	Trail Run	T1 + 10 Weeks
6	Submission of manuals and O&M plan	T1 + 12 Weeks
7	Commercial Deployment	T1 + 14 Weeks
8	Training	T1 + 16 Weeks

- 6.1 The OPRS application should be made live and operational within four month from the date of issue of Letter of Intent.
- 6.2 The firm shall prepare the entire documentation including Error Log/installation procedures/System Design/Flow Charts/Data Flow Diagrams etc., User manuals, Training manuals, Technical manuals, Operational manuals etc., and submit three sets of above mentioned documentation along with softcopy in CD/DVDs to the JKSRTC.
- 6.3 The firm shall train the Core Group and user group Supervisors as nominated by JKSRTC in all modules of Application Software, for a period not less than 30 days. The training should be of such standard that the group trained should be able to take over the operation and maintenance of the Project independently.
- 6.4 The successful bidder shall ensure availability of required man power for successful design, development, maintenance, attending to software modifications, rectification of issues/bugs etc.
- 6.5 In case of loss that would occur to JKSRTC due to non-providing of Technical and Development team, JKSRTC reserves the right to recover the estimated value of loss from the successful bidder. Such repeated occurrences will attract forfeiture of Security Deposit in favour of JKSRTC and cancellation of award.
- 6.6 The successful bidder shall use its best efforts to ensure that sufficient personnel are employed to perform the Services and such personnel have appropriate qualifications to perform the Services.
- 6.7 The successful bidder shall not disclose to any other party about the knowledge of system or pass on the possession of material and information given to the successful vendor under this agreed contract or any information which has been generated during the running of the project. The successful vendor should hold such material and information in strict confidence, not to make use of them other than for the performance of this contract, except release it only to designated employees requiring such information for operation, maintenance and control and inspection of the systems. During the execution of the contract and thereafter the above information should not be released to any other parties.

- 6.8 The firm shall deliver five copies of system manuals, operating manuals and user manuals for Application software to JKSRTC, with 15 days from the date of commercial deployment.
- 6.9 The firm shall ensure secrecy of the software, source and object code. The information shall not be disclosed to others except JKSRTC.
- 6.10 Unfinished or partially completed software shall not be accepted and the order will be cancelled, besides forfeiture of Security Deposit and invoking the Bank Guarantee.
- 6.11 The successful bidder shall carry out all modifications as specified from time to time by JKSRTC to update the application to suit the passenger/Operator requirements, meeting the statutory obligations based on the instructions given by the State/Central Government, and also for strengthening the Security System, shall rectify the bugs/problems identified during the implementation, at no extra charge, failing which the Security Deposit shall be forfeited to the Corporation and besides invoking the Bank Guarantee.
- 6.12 The firm shall not have any right on the Application Software. JKSRTC is the sole owner and can use the same software at any location.
- 6.13 The application developed along with source code shall be the property of JKSRTC. JKSRTC shall have all Intellectual Property Rights over the software. The source code and application data shall be handed over to JKSRTC at the end of the contract period and periodically when major changes are carried out, or whenever demanded by JKSRTC.
- 6.14 JKSRTC shall be the absolute owner of this software and it should not be used by, sold to or handled by any individual, outside Agency, Firm, Organization, State Transport undertaking except JKSRTC. Any violation or breach of this condition will entitle the Corporation to claim damages.

7. Payment terms

- a) Transaction charges shall be paid on a monthly basis after the end of the month.
- b) The successful bidder shall raise service tax invoice as prescribed by the Act duly giving breakup of Transaction charges and service tax separately for monthly payment of transaction charges after the end of the month.
- c) Payment will be arranged after pre-audit.
- d) Tax Deduction at Source (Income Tax) as per the provisions of Income Tax Act would be made from the transaction charges payable.
- e) GST, as per the provisions of GST Act will be paid extra as applicable.

8. Penalties

- a. As a measure of penalty, JKSRTC reserves the right to invoke the Bank Guarantee in addition to forfeiture of Security Deposit in case of indulgence in mal-practices such as wrong accountable, misuse or tampering of software, hardware and network equipment etc., by the successful bidder and in case of violation of terms and conditions of the agreement.
- b. In case of any delay on part of successful bidder to complete the task within the prescribed time of three months, a penalty of Rs.10,000/- per week of delay shall be

imposed on the successful bidder. Penalties will not be levied for delays not due to lapse from the successful bidder.

- c. The successful bidder shall be penalized to an extent of Rs.10,000/- per hour or part thereof for the non-availability of the system for carrying out the ticketing and related activities. The Managing Director, JKSRTC, is the final authority to decide the quantum of penalty.
- d. In case of inability to find, identify and fix any software problem in the application having operational & financial implications, the value of loss will be recovered and if not rectified within 24 hrs of intimation will result in penalty to the extent of Rs.5,000/- plus loss of actual amount for each problem.
- e. Any Ticket or waybill without full details, causing inconvenience to passenger will be penalized to the extent of double the ticket value plus Rs.2,000/- for each occasion.
- f. Deployment of application without proper testing attracts recovery of manpower cost of JKSRTC's involvement plus Rs.5,000/- penalty for each item identified and reported by JKSRTC.
- g. A penalty of Rs.5,000/- will be imposed for each occasion, if any wrong or unauthorized information is communicated through home page/website.
- h. Any Data loss will be recovered at the rate of double the loss or as per the amount assessed by JKSRTC.
- i. The successful vendor shall pay the hosting charges, connectivity charges, all licensing charges along with all applicable taxes etc., promptly without default. In case of non-payment of such bills, the amount, if paid by JKSRTC, will be recovered from the successful bidder with 36% penalty. This would be deducted from the monthly transaction charges payable. Such three occurrences in a year would be liable for forfeiture of the Security Deposit/ Invoking the Bank Guarantee.
- j. Genuine customer claims and court awards, if any, due to lapses/bugs/errors in the application will be deducted appropriately from the monthly payments.
- k. All penalty amounts as on date will be recovered from the monthly payable transaction charges amounts.

9. Termination/Withdrawal

- a. If the successful bidder does not fulfil the terms and conditions specified by JKSRTC, the contract shall be cancelled by JKSRTC duly giving three months 'notice.
- b. Malpractices in implementation of the project such as manipulation of data results in termination of the contract, forfeiture of the Security Deposit and invoking Bank Guarantee.
- c. If the successful bidder desires to withdraw from the agreement entered into, he will be allowed to do so only after completion of Six months period from the date of commencement of the project for which two months advance notice has to be given in writing to JKSRTC.

10. Detailed Project Technical Scope

Advance and current ticketing activity is carried out through this system. The OPRS application is a browser based solution in **3-tier architecture**.

The important features of the project are given hereunder:

Booking of tickets through OPRS

Tickets can be booked/cancelled/preponed/postponed by the passengers through OPRS, at JKSRTC counters / Authorized Ticket Booking Agents / B2B Corporate Agents / online / B2C Franchisees, for all the identified services for which advance reservation facility is provided.

JKSRTC Counters: Tickets can be booked at JKSRTC operated counters wherein the passengers pay cash and collect tickets printed. Eligible amounts are refunded in the case of cancellations. Receipt of ticket stock at the Bus Stations, Stock management, allotment of stock to the operators and accountal of ticket stock etc. is done through the OPRS System.

Agents: Agents are attached to Bus Stations. Agents operate on pre-paid model. The Agents top up their accounts in advance through net banking and the top up amounts are credited to JKSRTC account. The Agents can issue tickets as long as sufficient top up amount is available for issue of tickets. Agents are paid commission for the tickets issued. The passengers are issued tickets printed on A4 size plain paper. In case of cancellation, the eligible amount is refunded by the Agent, and the Agent's account is topped up by an equal amount.

B2B Corporate Agent: The Corporation has earlier appointed a B2B Corporate Agent for issue of tickets through OPRS, who in turn appointed sub agents. Operation is similar as in the case of Agent but only a single account is maintained for all the agents, and top up is made only by the Corporate Agent. Currently there are no active B2B Agents. Commission on similar lines to Agents was paid to the B2B Agent.

E-tickets: Tickets can be booked online by the passengers for which payments are made through Debit cards/credit cards/net banking. The ticket amount is transferred to the JKSRTC account by the payment gateway provider. In case of cancellation, the eligible amount is transferred to the account of the passenger duly debiting the same to JKSRTC account.

B2C Franchisees: The Corporation has earlier appointed B2C franchisees for issue of JKSRTC tickets through their ticket reservation portals. Access to OPRS system was provided to these franchisees through an API. Commission on similar lines to Agents was paid to the B2C franchisees.

Payment Gateways: Credit card/Debit card/Net banking transactions are carried out through Payment Gateways. Payment Gateway shall be provided by JKSRTC.

SMS Gateway: The OPRS system fires SMS messages to the passengers when they book/prepone/postpone/cancel tickets at ATB/B2B Corporate Agents/online, whenever

services are cancelled etc. These messages are sent to the passengers using the SMS gateway. Passengers are permitted to perform journey based on the strength of the SMS message. SMS messages are also fired for other predefined events. SMS gateway shall be provided by JKSRTC.

Benefits to End Customers:

- Information is available on fingertips.
- Ability to book tickets sitting at home using Credit/Debit Cards & Net Banking
- Can book tickets anywhere to anywhere
- Ability to pay in cash or carry out transactions using credit/debit card & Net Banking.

Benefits to JKSRTC:

- Increase its load factors (i.e., sell more tickets per bus).
- Bring down the operational costs with better management of schedules.
- Provide better quality data to plan the Extra schedules during the weekends, festivals and special occasions.
- Better cash flows due to Advance Cash Collection.
- Improve Customer service.
- Create a hi-tech image for JKSRTC.
- Increased Revenues.

11. Objectives of Proposed System

The proposed system shall meet the following objectives:

The proposed system shall provide “Anywhere to anywhere and anytime web based advanced/current reservation ticketing”. The benefits envisaged are:

- Easy and comfortable ticket transactions for the esteemed passengers.
 - Increase in the “Occupancy Ratio” of the buses.
 - Provide value added services which are needed for the passengers and to provide the utmost benefit to JKSRTC operational environment.
- a) The system shall process information in an integrated manner and make best use of latest and cutting edge technologies for enabling the online passengers and various ticket booking counters to carry out ticketing transactions with high responsiveness.
 - b) The system shall be based on an open hardware and software architecture for interoperability with various applications in existence in JKSRTC and those being planned or likely to be implemented in the future.
 - c) The hardware sizing, connectivity, bandwidth and application etc., should be so provided and designed to support 1,000 concurrent users.
 - d) Hardware, networking equipment, connectivity, bandwidth etc., for Data Centre and Disaster Recovery Centre should have at least 20% headroom for future expansion.

- e) Data integrity and consistency must be ensured while migrating data from the existing OPRS application to the new application.
- f) The system should cater to fast query retrieval.
- g) The system architecture shall cater for scalability. In future, the system is expected to be integrated with other major systems of JKSRTC like Centralized Integrated Solution, Vehicle Tracking and Passenger Information System and other departments like GPS/GPRS based intelligent TIMs (Ticket Issuing machines), Mobile/fixed reservation kiosks, SMS based enquiry and reservation, Railways, Jammu and Kashmir State Tourism Development Corporation, NGPAY, ITZ CASH, Mobile wallets, e-wallets and other online payment modes etc. Hence, scalability at all layers of the system should be catered to, for meeting the performance requirements with increase in user base. Carrying out the required integration is in the scope of the project and shall be carried out by the successful bidder.
- h) The System should implement value added services, such as, SMS based advance reservation, Arrival and Departure module, Out Depot Cash Remittance Module, Platform Announcement System, payment Gateway services for other service providers like NGPAY, ITZ Cash etc.
- i) The OPRS project should seamlessly integrate with the ERP based Centralized Integrated Solution (CIS) which is being implemented by JKSRTC, wherein all present systems such as Depot Computerization project, Online Inventory management System, Financial Accounting System, Payroll and other Systems, will be revamped as a web based centralized system. The data pertaining to tickets sold (with all details), earnings realized etc., will be needed to be provided to CIS Project, service-wise. There should be provision for integration and Electronic Data Interchange (EDI) and the successful bidder shall carry out all the required activities in this regard.
- j) High Security - The system shall cater to high security levels. Access to the system is to be strictly on the basis of securely administered lists of users on JKSRTC Booking Portal. Access to various modules should be Role based. Since numerous functions have to be addressed, security permissions have to be both at the levels of application and the database; hence a proper profiling engine is to be made to validate authorized Users. Single sign on facility should be incorporated in the system.

11.1 Bidders are to submit their optimal solutions for design, development, migration and implementation of the „OPRS“ including e -ticketing, providing and hosting of all required Servers, storage, networking and other required hardware in the Data Centre and Disaster Recovery Centre, providing connectivity to the application etc., on transaction charges basis on gross seats sold. This shall include:-

- a. A study of processes involved.
- b. Preparation of Project Plan.

- c. Providing and hosting of all required Servers, storage, networking and other required hardware in the Data Centre and Disaster Recovery Centre, providing connectivity to the application etc.
- d. Providing networking bandwidth required in redundancy for the Disaster Recovery Centre.
- e. The Data Centre and DRC equipment shall be hosted in a Tier 3+ data centres.
- f. The Data Centre and Disaster Recovery Centre shall be located at least 250 KMs away from each other and should be in different seismic zones.
- g. Providing of redundant leased line connectivity between DC and DRC.
- h. Installation and configuration of database, operating systems and any other applications.
- i. Installation, migration, commissioning and testing of the application.
- j. Installation, commissioning & maintenance of the required networking environment and network monitoring & management system.
- k. Design and Preparation of Test Data and System Testing.
- l. Take necessary steps and activities to migrate the existing data into the new system without any down time.
- m. User training to be provided at different levels at all implementation stages.
- n. The successful bidder shall provide a team of Software, Networking and DBA Engineers on 24 x 7 basis to design, develop, deploy and to attend day to day software and networking issues, and maintenance.
- o. Transaction-wise backup of data shall be maintained at five different locations.
- p. Reconciliation report based on total transactions and Payment gateway remittances shall be provided. The total transactions carried out through the system, by online users shall be reconciled with the amounts settled transaction-wise by the payment gateways. Soft copies of the gateway settlement reports will be provided by JKSRTC. Provision shall be given for uploading the settlement reports to the application for reconciliation. Alternately a standalone application may be provided and maintained for the reconciliation activity. This application shall have a provision to download the OPRS transaction data, accept the gateway settlement reports and generate the reconciliation reports. It should be borne in mind that different payment gateway providers will be engaged by JKSRTC, and they will have their own formats for settlement reports. The payment gateway providers may be changed from time to time.
- q. All the expenses for implementation of the project shall be borne by the successful bidder. JKSRTC will only pay the transaction charges on the gross seats sold.
- r. Detailed documentation and User manuals for different levels of users shall be provided.
- s. Solutions can be offered on secured, reliable & scalable Cloud Architecture also.

11.1 The vendor must keep in view the following key requirements while suggesting the solution:

- a. The design specifications of the solution shall be defined, complete in all respects, subject to requirements specified in subsequent sections and ensure efficient implementation inclusive of any process management review that may be required to provide the utmost benefit to JKSR TC operational environment.
- b. The solution should be extendable, open and flexible as per industry standards so that the architecture for this solution can be utilized for the new applications at a later date. The system should also provide a mechanism for error handling and robustness to scale up on demand to support future applications without major changes.

12. Broad Scope of the Project

- The Passenger should be able to book tickets(advance/current) in any JKSR TC operated counter, Agent counter, B2B franchisee counter, TIM (Ticket Issuing Machine)/Mobile based ticketing in the bus, kiosks and Ticket Vending machines and any other kiosks, Point of Sales counters (cashless transactions through credit/debit cards/Wallets), online through the JKSR TC ticket booking portal www.JKSR TCOnline.in and through the web portals of B2C franchisees, mobile apps etc., based on the business rules of JKSR TC from time to time. The application shall provide all these features.
- To provide “Anywhere to Anywhere” advance booking which means Tickets can be booked „anywhere to anywhere, anytime for onward and return journey”.
- This facility will be available at all the OPRS Bus Stations having/likely to have JKSR TC operated counters.
- Cancellations, Pre/Postponements will be allowed at any of the OPRS Bus Stations and ATB/B2B Agent counters.
- To provide accurate and easy accounting system for Inter Depot Transactions and e-ticketing.
- To provide web enabled Advance Reservation with various types of concessions implemented from time to time, Cancellation, preponement and postponement of tickets.
- To provide Arrival/Departure information through SMS, App and Web Interfaces or through any other mode available in the market from time to time.
- In future, Non-stop services and short distance services may also brought into the purview of OPRS during the period of contract and this requirement is also to be taken onto consideration. Mutually agreed upon transaction charges per gross seat sold will be decided at the time of inclusion of these services in OPRS.
- Providing additional hardware, System software, carrying out necessary changes in the application software as well as the tuning of the system should be done by the successful bidder throughout the contract period.
- The existing system (OPRS application) user interface and design etc., should be studied in detail and overall structure understood and incorporated in the new software under the overall scope of Anywhere to Anywhere and Anytime advance reservation.

13. Stake Holders

13.1 Passenger:

- Passenger is a traveller who uses JKSRTC services for travel.
- The System should address the requirements of any traveller and should provide specific requirements of different types of commuters.
- Students are special categories of commuters who may be allowed special privileges, such as pricing, periodicity issue of tickets etc.
- Women commuters are special categories of commuters who may be allowed special privileges in terms of seating and ticket pricing, issue of seasonal passes etc.
- Children are special category commuters who may be allowed special privileges in terms of seating and pricing.

13.2 Special Passengers:

- The System should provide for special passengers and seat allotment and ticket pricing and cover people, such as, elected Representatives, Physically Challenged, Senior Citizens and any other Group as decided by JKSRTC from time to time. These policies have to be dynamically configurable.
- Group passengers who may be given bulk allotment of seats including hiring of a Bus/Contract Carriages.
- The System should facilitate special concessions for selective seats for a service, selected seats for all services; for selected days, for selected days of week/ selected days of month / given period / any random days etc., and any combination of the same.
- The System should facilitate special concessions for groups of booking and for Schools.

13.3 Enroute and Local Authorized Ticket Booking Agents:

- The Agents should provide ticketing services either Current or Advance to passengers, provide reservation information to the passengers and offer their services to the traveling public.
- The System should be able to connect to Service Providers, like ITZ CASH, NGPAY, MOBILE ticketing etc., to provide online ticketing services as well as secure and accurate statement of revenue collection made on behalf of JKSRTC and provision should be made to enable the System to access and integrate with other Government Departments, such as Tourism, Endowments etc., to provide a Single Window facility for transport and accommodation etc.
- The agents operate on prepaid model. The system should be configurable for the agents' cash remittance (top up of their accounts) for prepaid or postpaid method.

13.4 Booking Clerks:

The Booking Clerks at various Bus Stations and also at Depots should be able to access the System to manage the services and ticketing process including viewing the service details, fare tables, cancellation, preponement, postponement both full and partial, generate

Auxiliary Way Bills, Shift, Revenue etc., and also be able to carrying out the ticketing process in full.

The tickets are given on type numbered preprinted stock. The application shall provide the required facility for receipt of ticket stock, issue to the counters/users, transfer of stock from one counter to another counter, tracking the stock ticket-wise until the stock is exhausted, accountal of stock etc.

13.5 B2B Corporate Agent:

This type of Agent operates on lines similar to an Agent. However a Corporate Agent has sub agents who carry out the actual ticketing transactions. Top up amount is however maintained at one level i.e., by the Corporate Agent.

13.6 B2C Franchisee:

- B2C franchisees operate on prepaid model.
- They offer ticketing for JKSRTC services, along with services of other public/private sector operators, from their web portals.
- Access to OPRS is provided through an API.

13.7 JKSRTC Management:

JKSRTC Management should be able to access the OPRS application for various management activities, such as control, decision making and implementation of new policies etc.

14. Application Architecture:

Since Bus Transport Industry is mostly local in nature, it is Suggested Methodology for the Project Execution

- Team formation.
- Thorough study of all aspects of the existing OPRS project
- Visit(s) to the JKSRTC Ticketing Counters/area of operation
- Understanding the business processes and data flows.
- Data collection methods, frequency of data flow and quality of data assessment.
- Planning for providing the required hardware, software, networking, connectivity and hosting the same in a Tier 3 plus Data Centre for 1,000 concurrent users.
- Planning for providing the required hardware, software, networking, connectivity for Disaster Recovery and hosting the same in a Tier 3 plus Data Center, for 1,000 concurrent users.
- Frequency review, daily, fortnightly, monthly and yearly.
- Conceptualization/Formulation/selection of application software and system Software based on business process understanding.
- Implementation Plan (penalties for delays, both for implementation and beneficiary organizations are applicable), Road Map (phasing of emerging applications) to be furnished.

- Sizing of hardware, networking based on phasing of applications proposed to be submitted
- Assessment of Manpower requirements their training, modules of training as per the proposed applications.
- Final review and demonstration to JKSRTC.

The Anywhere to Anywhere, Anytime Ticketing system will require management of the highest standard. Management processes must be appropriate to the Service type and must provide a high degree of visibility and responsiveness. A project plan will be required from the Bidder as a key element of responses.

This plan must cover the development phase of the project, including test activities and must include all aspects of project management, including but not limited to:

- Project definition and scope
- Work breakdown structure
- Risk breakdown structure
- Risk management process
- Assumptions
- Constraints to the project
- Acceptance Criteria
- Deliverables definition
- Project schedule
- Quality plan
- Resource plan
- Cost breakdown
- Identification of items to be supplied by Government or agents of Government
- Integration plan, test plan

The Anywhere to Anywhere, Anytime Reservation System will have the following other service providers to issue tickets.

- JKSRTC Booking Clerks at JKSRTC Bus Stations and Bus Stations in the neighbouring States;
- JKSRTC Authorized Ticket Booking Agents within and outside J & K State;
- JKSRTC B2B Agents/Sub-Agents;
- E-Seva/MeeSeva Counters, TS/AP Online, Rajiv kiosks;
- Website/Online Users;
- GPRS based ticket issuing machines;
- Mobile phone based advanced and current ticketing in the buses;
- Mobile App based Vehicle Tracking System
- Mobile App based Conductor Bus On Board Bus Ticket Issuing.
- Mobile App based Conductor Bus On Board Advance Bus Ticket Reservation.
- Reservation through NG Pay, PayPal, ITZ cash etc.

- Ticket Vending machines
- Mobile Apps for Android, IOS etc. for the passengers.
- Provision for Value added services to be added on regular basis;
- Mobile ticketing, ITMS integration to be implemented for reservation in the very near future.
- Multiple payment gateway option to be provided.
- SMS gateway integration.
- Integration to third party ticket portals like makemytrip.com, busindia.com, etc.

Support includes but is not limited to

- Development team during the entire contract period to support / implement changes requested by JKSRTC, attend to issues etc.
- 24 x 7 support for application maintenance
- 24 x 7 maintenance teams, including DBA's and Network Administrators to monitor the application and attend to issues;

The hybrid Architecture is the suggested Architecture to ensure business continuity and a good throughput and also enabling centralized data availability of reservation tickets for analysis, audit etc.

15. Functional Modules of the OPRS System

Broad details are specified in subsequent paragraphs. The detailed scope would be finalized at SRS stage. Each module should have facilities for generating reports, the formats for which could be obtained from JKSRTC.

15.1 Point of Sales

- a) Seat reservation & Cancellation
- b) Pre/postponement
- c) Waitlist tickets
- d) Refunds
- e) Reservation Enquiry
- f) Operators Reports
- g) System In-charge reports.
- h) Seat vacancy position.
- i) Issue of reservation tickets to general public, PHC, Senior Citizen, Retired employees (different categories with different types of concessions), Journalists, Freedom fighters, CAT cards, Vihari cards etc.
- j) Schedule and real time seat Displays
- k) Booking profile(Passenger preferences, ticketing & invoicing,seat assignment).
- l) Sales Statistics (Yield) & Logs.
- m) Client Profile, Lists and Queues.
- n) Check-in.

15.2 System Administration (ADMN)

- a) Vehicle / Seat management/modification.
- b) Route creation/management/modification.
- c) Service creation/management/modification
- d) Status of available ticket, Seat status update/modification.
- e) Ticket/Booking management/modification.
- f) Enquiry.
- g) Fare change or update or preference.
- h) Advance booking enquiry.

15.3 System Maintenance

- a) Delay time and cancellation entry.
- b) Bulk message (SMS & mail) transmittal.

15.4 MIS

- a) Statistical Reports
- b) TSR (Ticket Sales Reports) (Daily, Weekly, Monthly, given period Sales counter or shift-wise, route-wise, sector-wise, origin to destination-wise, service type-wise, destination-wise, journey date-wise, booked date-wise, service-wise etc., and a combination of the same)
- c) Occupancy data reports
- d) Powerful Inquiry Tools
- e) Real-time statistical output
- f) Agent-wise reports
- g) Exception reports
- h) Trend Analysis Reports
- i) Reconciliation reports for Gateway payments.
- j) Inter-depot transaction reports etc.

15.5 Central Monitoring System

- a) Bus Station-wise operation monitoring.
- b) Real time monitoring.
- c) Pre-emptive operational alerts.
- d) Anywhere to Anywhere transaction details.
- e) Log reports for critical and non-critical item modifications.
- f) Monitoring ticketing (real-time status on booking, cancellations etc., at all bus stations).

15.6 Internet Booking and Information System

- a) Web based information system and E-mail.
- b) Reservation rules.
- c) Web inquiry.
- d) e-Booking.
- e) Ticket delivery through print and mail.
- f) SMS to passenger
- g) Site map of the whole system.
- h) Cancellation of e-ticket.

- i) Refund of amount for cancellation ticket.
- j) E-ticketing sales reports payment gateway-wise.
- k) E-wallet based ticketing.

15.7 Reports

The various reports required from the modules as existing in the current system. The formats and details of actual reports shall be worked out jointly by the successful bidder and JKSRTC during System design stage.

Apart from regular reports like waybills, reservation charts, window scroll reports, etc., generation of various reports for monitoring and planning is a major activity which is done on a regular basis. The system resources required for this activity will be quite high at times. Proper care shall be taken to generate the reports depicting the correct information (real time or near real time) and to ensure that this activity does not have any adverse impact on the ticketing activity.

The distribution of data into three databases namely transaction, search and reporting may also be examined for better performance of the whole system.

15.8 Vendor Responsibility:

The bidder is expected to provide detailed documentation covering various views of the application software such as use case, design, process, implementation, migration and deployment views with detailed descriptions of use cases, business modeling, and analysis. Details of various international Standards used shall be referred to and copies submitted along with the bid.

The vendor will be responsible for carrying out the following major activities:-

(The list is only indicative and the vendor shall carry out all other activities, which will be required to achieve the objectives described above).

- a) Carry out business process study and information need analysis of JKSRTC's processes to achieve the mission-critical objectives defined earlier. Shall study and analyse the system requirements and business process for the functional modules required.
- b) Prepare and submit a project plan with detailed activity schedules and time- bound action plan for project and change management, as required, to implement the system and help the bidder to monitor and execute the plans. All milestones are to be broken down into sub activities. This plan is to be reviewed every fortnight and at other periodicities as mutually agreed to.
- c) The reservation application and underlying components should support both horizontal and vertical scalability.
- d) Migration of the existing data into the new system.
- e) Supply the SRS document in soft and 3 hard copies before starting the design of the system.

- f) Supply design documents in soft and 3 hard copies as part of system design phase.
- g) Deliver the specified number of copies of all Legal Licenses, Registration documents, user manuals, technical manuals, system manual and training manuals in hard copies and on three sets of CDs
- h) Conduct training programs at project site and at any other designated venues for all levels of users so as to make them conversant with the system and enable them to run the system independently. Vendor should also submit written training schedule, training manual and courseware. A core group of JKSRTC shall be given full scale all level training in all the modules.
- i) Design and preparation of test data and arranging for the acceptance test of the entire system in a manner mutually agreed.
- j) Maintenance of the total project Hardware, Software middleware and application, Network equipment and connections etc., of Data centre and Disaster Recovery Centre during the entire contract period.
- k) The look and feel of the application should be as similar as possible to the existing application to minimize the learning curve.

15.9 JKSRTC’s Responsibility

JKSRTC will be responsible for providing information, all relevant documents and data related to the functional and other procedures as may be relevant for the design and development of the OPRS and can be made available as required in accordance with the project plan. The vendor must maintain necessary secrecy and confidentiality of the data provided by JKSRTC during the process of execution of the project.

JKSRTC shall provide the following:

- a. Payment Gateway for integration with Online Ticketing Portal.
- b. SMS Gateway for integration with Online Ticketing Portal.
- c. Android based Electronic Ticketing Machines, GPS and GPRS connectivity required for the data to be sent to OPRS application.

15.10 JKSRTC’s Responsibility

Vendor shall provide the following deliverables for the software system. They may specify any alternative list of milestones and corresponding deliverables with appropriate justifications for changes:

Milestones	Deliverables
Acceptance of SRS document by JKSRTC.	Approved copy of SRS document.
Project planning.	Project plan
Acceptance of system design by JKSRTC.	Bidder will submit Design document and the acceptance of the same by JKSRTC will mark the culmination of this milestone.
Acceptance of user interface prototype	Bidder will submit the prototype for Approval and the acceptance of the same by JKSRTC will mark the culmination of this milestone.

User and administrative manual	User and administrative manuals in consultation with JKSRTC, including installation manuals and any other manual relevant for the operational utility of the system. The receipt of adequate number of approved documents would mark culmination of this stage.
Training	Training plan and training schedule.
Quality Assurance Plan, Acceptance Test Plan, Acceptance test Schedule	Module-wise test document as approved by JKSRTC.
Testing of all installed modules.	Test data design methods, test data and test reports, error and correction reports at the time of testing for the entire application including the various modules of the system.
Backup plan	Backup plan document as approved by JKSRTC.
Live run	Live run report including migration of existing data to the new system.
Malicious Code Certificate	To be furnished by the successful bidder before final acceptance of the system.
Source Code for the developed application	Source code of the developed application in its entirety, on CDs with additional information as deemed relevant by the bidder for the same.
Application Delivery	3 Copies of Developed Application CDs in the format approved by JKSRTC.

16. Operational Requirements for OPRS

This section sets out the operational requirements of the OPRS Project including project management requirements, acceptance testing & certification, OPRS application, maintenance & support including Data Centre and Disaster Recovery Center requirements, man power deployment and MIS reporting requirements etc. Service Level Metrics are provided in this document which shall be used for measuring and monitoring the quality of the services provided by the successful bidder.

16.1 Summary of Operational Requirements of OPRS Solution

Successful bidder shall implement, operate and manage the OPRS solution in accordance with the service level metrics defined for the project. Successful bidder shall coordinate and provide complete support to the OPRS Project Manager of JKSRTC in conducting the solution acceptance testing and certification.

The successful bidder shall provide operational support and maintenance services during the entire contract period of five years from the date of commencement of commercial operations, for overall system stabilization, software and IT infrastructure maintenance, system administration, security administration, database administration, network administration and end-user problem resolution. The operational support will have to

ensure that the OPRS solution is functioning as intended and all problems associated in operation of the application system are attended promptly.

The successful bidder is required to train the OPRS staff nominated by OPRS Project Manager, designated Department's technical and end-user staff, franchisees of JKSRTC and other identified partner organizations of JKSRTC to enable them to effectively operate the OPRS system. The successful bidder shall also be responsible for re-training the OPRS and department staff whenever changes are made in the software.

Preparation of documents including User Manuals, Operational Manuals, Technical and Maintenance Manuals etc., as per acceptable standards will be part of the requirements.

Following outlines detailed specifications for OPRS operational requirements:

- The following are indicative reporting requirements that the successful bidder should take into account while designing an appropriate solution:
 - Hourly/Daily/Weekly/Monthly / Yearly transactions/collections by centre.
 - Day-wise and Shift-wise collection summary reports.
 - User-wise summary for the day reports.
 - Transaction based alerts.
 - Service-wise, route-wise, destination-wise, service type-wise, sector-wise reports
 - All Users and all centres collection reports.
 - Service cancellation and tickets cancellation reports.
 - Bus Station-wise Anywhere to Anywhere transaction reports.
 - Gateway-wise Reconciliation statement for e-ticketing.
 - Generation of service wise fare details.
 - Inter Depot, Inter Region Transaction reports.
 - Corporation summary report daily/fortnightly/monthly/yearly.
 - All the reports to be generated in the form of HTML, PDF, Text, Excel, CSV formats.
 - All the reports to be generated in from – to date option facility.
 - Any other reports required by the Project Manager, OPRS time to time.
 - Any report in any format subject to availability of data in the Database.

The successful bidder shall provide transactional data, to JKSRTC, at prescribed intervals and as and when required by JKSRTC.

17. Service Metrics for the Online Passenger Reservation System (OPRS)

SLA to be delivered and shown periodically

OPRS	
OPRS Application Availability	99.5 %
Functional requirements upgrade	< 7 days
Client access upgrades	<30 days
Computing accuracy	100%

Hosting Centre	
Concurrent Connects to the OPRS	>1,000
Availability of systems at Data Centre	99.5 %
Resumption of online OPRS services in case of issues	<1 hr
Update of portal contents from decision to Implementation	<2 hrs
Billing accuracy	100%
Data availability	100%
ata accuracy	100%
Capacity of the Data Base Server	Handle 5,000 servicetransactions /hr
Capacity of the Application Server	Handle 5,000 servicetransactions /hr
Availability of the agreed services over the Internet.	100%
Time to restore servers from failure	<1 hr
Network	
Network availability at Data Center	99.95 %
Network Latency	Average of < 75 milliseconds
Client Access	
Average time per transaction (Total system response time) for a reservation transaction / Cancellation / pre-postponement.	< 60 seconds
Average OPRS page loading.	<10 sec
Request response time.	<=20sec
JKSRTC Client access availability.	99.5 %
Business Development	
Percentage of increase in the reservations every year(estimated)	5%(approx.)

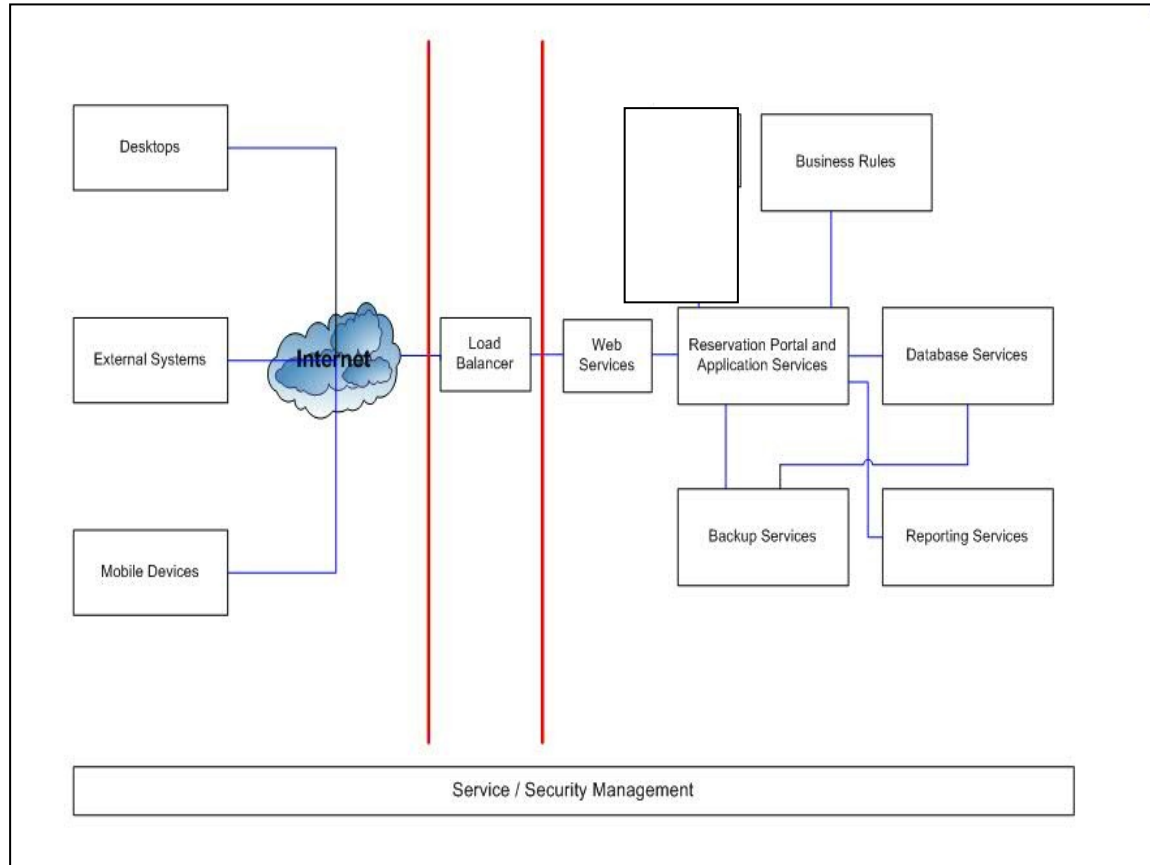
The SLA should be demonstrable as and when required by JKSRTC. The SLA shall be maintained on a monthly basis.

The System should scale up to 1,00,000 transactions per day and be able to complete a reservation / cancellation / pre-postponement and e-ticketing transactions in less than a minute when connected on a 512 kbps broadband Internet connectivity. These service metrics are indicative and will be finalized at the time of agreement. Service metrics are demonstrable in a production system. The system should be vertically scalable to add or upgrade hardware of Data centre/Disaster Recovery centre without changes to application Software.

18. Software Product Specifications

The successful vendor shall provide necessary licensed software like Operating System, Database, Web application, Network software and management, Anti-virus and any other required software. The software and hardware licenses shall be valid up to end of the contract period.

Logical Architecture



N-tier: The Proposed application will be N-tier Service oriented Architecture – with separation of business logic from application, database and presentation.

Load Balancer: Load balancer application will be the first component which will intercept the user request and spray it to Web Server. This ensures the load is distributed evenly across Web Server.

Web Servers: This component provides the front end to the solution. It allows for greater concurrency and resource offloading from the Portal Server tier, by serving static content (HTML pages, for example) and dynamic content.

Application Services: Main functionality of this component is to host and run the Reservation application.

Portal Services: Its main function is to serve the Portal Server framework to the desktops and mobile devices of portal users. This component creates an environment that provides

the connectivity, administration, and presentation services that are required. Portals serve as a simple, unified access point to web applications. Portals also provide valuable functions like security, search, collaboration, and workflow. A portal delivers integrated content and applications, plus a unified, collaborative workplace. A complete portal solution provides users with convenient access to everything needed to complete their tasks virtually anytime, anywhere.

Web Content Management: This component empowers JKSRTC team by providing an environment that allows them to create, edit, and publish Web content. This enables JKSRTC Team to have less dependence on technical resources and they can publish content in a more timely and efficient way by using the Web Content Management component.

Database Services: This component stores data in support of Reservation systems and it needs to be deployed in Active-Active mode.

Directory Services: This component stores user information in LDAP standard compliant directory server.

Business Rules: This component provides the capability to keep Business Rules outside of the core application and enables the Business users to manage Rules on their own.

Backup Services: This component protects JKSRTC's data from hardware failures and other errors by storing backup and archive copies of data on offline storage. This will also play a key role in Disaster Recovery.

Reporting Services: This layer provides reporting, analysis, score carding, dash boarding, business event management, and data integration.

Service/Security Management: This layer provides services such as Identification, Authentication, Authorization, and Access control, System Management, Network Management and SLA Management.

Bid Compliance Sheet**Annexure-1****Bidder Should Mark Page No. on Enclosures**

(Bidder should ensure that all documents enclosed are neat and legible)

#	Criteria (Document submitted)	Mention Enclosure Page No.	Fill Compliance (Yes/No)
1	Bidder shall provide an attested copy of –		
a)	Copy of PAN card		
b)	Company Registration Certificate		
c)	Valid GST registration Certificate		
d)	Income Tax Returns for the last three years (2013-14, 2014-15&2015-16).		
2	Certified Audited copies of Balance Sheets, Profit & Loss Accounts, Annual Reports of last three financial years (2013-14, 2014-15, 2015-16) from bidder		
3	Valid ISO 9001:2008 certification		
4	Documentary proof from bidder regarding having prescribed minimum average turnover in the last three financial years		
5	An affidavit duly attested by the notary that the Bidder was not Black listed by any PSU/Corporation/Board or State/Central Government in India		

Annexure – 2 (EOI form)

EOI for design, development, implementation, operation and maintenance of Online Passenger Reservation System (OPRS), Mobile App Based Vehicle Tracking and Electronic Bus Onboard Ticketing project for JKSRTC for a period of five years, on transaction charges basis on gross seats sold, as per the terms and conditions stipulated in the EOI

1.	Name of the Firm/ Agency/ Company etc. along with registration number	
2.	Full Name and designation of the authorized person submitting the EOI	
3.	Particulars of the firm:	
a)	Whether it is a partnership Firm, under the Partnership Act or a Company constituted under Indian Companies Act, 1956 or a Private Limited Company etc. (copy of relevant document to be submitted)	
b)	Nature of business being carried out (copies of supporting document(s) to be submitted).	
c)	Previous experience in similar area (Enclose documentary evidence as proof)	
4.	Financial Status of the Firm (enclose audited profit & loss account, balance sheet for the years 2013-14, 2014-15, 2015-16)	
a)	Annual turnover in 2014-14	
b)	Annual turnover in 2014-15	
c)	Annual turnover in 2015-16	
5.	No. of employees on rolls	
6.	Whether the Firm/ Agency/ Company has Branches carrying out business in the relevant fields in J&K and other States - if so mention the Addresses of the Branches.	
7 a)	Name of the whole time Director (Head of the firm)	

b)	Relationship/Designation of authorized signatory signing on behalf of the Firm.	
8	Address for correspondence & Phone Nos. (FAX, Website, email) (All correspondence will be made with local office only)	
a)	Local Office	
b)	Head Office	
9 a)	Permanent address of the Head of the Firm with phone numbers	
b)	Residential address of the personnel concerned	

I / We agree to abide by the terms and conditions laid down in the EOI. The information furnished above is true to the best of my/our knowledge. I/we fully understand that in the event of the Company's/Firm's/Agency's failure to abide by any of the terms & conditions or if the information furnished is found to be false.

Signature of the EOI'er

AUTHORISED PERSON WITH SEAL

Name:

Place :

Date :

Technical Bid Compliance Sheet (with respect to Technical Evaluation)**Bidder Should Mark Page No. on Enclosures Submitted in Evidence of Eligibility Criteria**

(Bidder should ensure that all documents enclosed here should be neat & clean and easily readable):

#	Criteria (Document submitted)	Mention Enclosure Page No.	Fill (Yes/No)	Compliance
1	Bid Authorization Letter (The letter of authorization shall be indicated by written Power of attorney accompanying the bid).			
2	Bidder shall provide an attested copy of –			
	PAN card			
	Company Registration Certificate			
	Valid GST registration Certificate			
	Income Tax Returns for the last three years.			
3	Certified Audited copies of Balance Sheets/ Profit & Loss Accounts/ Annual Reports of last three financial years (2013-14, 2014-15 and 2015-16) from bidder			
4	Documentary proof regarding the bidder being in business of IT Services for a minimum of 5 years			
5	Copy of valid ISO 9001:2008 certification complying with the requirement given in the EOI			
6	Documentary proofs from bidder regarding having minimum average turnover of Rs. 1Crores in last three financial years			
	Turnover for the year 2013-14			
	Turnover for the year 2014-15			
	Turnover for the year 2015-16			
7	Documentary proof regarding the bidder having an average turnover of Rs. 1crores in software consultancy, software development & its implementation and maintenance besides system integration			
	Turnover for the year 2013-14			
	Turnover for the year 2014-15			
	Turnover for the year 2015-16			
8	Bidder development Centredetails - the			

	<p>following documents have to be submitted as proof</p> <ul style="list-style-type: none"> a) Rental agreement in case the development Centre is in rented premises. b) Sale agreement, telephone/ electricity bills for last three months, in case the development Centre is in an premises owned by the bidding entity c) Details of personnel on rolls and equipment available. 		
9	<p>In case the bidding entity has past experience of successfully developing and implementing online reservation system, the following documents & details shall be submitted</p> <ul style="list-style-type: none"> a) Copy of award of the project b) Details of Client along with address and contact numbers of authorized personnel of the client with their designations c) Project completion certificate, if any d) Project cost 		
10	<p>Documentary proofs regarding Bidder having an experience of execution of similar projects. Work orders and a certificate regarding 'Project has been successfully & satisfactorily executed' from client</p>		
11	<p>An affidavit duly attested by the notary that the Bidder has not been Black listed by any PSU/Corporation/Board or State/Central Government in India</p>		
12	<p>An undertaking from the Bidder on company letterhead to the fairness of these documents in support of their claim while submitting the Bids</p>		
13	<p>An undertaking from bidder that he would be fully responsible for successful completion of the project.</p>		
14	<p>The Bidder should submit the affidavit stating that the bidder or employees should not ask for employment in Corporation.</p>		
15	<p>Bill of Material (BoM) with Make, Model, Specifications etc.</p>		
16	<p>OEM Authorization, Warranty and Support Letter</p>		
17	<p>Team Deployment Details</p>		
19	<p>Technical Compliance Sheet</p>		

Annexure - 4

Bidder Profile		
1	Name & Address of The Bidder	
2	Location of Corporate Head Quarters	
3	Date & Country of Incorporation	
4	Details of Contact person (Name, designation, address etc.) Telephone Number, Fax Number, e-mail	
5	Is the firm a registered company? If yes, submit documentary proof. Year and Place of the establishment of the Company.	
6	Is the firm registered with sales tax department? If Yes, submit valid sales tax registration certificate.	
7	Number of offices in India	
8	PAN Details	
9	Details of court litigations, including (but not limited to) — Have you filed any claim against any Company / Institutions for similar type of project? If so, give details like case no., court dispute involved and present status. Has any Company/Institution filed any claim/case against you, if so, furnish full details. Has any of your customer or clients filed any case against you in a court? If so, furnish details.	

Authorized Signatory

<Name>

Seal

Please Note that providing inadequate or incorrect information could lead to disqualification of the bid.

Annexure – 5 Bidder’s Authorization Certificate (Financial bid)

To,
The Managing Director,
JKSRTC, Srinagar.

<Bidder's Name>, < Designation>, is hereby authorized to sign relevant documents on behalf of the Company in dealing with EOI pertaining to **“Implementation of Online Passenger Reservation System (OPRS), Mobile App Based Vehicle Tracking and Electronic Bus Onboard Ticketing on transaction charges basis on gross seats sold for a period of Five years”** dt. _____. He/she is also authorized to attend meetings and submit financial bid/information as may be required by you in the course of processing above said EOI.

Thanking you,

Authorized Signatory (Name)
Name & Signature of Authorized Person

Company’s Seal

Annexure - 6 (Financial proposal)

FINANCIAL BID

Financial bid for Implementation of Online Passenger Reservation System (OPRS), Mobile App Based Vehicle Tracking and Electronic Bus Onboard Ticketing on transaction charges basis on gross seats sold for a period of Five years, as per the terms and conditions stipulated in the EOI

Description	Rate in Rs. (excluding taxes) in figures and words
Transaction charges to be paid for each gross seat booked through the application during the month excluding Blocked Seats, Cancellation, Preponement, Postponement Duplicate Ticket, and Modification of Ticket.	

Details of taxes applicable along with existing rate of tax:

Signature:

Name:

Designation:

Name of firm:

Seal

FORMAT FOR PROVIDING REFERENCES

S. No	Detail	Project 1	Project 2
1	Name of Customer Organization		
2	Country		
3	Government/Non-Government		
4	Geographical Coverage – number of locations, Cities etc		
5	Contact Details		