

# **Request for Proposal (RFP)**

For

## **GPS Devices and Associated Services**

**Punjab State Bus Stand Management Company**

Jeevandeep Building Sector 17 B

Chandigarh – 160 017.

## **Introduction**

1.1 Punjab State Bus Stand Management Company (PUNBUS) is a Company wholly owned by the Government of Punjab and operates Stage Carriage buses in Punjab and its neighbouring States. Presently PUNBUS has over 1000 buses in operation. It is proposed to install GPS System in Heated, Ventilated and Air-Conditioned buses (HVAC) of PUNBUS and in kilometre scheme buses being operated by Punjab Roadways. Presently there are 61 HVAC Buses of PUNBUS and 70 kilometre-scheme buses of Punjab Roadways. Thus the GPS System is to be implemented in about 130 buses presently as a pilot project ("**Project**"). Depending on the successful implementation of the project the number of buses can be increased for fleet of PUNBUS and Punjab Roadways in the future at same rates and terms and conditions. It must be clearly understood that there is no guarantee that the buses to be added in future or buses other than the 130 buses specified will be given for GPS installation to the successful bidder.

1.2 As a part of the above, the vehicles to be covered by the Project will require installation of the Global Positioning System (GPS) devices and other accessories relating thereto along with installation and integration of Passenger information boards at bus stands desired by PUNBUS. Additionally, the Pilot Project also proposes to include 10 nos Passenger Information System (PIS) Display Boards to be installed at designated Bus Stops/ Bus Shelters, and an additional 10 nos of Passenger Information Display Boards inside the buses.

1.3 With a view to procure GPS device, PIS display boards, In-Bus Display boards together with associated services ("**Work**"), PUNBUS intends to seek proposals from eligible entities for consideration towards award of the Work in accordance with the procedure set out herein.

## **2. Scope of Services**

2. 1 The Successful Bidder to be selected through the process outlined in this RFP shall perform the following scope of work during the contract period of 5 years:

(a) Design, manufacture, supply, install and commission the GPS devices on the buses and other vehicles as per the minimum technical specifications provided in Annexure A including carrying out the activities incidental and relating thereto.

(b) Also, the pilot project proposes to include design, manufacture, supply, installation and commissioning of 10 nos Passenger Information Display Boards as per specs provided in Annexure B. For this, the bidder will provide Passenger Information boards conforming to specifications given in this RFP, install them at locations desired by PUNBUS, and develop an interface with Passenger information system at bus stands so that the timings of incomings buses are displayed. The successful bidder will develop input system at back end to enter bus route inputs and communicating it to PIS and allow communication of PIS Boards to back-end through GPRS.

(c) The project also proposes to include design, manufacture, supply, installation and commissioning of 10 no's Passenger Information Display Boards inside the buses as per specs provided in Annexure G.

(d) Undertake onsite maintenance, removal, repair, replacement, shifting and other incidental activities relating to the GPS devices including components and accessories, as also the PIS Display Boards covered under the Pilot Project.

(e) Provide and undertake installation, configuration, maintenance/ replacement of the SIM Cards and manage the interface with telecom service providers.

(f) Set up Control room-cum-data centre at the location desired by PUNBUS for which Servers, computers, licensed OS, licensed system software including database, application

software with license, digitised maps, UPS, peripherals etc. will be provided by the Service Provider. Details of the Control room are given at Annexure C to this tender.

(g) Deploy manpower for the duration of the project, as per details provided at Annexure C in the document. The successful bidder will provide reports for Management Information System as per indicative list attached (Annexure D) but not limited to this list. New reports will be developed as per functional requirements of PUNBUS, for which the requisite manpower as mentioned at Annexure C will be posted to the Control Room on a full-time basis for a minimum period of one year, in addition to Support Staff needed for the entire term of 5 years.

(h) Undertake the following in the bus stands relating to bus routes:

(i) Provide GPS feed in required format to Passenger information system board to display name of approaching bus on the existing LED boards

(ii) Update the data base relating to routes

(i) Standards of Performance shall be as set out in Annexure I

### **3.1 Deliverables.**

The deliverables include the following:-

(a) GPS devices. 130 no's, specs given at Annexure A to this RFP.

(b) Passenger Information System (PIS) Display Boards. 10 no's, specs as given at Annexure B.

(c) The project also proposes to include design, manufacture, supply, installation and commissioning of 10 no's Passenger Information Display Boards inside the buses as per specs provided in Annexure G.

(d) Control room. Successful bidder to establish the Control Room at the Headquarters of PUNBUS, complete with servers (application, database, web server, map server), 40" screen, software (operating system, system software, application, mapping software, etc), UPS, etc. Details as given at Annexure "C".

(e) Manpower Deployment. Full-time manpower comprising of Project Manager, Software Engineer and Support engineer to be deployed for varying durations as mentioned at Annexure C of the RFP.

**3.2 Delivery Period.** The delivery of entire stores including the GPS devices, PIS display boards, Control Room infrastructure, will be completed within 16 weeks from the date of Supply Order. In case of late supplies penalty can be imposed by the Managing Director PUNBUS as per clause 3.3 and if supplies are delayed beyond 2 months from date of delivery then purchase order can be cancelled and bank guarantee forfeited in part or full at discretion of Managing Director PUNBUS.

**3.3 Liquidated Damages.** In case of delay in delivery beyond the Delivery Period allowed under the Tender, the payment will be subject to Liquidated damages at the rate of 0.5% of the value of undelivered stores for every week of delay.

**3.4 Prices.** All prices are FOR PUNBUS delivery / installation locations. No other charges will be payable over and above the prices, installation charges, and taxes mentioned in the Financial Bid.

**3.5 Force Majeure.** Standard Force majeure conditions will apply.

#### **4. Bid Process**

4.1 The Bidders are required to submit their Proposals in three parts/envelopes

- (a) Qualification Bid;
- (b) Technical Bid; and
- (c) Financial Bid.

4.2 In the first stage, the Qualification Bid of the Bidders will be evaluated for assessing the Bidder's technical and financial capabilities vis-à-vis the stipulated Eligibility Criteria in clause 5 of this RFP.

4.3 In the second stage, only the Bidders emerging qualified from the first stage of evaluation shall be eligible for opening & evaluation of their Technical Bid. The Technical Bid submitted by such Bidders shall be evaluated based on the minimum technical specification required as specified by PUNBUS. Live demonstration of the entire solution, comprising both the GPS device and the Passenger Information system (PIS) will be necessarily required to be provided by the Bidders to the Committee formed by PUNBUS for the purpose.

4.4 The Financial Bids of only those Bidders who qualify in the qualification bid and whose technical specifications are over the minimum specifications required by PUNBUS and have successfully demonstrated the complete GPS and PIS solution will be considered for opening & evaluation. The Financial Bids shall be evaluated and given Financial Score based on the evaluation method outlined in clause 7 of this RFP.

4.5 The Bidder who has rates are the lowest as per procedure outlined in clause 7 of this RFP shall be considered by PUNBUS to be the Preferred Bidder.

#### **5. Eligibility Criteria**

##### **5.1 Eligibility of Bidders**

Only the entities meeting or exceeding the criteria provided in this section shall be eligible to submit their Proposal in response to this RFP.

5.1.1 The Bidder shall be either:

(a) a single business entity incorporated under the Companies Act, 1956 or equivalent law in their country of jurisdiction, or

(b) a consortium of business entities ("Consortium") subject to the following:

(i) The number of members in a Consortium shall not be more than three.

(ii) All members of the Consortium should be incorporated under the Companies Act, 1956 or equivalent law in their country of jurisdiction.

(iii) One of the members shall be designated as Lead Member who shall be authorized to deal with PUNBUS for and behalf of the Consortium by way of a Power of Attorney (POA).

(iv) A member of any Consortium shall not bid either individually or as a member of another Consortium.

(v) The Consortium shall submit a Consortium Agreement, drafted specifically for this project, as part of its Qualification Bid outlining the role, responsibilities and obligations of each member. The Consortium Agreement shall also provide that each of the parties thereto shall be liable and responsible jointly and severally in discharging their obligations in accordance

with this RFP and towards compliance of all statutory and other requirements as may be applicable in respect of the work and that the responsibility of all the members of the Consortium shall be joint and several at every stage of implementation of the work.

### **5.1.2 Technical Criteria**

The Bidder (in case of a single business entity) or Lead Member of the Consortium shall meet the following criteria:

(a) Shall be an Original Equipment Manufacturer in the business of designing & manufacturing GPS devices. Traders/ dealers are not eligible to bid.

(b) Should have successfully executed at least one deployment of GPS based solution of minimum order value Rs 25 lacs. This deployment should have been carried out with a State Transport Undertaking in India. Certificate of successful deployment to be attached as a part of the tender response.

(c) A minimum of 250 GPS devices manufactured by the Bidder should have been deployed with Govt agencies in India. Certificates of successful completion of contract to be furnished.

(d) Shall have successfully executed at least one Project comprising Passenger Information System (PIS) on at least 20 units deployed in a State Transport Undertaking in India.

(e) shall confirm and represent that it can manufacture Type I GPS Devices conforming to the minimum technical specifications provided in Annexure A by way of stating compliance against each of the parameter listed therein.

Bidders shall further provide the detailed technical specifications of its GPS device complying with the minimum specifications pertaining to the Type I GPS Device as provided in Annexure A, and detailed technical specifications of its PIS display Board complying with minimum specs provided in Annexure B, along with details of the entire Control Room infrastructure to be set up by the bidder at the Headquarters of the PUNBUS. The Bidder must submit the supporting documents evidencing its capabilities and experience and the representations, as required.

### **5.1.3 Financial Criteria**

The Bidder (in case of a single business entity) or all members together (in case of Consortium) shall meet the following financial criteria:

(a) Minimum net worth (NW)<sup>1</sup> of Rs. 5 crores as on March 31, 2010 or on the basis of latest audited financial statements of the Bidder.

(b) Minimum average sales turnover of Rs. 15 crores in the three preceding financial years on the basis of last three audited financial statements of the Bidder.

*1 NW = Paid-up share capital + Free reserves – Profit & Loss Account (Dr. Balance) – Miscellaneous Expenditure*

Bidder must submit all the applicable audited financial statements and certificates from practicing chartered accountant(s) or its/their statutory auditor(s) in support of the above calculations along with the computational details. Details in respect of all the entities whose financial capabilities have been used in working out the net worth and the average sales turnover needs to be submitted.

## 6. Preparation and Submission of Proposals

### 6.1 Preparation of Proposals

The Bidders are required to submit their Proposal in three parts/envelopes

(a) Qualification Bid: To contain details as per Annexure E

(b) Technical Bid: To contain details as per Annexure F

(c) Financial Bid: To contain details as per Annexure H

All the three are to be placed inside an outer envelope bearing the identification – **“Proposal against RFP for GPS devices and Associated Services”** along with the name of the Bidder. Each Bidder shall submit only one (1) proposal in response to this RFP. Any Bidder, who submits more than one Proposal, will be disqualified.

### 6.2 Submission of Proposals

Proposal prepared in accordance with section 5.1 above should reach not later than the 12/8/2010 , **1700 Hrs (“Due Date”)** at the following address by hand or by registered post or by courier: Qualification bids will be opened on 13/8/2010 at 11 AM and date and time of opening of technical and financial bid will be intimated in due course to the qualified bidders.

Executive Director - Operations (PUNBUS)  
Jeevandeep Building Sector 17 B  
Chandigarh 160017.  
Phone 0172-2704112.

## 7. Evaluation of Proposals

### 7.1 Evaluation of the Qualification Bid

In this stage, the Qualification Bid of the Bidders shall be evaluated for assessing the Bidder's technical and financial capabilities vis-à-vis the stipulated Eligibility Criteria in clause 4 of this RFP. The Bidders who emerge qualified based on the aforesaid evaluation shall alone be eligible for opening & evaluation of their Technical Bid.

### 7.2 Evaluation of the Technical Bid

7.2.1 In this stage, the Technical Bids of only those Bidders who have emerged qualified based on evaluation of their Qualification Bid shall be opened and evaluated in comparison to the minimum technical specifications required by PUNBUS:

SI	Parameter	Elements
<b>1</b>	<b>GPS Device</b>	
(a)	Parallel GPS Receiver	Number of channels
(b)	Acquisition sensitivity	(-) _____ dBm
(c)	Tracking Sensitivity	(-) _____ dBm
(d)	Positional Accuracy	mtrs ( 2dRMS confidence level higher than 95% or CEP)
(e)	Hot Start time	in seconds
(f)	Warm Start time	in seconds
(g)	Cold Start time	in seconds
(h)	GPRS class	class
(i)	Battery Backup	in hours
Manufacturing and Supply plan	Time for Supply of GPS System to PUNBUS.	IN DAYS
Installation Plan	Time for installation of GPS System in buses of PUNBUS	IN DAYS
O & M Plan	Number of ground personnel the organisation is ready to provide for operation and maintenance issues dedicated for PUNBUS.  Name of the SIM provider for operation of equipment and consent that down time due to SIM will be considered as down time of equipment for calculating penalty.	SIM Provider :  Are you willing to consider down time of SIM as downtime of GPS Equipment as per terms of this RFP _____(yes/no)

7.2.2 **Demonstration.** The Pre-Qualified bidders will be required to give a live Demonstration of the solution, comprising both of GPS based Vehicle Tracking System and the Passenger Information system (PIS) Display as a part of the Technical Evaluation, at a place and time indicated by the client. At least 7 days notice will be given to the bidders for the same. Companies which are unable to give a working demo will be rejected from the subsequent stages in the procurement process.

7.2.3 Only those Bidders who qualify in the technical bid above shall be considered for further evaluation including evaluation of their Financial Bid.

### 7.3 Evaluation of the Financial Bid

7.3.1 The Financial Bids shall be evaluated on the basis of the Total of One-Time and Recurring charges to be worked out based on Charges quoted by the Bidder as under:

SI No	Description	No of Units	Unit Price (in Rs)	Extended Quote (in Rs)
<b>(A) GPS devices:</b>				
1	Cost of the in-vehicle GPS device	130	A1	130*A1
2	Sales Tax on GPS device @ __B__ %	130	(B/100)*A1=C	130*C
3	Installation charge for GPS devices	130	D	130*D
4	Service Tax on Installation @ __E__ %	130	(E/100)*D=F	130*F
5	Total cost of GPS devices including Installation and Taxes	130	A1+C+D+F=G	130*G= <b>P1</b>
<b>(B) Passenger Information Systems (PIS) Display boards for BUS STOPS:</b>				
1	Cost of Display Boards for BUS STOP	10	A2	10*A2
2	Sales Tax on Display boards @ __B__ %	10	(B/100)*A2=J	10*J
3	Installation charge for PIS boards	10	K	10*K
4	Service Tax on Installation @ __E__ %	10	(E/100)*K=L	10*L
5	Total cost of PIS display boards for Bus Stops including Installation and Taxes	10	A2+J+K+L=M	10*M= <b>P2</b>
<b>(C) Passenger Information Systems (PIS) Display boards INSIDE THE BUS:</b>				
1	Cost of In-Bus Display Boards	10	A3	10*A3
2	Sales Tax on In-Bus boards @ __B__ %	10	(B/100)*A3=H	10*H
3	Installation charge for In-Bus boards	10	N	10*N
4	Service Tax on Installation @ __E__ %	10	(E/100)*N=Q	10*Q
5	Total cost of In-Bus PIS display boards including Installation and Taxes	10	A3+H+N+Q=R	10*R= <b>P3</b>
<b>(D) Recurring Charges:</b>				
1	Monthly Service Charges per GPS device, including SIM charges and Maintenance of GPS devices	130	S	130*S=T
2	Monthly Service and maintenance/ AMC charges per PIS Display Board (at Bus Stop and In-Bus) throughout 5 yr period	20	U	20*U=V
3	Monthly charges towards Control room infrastructure and Manpower Deployment Costs, payable monthly	1	W	W
4	Service Tax on monthly charges at (D)1+(D)2+(D)3 above, @ __E__ %			(E/100)* (T+V+W)=X
5	Total Monthly Charges incl Service Tax			T+V+W+X=Y
6	Recurring Charges for 5 years	60	Y	60*Y= <b>P4</b>
<b>(E)</b>	<b>Total Price =</b>			<b>P1+P2+P3+P4 = P</b>

The Financial Bids of all Bidders shall be opened and the Bidder having TOTAL P as lowest payable by PUNBUS will be the preferred bidder.

#### **7.4 Final Evaluation.**

The Bidder considered by PUNBUS to be the Preferred Bidder will be called upon by PUNBUS towards signing of the agreement.

#### **8. Payment Terms.**

**GPS Device and PIS display board price, including installation, to be paid as One-Time charges.** 60% of the price of the GPS devices and Display Boards will be made against delivery of stores. Additional 30% will made against installation and commissioning of the eqpt on pro-rata basis. Balance 10% will be made after 45 days of successful commissioning.

**Control room expenditure to be recovered as monthly Recurring charges.** Bidder will recover the Control room establishment expense (including cost of servers, UPS, 40" LCD screen, OS, system software, application software, map software, maps) in the form of monthly recurring charges. Also, manpower deployment charges to be recovered as monthly recurring charges.

Other recurring charges like SIM card charges, post-warranty GPS device maintenance, PIS maintenance, etc., data centre operating expenses like bandwidth etc to be recovered as monthly recurring charges.

#### **9. Warranty.**

The stores will carry a warranty against any manufacturing defects for a period of 12 months from the date of supply

#### **10. Right to Accept or Reject Proposals.**

10.1 Notwithstanding anything contained in this RFP, PUNBUS reserves the right to accept or reject any Proposal and to annul the Bidding Process and reject all Proposals, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof. PUNBUS reserves the right to reject any Proposal if:

(a) at any time, a material misrepresentation and/or concealment of any facts / materials is made or discovered, or

(b) The Bidder does not respond promptly and diligently to requests for supplemental information required for the evaluation of the application.

**Annexure A:**  
**Minimum Technical Specifications – GPS Devices**

<b>Specifications</b>	<b>Type I Required Feature.</b>
<b>1. General Features.</b>	
(i) GPS(Location, speed, heading, timestamp) data polling and sending frequency capability of less than or equal to 10 sec	YES
(ii) Location on demand on GPRS/SMS.	YES
(iii) Memory to store min 15000 positional log.	YES
(iv) Configurable Backup SMS facility in case of GPRS failure.	YES
(v) Capability to send Serving and Adjacent Cell ID as well as Network measurement report (NMR).	YES
<b>2. GPS Specs</b>	
(i) Parallel GPS Receiver -20-Channel or more	YES
(ii) Acquisition sensitivity : better than (-)148dBm	YES
(iii) Tracking Sensitivity better than (-)155 dBm	YES
(iv) Less than 10m Positional Accuracy,( 2dRMS confidence level higher than 95%) or 3m CEP	YES
(v) Hot Start < 10s	YES
(vi) Warm Start : < 40s	YES
(vii) Cold Start <60 s	YES
(viii) Outputs as per NMEA 0183	YES
(ix) WGS-84 compliant	YES
<b>3. GPRS Communication</b>	
(i) In- Built Triband GPRS module/Modem	YES
(ii) Multi Slot GPRS	YES
(iii) GPRS class 10 or Above	YES
(iv) Should support all – SMS, Voice, Data, GPRS, TCP/IP	YES
<b>4. Power</b>	
(i) Input voltage range 8-30 Volts	YES
(ii) Active mode Peak < 1.0 A	
(iii) Active mode Avg < 200mA	YES
(iv) Sleep Mode < 25 mA	YES
<b>5. Battery backup</b>	
(i) 4hrs or more in active mode	YES
<b>6. Operational Environment Variables</b>	
(i) Temperature range ; -10° C to 85 °C	YES
(ii) Humidity Level: 5% to 95% non-condensing	YES
(iii) Dust, temperature, vibration and Water Splash resistant	YES
(iv) IP 65 rated or equivalent. With heat resistant, Vibration proof, tamper proof	YES

Specifications	Type I Required Feature.
<b>7. Antenna</b>	
(i) Should have internal GPRS antenna	YES
(ii) Should be capable of supporting external GPRS antenna	YES
(iii) Should have internal GPS antenna	YES
(iv) Should be capable of supporting external GPS antenna	YES
<b>8. Ports</b>	
(i) 8 or more digital Inputs	YES
(ii) 4 or more digital outputs (For Relays, sirens etc.)	YES
(iii) 1 or more analog inputs( For analog inputs like Fuel, temperature etc)	YES
(iv) Ignition sensing	YES
(v) 2 nos RS232 ports –	YES
(a) RS232 /GPS out for LED display board thru integrated controller, inside buses.( GPRMC string out in Degree, minutes format with 1/10,000 of minutes, ddmmyy format every 1 sec feed)	YES
(b) RS232 for Ticket Validator/RFID	YES

**Annexure B:**  
**Minimum Technical Specifications -**  
**Passenger Information System (PIS) Display Boards at Bus Stops**

**Passenger Information System Display at Bus Stop.**

- LED Display showing estimated arrival time of the buses on a specific route
- Bi-Lingual LED display giving alphanumeric messages in English & Punjabi.
- Tamper Warning

**Functional & Technical.**

The display should be a minimum 2 Row alphanumeric display of amber LEDs in the wavelength of 585nm-595nm.

The display should be readable from a distance of 30 meters in broad daylight. LED viewing angle should be a minimum of 110 deg Horizontal and 50 deg vertical.

The pitch of the LEDs should be better than 10mm (H) X 13.4mm (V).

The character height should be about 200mm, but always more than 195 mm. The size of the display box should be approx 460mm X 940mm with display size of approx 400mm X 880mm (min 390 mm x 870mm).

Display should indicate the route number (if any), destination and time of arrival of bus.

The display should scroll the destination information while keeping the ETA static.

The display should alternatively show the information in English & Punjabi.

This unit should have inbuilt sensors to detect the removal and an alarm is generated in the control room in case the unit is removed from its location.

It should be powered from 220V AC power supply and should have an inbuilt battery which can display the information for at least one hour after the power failure. The internal battery should be automatically charged from the supplied 220V AC. The unit should remain operational from 170V to 240V AC. The tamper function should be operational for twelve hours after power failure.

**Physical & Environmental:**

Splash Proof: The display should not get damaged while the wind blown rain shower falls on it. Adequate protection has to be built in the system. The display should be IP65 compliant and a certificate from an Indian government agency supporting the same should be provided.

Temperature: The unit should work satisfactorily from -5degC to +70 degC, RH 95%.

Vibration: The unit should be able to withstand the vibration generated by the commercial/heavy vehicles being driven on the road near the Bus Shelter.

Mounting: The mounting for display should be provided alongwith.

**Annexure C:**  
**Specifications of Control Room and Manpower Deployment**

Bidder will set up control room at Chandigarh in PUNBUS Office/ Workshop. Proper arrangements such as security of data, access to authorized functionary, storage devices & retrieval to meet any exigency will be made. Control room would maintain web application server, database server, and mirror server on **Xeon** based servers. All the servers should be in DMZ behind the firewall. Multiple links to access the servers with failover so that in case of one link failure other link may take the control and servers can be accessed through Domain.

Database Servers should be able to store every 3-second data for 1000 buses for a period of 2 years.

The bidder will provide a LCD/ LED screen of min 40" to be mounted on a wall in the Control Room to facilitate suitable live monitoring of the buses.

UPS of suitable capacity to enable operation of upto 6 hours on battery-backup in case of power breakdown should be provided as a part of the solution.

Bidder will manage the control room by deputing trained staff. Any customization required in the reports will be done by the staff deputed at control room. Staff deputed by bidder will have to coordinate in close cooperation with PUNBUS authorities in terms of software requirements/up gradation, report generation (as per requirements).

Even though the bidder will make this capital investment on the Control Room infrastructure, this investment will be paid for in the form of monthly payout only in the form of a fixed monthly sum over the 60 month period of the contract. No initial payment will be made to the contractor at the time of installation.

**Manpower deployment:**

The Successful bidder will deploy a Project Manager full-time during the installation period and for a period of 3 months after successful implementation. Further, one software engineer will be posted at the headquarters of PUNBUS for a period of one year to customise reports as per the requirement of the client. Also, one support engineer will be posted full-time at the PUNBUS headquarters during the entire term of five years to ensure optimal uptime of GPS/ PIS system and to ensure that the technology is exploited for the benefit of the client to the maximum. Mapping of routes as required for location of bus stands and bus stops enroute and end points will be carried out by the manpower deployed.

The manpower cost will also be paid in the form of a fixed monthly sum over the 60-month period of the contract, as per the amount bid by the successful bidder against this head.



**Vehicle Tracking:-**

- Should track & monitor the movement of fleet
- Integrate Passenger Information board
- Should show real-time location, speed & direction of each bus of the fleet on GIS map
- Should show ETA of every bus for next stop with roll over refreshment on every 30sec
- Inform commuters about the bus routes and arrival timings of buses at the bus stops/terminals through LED Display systems
- IVRS and SMS to know ETA of the particular bus/route
- Route addition/deletion or modification facility on frontend
- WEB based PIS
- **Reports**
  - Route Deviation alerts
  - vehicle Over speeding alerts
  - Vehicle Stoppage detail
  - Vehicle Battery status
  - Vehicle Display status(On/Off)
  - Route Details
  - Driver driving statistics from graph
  - Disconnectivity report
  - Online status on Map
  - Distance Covered Reports
  - Buses stopping at unauthorised stops or not stopping at authorised stops.
  - Buses running late or before time.
- ❖ Any other Reports can be added as per the requirement of the department.

All software licenses including OS, system software, application software, map software, etc., used in the solution will be bought in the name of the client, and will be submitted to the PUNBUS within 30 days of implementation of the solution. Routes will have to be mapped for exact location of the bus stands enroute. No extra charges will be given by PUNBUS for route mapping.



**Annexure E:  
Contents of Qualification Bid**

**1. Preparation of Qualification Bid**

1.1. The Qualification Bid needs to contain the information / documents listed hereunder in a sealed envelope bearing the identification – **“Qualification Bid against RFP for GPS devices and Associated Services”** along with the name of the Bidder:

(a) Details of the Bidder

- (i) Name
- (ii) Country of incorporation
- (iii) Date of incorporation and/ or commencement of business
- (iv) Shareholding details
- (v) Address of the corporate headquarters and its branch office(s), if any, in India:
- (vi) Details of manufacturing facilities (also mention, whether owned, contracted etc.)
- (vii) Certification of company, manufacturing facility and devices (Like ISO, CE, etc.).
- (viii) Brief description of the Bidder including details of its main lines of business and proposed role and responsibilities in this Project
- (ix) Website URL
- (x) Particulars of the Authorized Signatory of the Bidder:

(A) Name:

(B) Designation:

(C) Address:

(D) Phone Number:

(E) Fax Number:

(F) Email Address:

(xi) In case of the Bidder being a Consortium:

(A) The information above [(i) to (ix)] should be provided for all the members of the Consortium

(B) Information regarding the role of each member of the Consortium should be provided as per table below:

Sl.	Name of Bidder /Consortium Member(s)	Role
1		
2		
3		

(b) Documents in support of compliance of the Bidder with regard to Technical Criteria / other requirements (clause 5.1.1 & 5.1.2 of the RFP):

Sl.	RFP Clause	Supporting Documents Provided with the application
1	5.1.1	<ul style="list-style-type: none"> <li>• Copy of the Certificate of Incorporation</li> <li>• Power of Attorney:</li> <li>• Attested Power of Attorney (POA) in original authorizing the person signing the Proposal for and on behalf of the Bidder / Lead Member</li> <li>• Attested Power of Attorney (POA) in original authorizing the Lead Member of Consortium to deal with DIMTS for and behalf of the Consortium</li> <li>• If the Bidder is a Consortium, attested Consortium Agreement, in original, outlining the role, responsibilities and obligations of</li> </ul>

*[Signature with Seal of the Bidder]*

		each member.
2	5.1.2 (a)	<ul style="list-style-type: none"> <li>• Undertaking by the Bidder</li> <li>• Documentary evidence in support</li> </ul>
3	5.1.2 (b)	<ul style="list-style-type: none"> <li>• Copy of work order(s) establishing the eligibility</li> <li>• Copy of completion certificate from client</li> </ul>
4	5.1.2 (c)	<ul style="list-style-type: none"> <li>• Copy of work Order(s) establishing the eligibility</li> <li>• Copy of completion certificate from client</li> </ul>
5	5.1.2 (d)	<ul style="list-style-type: none"> <li>• Copy of Work Order(s) establishing the eligibility</li> <li>• Copy of completion certificate from client</li> </ul>
6	5.1.2 (e)	<ul style="list-style-type: none"> <li>• Self certification by way of stating compliance against each of the parameter</li> <li>• Detailed technical specifications of GPS device of the Bidder complying with the minimum specifications pertaining to the Type I GPS Device as provided in Annexure A: Minimum Technical Specifications of this RFP along with the product brochure of the same</li> </ul>

**Annexure F:**  
**Contents of Technical Bid**

The Technical Bid needs to contain the information / documents listed hereunder in a sealed envelope bearing the identification – “**Technical Bid against RFP for GPS devices and Associated Services**” along with the name of the Bidder:

SI	Item	Description
<b>1</b>	<b>GPS Device</b>	
(a)	Parallel GPS Receiver	Please specify number of channels
(b)	Acquisition sensitivity	Please specify in (-) _____ dBm
(c)	Tracking Sensitivity	Please specify in (-) _____ dBm
(d)	Positional Accuracy	Please specify in mtrs ( 2dRMS confidence level higher than 95% or CEP)
(e)	Hot Start time	Please specify in seconds
(f)	Warm Start time	Please specify in seconds
(g)	Cold Start time	Please specify in seconds
(h)	GPRS class	Please specify class XXXX
(i)	Battery Backup	Please specify in hours
<b>2</b>	<b>Manufacturing &amp; Supply Plan</b>	Number of Days required for manufacture and supply of GPS Equipment for 130 Units_____days.
<b>3</b>	<b>Installation Plan</b>	Number of days required for installation of 130 Units in 18 Locations of Punjab _____days.
<b>4</b>	<b>O &amp; M Plan including supplying manpower, developing MIS reports and development of Data Centre at one desired location of PUNBUS.</b>	Are you willing to depute two personnel full time at disposal of PUNBUS for this Phase _____(yes/no). Number of days required for development of reports specified by PUNBUS_____DAYS.

The Bidders also need to submit the following documents as a part of their Technical Bid:

1. Technical specifications of the GPS/GPRS modules in support of the various parameters.
2. The communication protocols of the GPS devices for the purposes of configuration and integration with the application / communication server.

**Annexure G:**  
**Specifications of**  
**In-Bus Passenger Information System (PIS) Display Boards**

In addition to 130 GPS devices and 10 Passenger Information System (PIS) Display boxes at Bus Stops, ten (10) nos. of In-Bus displays are also proposed to be implemented in the Pilot Phase. The Internal Display board should conform to the urban bus specifications as per JNNURM/ ASRTU for fitment on standard Type I bus as per AIS 052.

The Internal Display should conform to the following specifications:-

SR.NO.	PARAMETER	INTERNAL DISPLAY (Standard)
1	<b>TYPE</b>	FIXED & SCROLLING TYPE
2	<b>LANGUAGE</b>	ENGLISH / PUNJABI
3	<b>DATA</b>	1. DIFFERENT ADVERTISEMENT MESSAGES (TO BE DISPLAYED WHEN THE DRIVER WANTS & CONTINUE PERIODICALLY). 2. NAMES & BADGE NO. OF CREW (DRIVER & CONDUCTOR). 3. ROUTE INFORMATION: ROUTE ID, SOURCE NAME, DESTINATION NAME AND NAME OF THE STOPS. (USER SELECTABLE) 4. PROVISION TO INTERFACE WITH THE VTS DEVICE AND DISPLAY NAME OF CURRENT & NEXT BUS STOPS.
4	<b>VISIBILITY</b>	VISIBLE FROM LAST SEAT OF THE BUS
5	<b>DISPLAY AREA</b>	800 X 100 mm (L X B)
6	<b>LED COLOUR &amp; WAVELENGTH</b>	AMBER (590 nm to 595nm) DOMINANT WAVELENGTH: 590nm
7	<b>LED SIZE</b>	5 mm (EACH DOT OF DOT-MATRIX MODULE)
8	<b>TEMPERATURE</b>	0 – 60 degrees C
9	<b>HUMIDITY</b>	5% - 95%
10	<b>SUPPLY</b>	NOMINAL INPUT 24V
11	<b>OTHERS</b>	1. DISPLAY IS SPLASH PROOF, RUGGED & VIBRATION PROOF. 2.DISPLAY IS MODULAR (BASED ON DOT-MATRIX MODULES).
12	<b>MOUNTING PLACE</b>	BEHIND THE DRIVER

The live working of the Internal Display will be shown as a part of the demonstration to be provided during the Technical Evaluation stage of the bid.

**Annexure H:**  
**Financial Bid Form**

SI No	Description	No of Units	Unit Price (in Rs)	Extended Quote (in Rs)
<b>(A) GPS devices:</b>				
1	Cost of the in-vehicle GPS-based tracking device	130		
2	Sales Tax on GPS device @ ____ %	130		
3	Installation charge for GPS devices	130		
4	Service Tax on Installation @ ____%	130		
5	Total cost of GPS devices including Installation and Taxes	130		
<b>(B) Passenger Information Systems (PIS) Display boards for BUS STOPS:</b>				
1	Cost of Display Boards for BUS STOP	10		
2	Sales Tax on Display boards @ ____%	10		
3	Installation charge for PIS boards	10		
4	Service Tax on Installation @ ____%	10		
5	Total cost of PIS display boards for Bus Stops including Installation and Taxes	10		
<b>(C) Passenger Information Systems (PIS) Display boards INSIDE THE BUS:</b>				
1	Cost of In-Bus Display Boards	10		
2	Sales Tax on In-Bus boards @ ____%	10		
3	Installation charge for In-Bus boards	10		
4	Service Tax on Installation @ ____%	10		
5	Total cost of In-bus PIS display boards including Installation and Taxes	10		
<b>(D) Recurring Charges:</b>				
1	Monthly Service Charges per GPS device, including SIM charges and Maintenance of GPS devices	130		
2	Monthly Service and maintenance/ AMC charges per PIS Display Board (Bus Stop and In-bus) throughout 5 yr period	20		
3	Monthly charges towards Control room infrastructure and Manpower Deployment costs, payable monthly	1		
4	Service Tax on monthly charges at (D)1+(D)2+(D)3 above, @ ____%			
5	Total Monthly Charges incl Service Tax			
6	Recurring Charges for 5 yrs (60months)	60		
<b>(E) Total Price =</b>				

Date

Signature with seal of tenderer.

*[Signature with Seal of the Bidder]*

- 1) It is certified that these are the lowest prices quoted by us for similar units to any other STU or any other organisation.
- 2) The prices given in the format above are unit prices. We understand that L1 will be established taking into account the total cost for the quantities for GPS device, PIS display as given earlier in the criteria of evaluation
- 3) It is understood that if we are the preferred bidder for GPS Units PUNBUS is at liberty to buy the PIS Boards from us or any other organisation but we will provide support.
- 4) Nothing has been concealed and the prices quoted are unconditional valid for a period of 180 days from date of opening of tender.
- 5) It is understood that all support activities required for successful implementation and operation of GPS System, PIS Boards, generation of reports etc. will be our responsibility and nothing extra than the rates specified will be charged except in case where PUNBUS requires extra work to be carried out beyond the scope of work.
- 5) We accept the terms and conditions of the tender and the system of evaluation of tender is clearly understood.

Date \_\_\_\_\_

\_\_\_\_\_  
(Signature with seal of Tenderer)



**Annexure I:**  
**Standards of Performance**

1. The payment related to the Monthly Service Charges by PUNBUS shall be performance linked such that Default Charges would be levied upon, when the performance is below the Standards of Performance provided herein.

2. Selected Bidder ("**Vendor**") shall ensure minimum 98% uptime of the system on monthly basis to be worked out according to clause 3 below ("**Standards of Performance**").

3. Service of Data centre and operation of Passenger information system also form a part of standard of performance and if desired reports are not generated or wrong reports are generated or if Passenger information system boards are not working then PUNBUS will issue notice for rectification within a period of 7 days of notice. If after 2 such notice the defects are not rectified, M.D. PUNBUS can impose a penalty at his discretion. Repeated defaults on this count will be counted as events of defaults and in such case the Contract can be cancelled and the performance security can be forfeited.

4. The uptime will be calculated as provided hereunder:

(a) The uptime in respect of a vehicle will be worked out on a monthly basis, based on the time the GPS device/ PIS display was expected to be functional, vis-à-vis the actual time the device remained functional during the month.

(b) The device shall be regarded as functional in respect of a vehicle during times when the spatial movement (location vs time) and speeds of the vehicle were captured by the device subject to sub-clause (c) hereunder.

(c) The system shall be deemed to have remained functional in respect of a vehicle during times when the spatial movement (location vs time) and speeds of the vehicle could not be captured by the system attributable to or arising out of the following:

(i) Any downtime which has arisen out of any accidents, tampering, wilful damages to the units which has arisen out of reasons that can be attributed to PUNBUS;

(ii) Any downtime due to the reason that the buses were not operated either on account of their being held up in the workshop for repair etc or being impounded by police or any other such reason;

(iii) Any downtime which has arisen due to theft, damages, vandalism relating to GPS Devices and related components; and

5. In case, the Standards of Performance is not achieved in respect of certain vehicles, then the following deductions ("**Default Charges**") may be made by the PUNBUS from the Monthly Service Charges payable to the Vendor in respect of such vehicles:

SI	Monthly Device Uptime	Default Charges as % of Monthly Service Charges
(a)	98% or more	Nil
(b)	90% or more but less than 98%	2 times (100% - actual uptime in %) For example if the actual uptime was 94%, the Default Charges as % of Monthly Service Charges shall be (100-94) x2%= 12%

(c)	85% or more but less than 90%	2.5 times (100% - actual uptime in %) For example if the actual uptime was 86%, the Default Charges as % of Monthly Service Charges shall be $(100-86) \times 2.5 \% = 35\%$
(d)	Less than 85%	2.5 times (100% - actual uptime in %) For example if the actual uptime was 84%, the Default Charges as % of Monthly Service Charges shall be $(100-84) \times 2.5 \% = 40\%$ . In case Vendor fails to achieve 85% uptime or more for a continuous period of 2 months, PUNBUS may direct Vendor to rectify the same (achieve 85% uptime or more) within 1 month. In case Vendor fails to cure the defect within the said period of 1 month to the satisfaction of PUNBUS, it shall be deemed to be a Vendor' Event of Default entitling PUNBUS to Terminate the Agreement.

**6. Performance Bank Guarantee.** A performance guarantee in the shape of bank guarantee equivalent to Rs. 5 Lakhs for 130 buses and additional guarantee of Rs. 2 lakhs for every additional 50 buses will be provided by the successful bidder. Similarly, Bank Guarantee of Rs 5 lacs for 10 PIS display boards and Rs. 2 Lakhs for 10 display boards inside buses, and proportionately extra for additional PIS displays boards at bus stands or inside buses will be provided by the bidder. Default charges and Penalty, if any, will be deducted from the monthly bill payable to the successful bidder but can also be deducted from this bank guarantee. The performance guarantee can be forfeited in part or full in case of termination or an event of default. In case of forfeiture in part or full of bank guarantee except in case of termination, it will be refurbished back to its original value within 30 days of such forfeiture failing which the agreement can be terminated by the Managing Director PUNBUS.

#### **7 Terminations for Default**

1. Without prejudice to any other rights available to PUNBUS for breach of contract or otherwise PUNBUS may in its sole discretion terminate the Concession Agreement in whole or in part if:
  - a. Vendor fails to perform any of Vendor's obligations set forth in the Concession Agreement; and/or.
  - b. Vendor fails to comply with the applicable laws, rules and regulations.
2. In any of the above mentioned conditions, PUNBUS shall have the right to invoke the Performance Guarantee.
3. If Vendor, having been notified, fails to remedy the defect(s) within a timeframe specified in the service Level Acceptance ('SLA') metrics section, PUNBUS may proceed to take such remedial action as may be necessary, at Vendor's risk and expense and without prejudice to any other rights which PUNBUS may have against the Vendor under the concession Agreement.
4. PUNBUS reserves the right to take further legal action / black list the vendor in case of default leading to termination which PUNBUS feels was a direct result of failure of the Supplier/Vendor.

#### **8. Termination for Insolvency, Dissolution etc**

PUNBUS may at any time terminate the Agreement by giving written notice to Vendor without any compensation to vendor, if Vendor becomes bankrupt or otherwise insolvent or in case of dissolution of firm or winding up of the company, provided that such termination will not prejudice any other rights of PUNBUS. Notwithstanding the generality of the foregoing, PUNBUS reserves the right to invoke the performance Guarantee.

#### **9. Settlement of Disputes and Arbitration**

Any legal proceedings arising between the PUNBUS and the Vendor, if it is a must, shall be instituted in the Courts situated in Chandigarh alone and not any where else in the country.

In case of a dispute arising between the parties with regard to interpretation of these terms and Agreement or their fulfilment, the dispute shall be referred to the Principal Secretary Transport for arbitration, who will be sole Arbitrator and whose decision shall be final and binding on both the parties.

The PUNBUS and the GPS enabled Automatic Vehicle Tracking suppliers both agree to accept the Principal Secretary Transport or his nominee, as the Sole Arbitrator, knowing fully well that the Principal Secretary Transport is an officer of the PUNBUS. Further no party shall have the right to go to the court of law for any dispute under this agreement for their fulfilment unless the dispute is first referred to the Sole Arbitrator specified under the Agreement.

Date

Signature with seal of the bidder.

**ANNEXURE J:**  
**AGREEMENT FOR SUPPLY OF GPS BASED BUS TRACKING SYSTEM**  
**(ON STAMP PAPER OF REQUISITE VALUE)**

THIS AGREEMENT is made this day on \_\_\_\_\_ between Punjab State Bus Stand Management Company (PUNBUS) Chandigarh through its Managing Director hereinafter called as 1<sup>st</sup> Party or PUNBUS & \_\_\_\_\_ through \_\_\_\_\_ hereinafter called the supplier or 2<sup>nd</sup> party which expression shall unless contrary to the meaning or context thereof shall mean and include their successors, executors and administrators. The supplier shall submit the unconditional acceptance of terms and conditions of supply, specifications, standards of performance etc. contained in the RFP documents before signing of agreement which shall form part of this agreement.

Whereas the supplier has agreed to supply GPS devices, PIS Display boards at Bus stands and PIS Display boards inside buses at PUNBUS premises as per the rates given in Financial Bid/Negotiated Rate which shall also forms part and parcel of this AGREEMENT , and the PUNBUS has agreed to place purchase order at these rates.

The Supplier agrees to abide by the terms and conditions given in the RFP and to meet the performance standards given in the RFP and agrees that in case of failure to supply the material as per purchase order or to meet performance standards penalties can be imposed by PUNBUS or agreement can be terminated after following the process mentioned in the RFP.

It is agreed that the complete RFP signed by both the parties forms a part and parcel of the agreement and the specifications, terms and conditions and other clauses mentioned form a part and parcel of this agreement.

Signature of the Supplier with Seal

Signature for and on behalf of  
PUNBUS with Seal

Date: \_\_\_\_\_

Witness with full address

1 \_\_\_\_\_  
2 \_\_\_\_\_

**PERFORMANCE BANK GUARANTEE**

**(To be stamped in accordance with Stamp Act provision in Chandigarh )**

Ref: Bank Guarantee No.

Date:

To,

Managing Director ( PUNBUS)

Jeevandeep Building Sector 17 B

Chandigarh 160017.

Phone 0172-2704112.

Dear Sir,

WHEREAS..... (Name of Firm) hereinafter called "the Firm" has undertaken, in pursuance of Contract dated..... (hereinafter referred to as "the Contract") to....., for the Punjab State Bus Stand Management Company (PUNBUS), Jeevandeep Building Sector 17 Chandigarh.

AND WHEREAS it has been stipulated in the said Contract that the Firm shall furnish a Bank Guarantee ("the Guarantee") from a scheduled bank for the sum specified therein as security for the performance of PUNBUS as per the agreement.

WHEREAS we \_\_\_\_\_ ("the Bank", which expression shall be deemed to include it successors and permitted assigns) have agreed to give PUNBUS:

THEREFORE the Bank hereby agrees and affirms as follows:

1. The Bank hereby irrevocably and unconditionally guarantees the payment of all sums due and payable by the Firm to Punjab State Bus Stand Management Company (PUNBUS) under the terms of their Agreement along with terms and conditions dated \_\_\_\_\_ on account of any failure on part of Firm to complete its obligations under the Agreement. Provided, however, that the maximum liability of the Bank towards PUNBUS under this Guarantee shall not, under any circumstances, exceed \_\_\_\_\_ in aggregate.

2. In pursuance of this Guarantee, the Bank shall, immediately upon the receipt of a written notice from PUNBUS stating any failure on part of Firm to complete its obligations under the Agreement, which shall not be called in question, in that behalf and without delay/demur or set off, pay to PUNBUS any and all sums demanded by P under the said demand notice, subject to the maximum limits specified in Clause 1 above. A notice from PUNBUS to the Bank shall be sent by Registered Post (Acknowledgement Due) at the following address:

Attention Mr \_\_\_\_\_.

3. This Guarantee shall come into effect immediately upon execution and shall remain in force for a period of 63 months from the date of its execution. However, the Guarantee shall, not less than 30 days prior to its expiry, be extended by the Bank for a further period of 6 months. The Bank shall extend the Guarantee annually in the manner hereinbefore provided for a period of as per PUNBUS from the date of issue of this Guarantee.

4. The liability of the Bank under the terms of this Guarantee shall not, in any manner whatsoever, be modified, discharged, or otherwise affected by:

i) Any change or amendment to the terms and conditions of the Contract or the execution of any further Agreements.

ii) Any breach or non-compliance by the Firm with any of the terms and conditions of any Agreements/credit arrangement, present or future, between Firm and the Bank.

5. The BANK also agrees that PUNBUS at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor, in the first instance without proceeding against Firm and not withstanding any security or other guarantee that PUNBUS may have in relation to the Firm liabilities.

6. The BANK shall not be released of its obligations under these presents by reason of any act of omission or commission on the part of PUNBUS or any other indulgence shown by PUNBUS or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the BANK.

*[Signature with Seal of the Bidder]*

7. This Guarantee shall be governed by the laws of India and only the courts of Chandigarh shall have exclusive jurisdiction in the adjudication of any dispute which may arise hereunder.  
Dated this ..... Day of .....

Witness

(Signature)  
(Name)

(Official Address)

(Signature)  
Bank Rubber Stamp  
(Name)  
Designation with Bank Stamp