CORRIGENDUM #3

Dated: 27.05.2021

RFP FOR ENGAGEMENT OF CONSULTANT FOR GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) BASED TOLLING

RFP Reference No.: IHMCL/GNSS/2021/01 published on dated 15.04.2021.

SI. No. Section	Original Clause as per RFP/Corrigendum	Updated Clause
1. Clause 4.3, Eligibility/Pre- Qualification Criteria SI. # 1	 i. The Sole Bidder or the Lead Member, in case of a consortium, must be a business entity incorporated in India under the Companies Act, 1956/2013 or the Limited Liability Partnerships Act, 2008. ii. In case of a consortium, the other member(s) of the consortium should be incorporated as per above subject to the following conditions: a. Maximum number of members in the Consortium shall be Three (3); b. Members of the Consortium shall nominate one member as the lead member (the "Lead Member"), who shall be responsible for all interactions with IHMCL; c. All members in the Consortium shall be jointly and severally liable; d. No bidder applying individually or as a member of a Consortium, as the case may be, can be member of another Consortium. 	 i. The Sole Bidder or the Lead Member, in case of a consortium, must be a business entity incorporated in India under the Companies Act, 1956/2013 or the Limited Liability Partnerships Act, 2008. ii. In case of a consortium, the other member(s) of the consortium should be incorporated as per above, OR, Indian Partnership Act, 1932 OR, any equivalent foreign act, subject to the following conditions: a. Maximum number of members in the Consortium shall be Three (3); b. Members of the Consortium shall nominate one member as the lead member (the "Lead Member"), who shall be responsible for all interactions with IHMCL; c. All members in the Consortium shall be jointly and severally liable;

SI. No.	Section	Original Clause as per RFP/Corrigendum	Updated Clause
		e. Proposal/Bid should contain the information required for each member of the Consortium; f. Proposal/Bid should include a brief description of the roles and responsibilities of individual members; iii. The Sole Bidder/all members in case of a consortium should be registered with GST in India.	 d. No bidder applying individually or as a member of a Consortium, as the case may be, can be member of another Consortium. e. Proposal/Bid should contain the information required for each member of the Consortium; f. Proposal/Bid should include a brief description of the roles and responsibilities of individual members;
		Supporting Documents Sole Bidder or all consortium member, in case of Consortium	g. the members of the Consortium shall enter into a Memorandum of Understanding (MoU) for the purpose of submission of the Proposal. (Format provided at Annexure 1 of this Corrigendum) iii. The Sole Bidder / all members Lead Member, in case of a
		i. Copy of Certificate of Incorporation/ Registration under Companies Act, 1956/2013 or any equivalent foreign act, as applicable or Deed of partnership registered under Limited Liability Partnership Act 2008.	consortium should be registered with GST in India. It may be note that in case of award of Contract, all billing, and payments, etc. shall be in the name of the Sole Bidder or Lead Member (in case of a consortium) only.
		 ii. Power of Attorney for Lead Member of Consortium as per the format supplied along with Letter of Authorization. iii. GST Registration Certificate (Sole Bidder or Lead Member of the consortium only) 	Supporting Documents Sole Bidder or all consortium member, in case of Consortium
			 i. Copy of Certificate of Incorporation/ Registration under Companies Act, 1956/2013 or any equivalent foreign act, as applicable or Deed of partnership registered under Limited Liability Partnership Act 2008, as applicable. ii. Power of Attorney for Lead Member of Consortium as per the format supplied along with Letter of Authorization.

SI. No.	Section	Original Clause as per RFP/Corrigendum	Updated Clause
			iii. GST Registration Certificate (Sole Bidder or Lead Member of the consortium only)iv. MoU of Consortium as per Annexure 1.
2.	Section 7.1 (SI# 1)	Scope of Work Broad Task SI # 1 - Literature survey & reverse engineering of case studies (at least two of these)	The sub-tasks are SI #1 - Literature survey & reverse engineering of case studies shall stand revised as provided in Annexure 2 of this Corrigendum (Point # A)
3.	Section 7.1 (SI# 3)	Scope of Work Broad Task SI # 3 - Standards & specifications	Following points shall be added in the existing sub-tasks points (under enforcement mechanism) The solution should include a fraud management system design, a fine algorithm and how fine/penalty shall be collected and consequence if fine not paid).
4.	Section 7	Scope of Work - New Clause	Additional Scope The Consultant shall be required to provide Programme Management Unit (PMU) Support for a period up to 1 year ("PMU phase") to supervise the work during Implementation/ post-implementation phase Detailed sub-tasks are provided in Annexure 2 of this Corrigendum. (Point # B)

SI. No.	Section	Original Clause as per RFP/Corrigendum	Updated Clause
5.	Section 5.2.3.	Resource Requirement	The resource requirement shall stand revised as provided at Annexure 2 SI # C of this Corrigendum.
6.	Section 7.2	Contract Duration The overall duration of the Consultancy Assignment shall be 1 year, extendable up to additional 6 months at sole discretion of IHMCL and mutual consent.	Contract Duration The overall duration of the Consultancy Assignment shall be 4 2 (two) years, extendable up to additional 1 year at sole discretion of IHMCL and mutual consent.
7.	Section 7.3	Deliverables & Timelines	Revised deliverable and their timelines are provided at Annexure 2 of this Corrigendum (SL # D)
8.	Section 7.5	Payment Milestones	Revised payment Milestones is provided at Annexure 3 of this Corrigendum.
9.	Section -9, Appendix II :Financial Proposal	Financial Bid Format	Revised Financial/Commercial Bid Format is provided at Annexure 4 of this Corrigendum. Also, bidders are required to refer to excel sheet uploaded on e-procurement portal.

Section	Original Clause as per RFP/Corrigendum		Updated Clause	
Schedule of the Tender (Key dates) Bid Due Date for submission on e-tender portal	Bid Due Date for submission on e-	Date 10 th June 2021 till 16:00 Hrs IST 10 th June 2021 till 16:30		
	of following documents at IHMCL office: • Document Fee	-	office: Document Fee EMD/Bid Security	Hrs IST
	Power of Attorney		Opening of Technical Bids	11 th June 2021 at 17:00 Hrs
	Opening of Technical Bids	28th May 2021 at 17:00 Hrs		
	Section 2, Schedule of the Tender (Key	Section 2, Schedule of the Tender (Key dates) Event Description Bid Due Date for submission on e-tender portal Due date for physical submission of following documents at IHMCL office: Document Fee EMD/Bid Security Power of Attorney	Section 2, Schedule of the Tender (Key dates) Date	Section 2, Schedule of the Tender (Key dates) Due date for physical submission of following documents at IHMCL office: Document Fee EMD/Bid Security Power of Attorney

Annexure 1 – Draft Memorandum of Understanding (MoU)

(To be executed by Member of the Consortium)

[On Non-judicial stamp paper of INR 100 duly attested by notary public]

amono Party o [Addre	of the Fess], as	Indum of Understanding (MoU) entered into this day of [Date] [Month] 2021 at [Place] (hereinafter referred to as "") and having office at [Address], India, as irst Part and(hereinafter referred as "") and having office at Party of the Second Part and(hereinafter referred as "") and lat [Address], as Party of the Third Part.
The pa	arties ar	re individually referred to as Party and collectively as Parties.
Propos	sal date	ndian Highways Management Company Limited (IHMCL) has issued a Request for d [Date] (RFP) from the Applicants interested in < RFP for Engagement of GNSS based tolling> :
said P	roject a	AS the Parties have had discussions for formation of a Consortium for bidding for the nd have reached an understanding on the following points with respect to the Parties' igations towards each other and their working relationship.
	JTUAL OLLOWS	UNDERSTANDING OF THE PARTIES, IT IS HEREBY AGREED AND DECLARED S:
i.	The puto:	urpose of this Agreement is to define the principles of collaboration among the Parties
	a.	Submit a response jointly to Bid for the "RFP for Engagement of Consultant for GNSS based tolling" as a Consortium.
	b.	Sign Contract in case of award.
	C.	Provide and perform the supplies and services which would be ordered by the Purchaser pursuant to the Contract.
ii.	as, bu Purcha	greement shall not be construed as establishing or giving effect to any legal entity such it not limited to, a company, a partnership, etc. It shall relate solely towards the aser for "RFP for Engagement of Consultant for GNSS based tolling" for and related tion works to be performed pursuant to the Contract and shall not extend to any other es.
iii.	The Pa	arties shall be jointly and severally responsible and bound towards the Purchaser for the

performance of the works in accordance with the terms and conditions of the BID document,

and Contract.

iv.	suc	,	hall act as Lead Member of the Consortium. As rty's combined activities and shall carry out the	
	a.	To ensure the technical, commercial and a	administrative co-ordination of the work package	
	b. To share the technical experts having experience in the proposed technology.			
	c. To lead the contract negotiations of the work package with IHMCL.			
	d.	The Lead partner is authorized to receive in of all Parties.	instructions and incur liabilities for and on behal	
	e.	In case of an award, act as channel of contract	communication between the Purchaser and the	
	f.	Shall raise invoice and received the paym all regulations under GST.	nent on behalf of the Consortium and comply to	
	g.	Shall attest all deliverables submitted to Consulting Head/partner of the firm.	HMCL signed by the Team Leader and the	
٧.		at the Parties shall carry out all responsi reement.	sibilities as Developer in terms of the Projec	
vi.		at the broad roles and the responsibilities o as below:	of each Party at each stage of the Bidding shal	
Party	A:			
Party	B:			
Party	C: _			
vii.		at the Parties affirm that they shall implement cessary steps to see the Project through exp	nent the Project in good faith and shall take al xpeditiously.	
viii.		at this MoU shall be governed in accordance all have exclusive jurisdiction to adjudicate o	ce with the laws of India and courts in New Delh disputes arising from the terms herein.	
		whereof the Parties affirm that the informati is MoU duly executed on the date and year	•	
(Party	of th	he first part) (Party of the sec	cond part) (Party of the Third part)	
Witne	SS:			
i.				
ii.				
iii.				
			Dago 7 of 17	

A. Sub-task of Deliverables # 1 - Literature survey & reverse engineering of case studies

The sub-tasks are SI #1 - Literature survey & reverse engineering of case studies shall stand revised as below:

a. Report 1 (a) - To be submitted within T + 2 weeks

The consultant shall also be required to study different technologies, other than GNSS technology, being deployed for toll collection across the Globe and carry out a cost-benefit analysis of these technologies.

Consultant shall carry out survey, research and presentation of major options (technologies) and the estimated total cost analysis - covering all the metrics in a defined Outcome Matrix (as given in (b) below).

Carry out review with chosen experts from India's leading technical institutes such as IITs, IISc, IIMs, etc. as well as technical teams of major automobile manufacturing companies (OEMs) like Tata Motors, Mahindra & Mahindra, Maruti) and conduct consultative discussions to seek their ideas and recommendations for subsequent phase.

b. Report 1 (b) - to be submitted within T+ 4 weeks

Based on the study the consultant shall recommend the Final best suited Technology in Indian Conditions and the Final Outcome Matrix as below:

- i. the basis of comparison of various options of technologies including GNSS
- ii. the optimising criteria, every effort should be made to achieve the best possible outcome (as per metrics defined)
- iii. the judging criteria, not just for selecting the final technology, but the vendor (Implementing agency).

Output

 A detailed recommendation along with cost-benefit analysis on best-suited technology for tolling in India

c. Report 1 (c) - to be submitted within T+ 6 weeks

Examine different models of GNSS (or the best suited technology or selected technology) based tolling systems operational globally including:

- Global use cases, countries using GNSS (or selected technology) based tolling.
- Technology in use, Data Governance, handling of privacy issues of users and Analytics Strategy
- Toll-company/ authority end infrastructure manufacturer/ vendor ecosystem
- Institutional mechanism

- Operating cycle and model, data generated, ownership/ custodianship, storage, protection & destruction (in Europe, GDPR will apply)
- Operating standards & specifications
- Vehicle end infrastructure (On Board Unit (OBU), assisted GPS/GNSS etc.) manufacturer/ vendor ecosystem
- Regulatory mechanism in use (including admissibility of GNSS coordinates as means of determining distance travelled)
- Enforcement mechanism
- Performance statistics if any
- Benefits to users
- Outcome Matrix (as provided below)

Output:

- Literature study report
- Case studies (2 nos. at least)

The proposed **Outcome Matrix** should cover the following, parameters but not limited to,

- **Toll Proportionality:** In the new system, is the toll proportional to the no of km used by vehicle and by type of vehicle; especially for local residents and businesses who may be using only 1-2 km of a stretch if they have no other alternative road
- Fraud Immunity: How immune is the new solution to fraud (disconnection of vehicle sensor, tampering, etc). The metric here is expected % Fraud should be less than 2% of the total toll, where occasional offender are penalised, systematic offenders vehicles are confiscated/seized
- Total Cost & Time: Total expected cost of implementation for the entire existing highway network including the fraud detection system (which should be identified and spelled out in the RFP in subsequent deliverables, how many km, how many exits both soft exits and hard exits). This should include one time and annual cost for 7 years.
- Zero Friction: There should be no speed reduction below the stated speed limit except of
 course when vehicles come on to the ramp or exit the highways where on-ramp and exit
 recommended speeds may be assumed. Similarly, users should face no harassment, e.g. if
 their wallet balance dips, they should get an alert and a day to refill without being stopped and
 harassed, a surcharge of Rs 50-100 can be added for example to encourage good behaviour
- **Resiliency:** The solution should be resilient to Indian conditions work in excess of 10 deg C of the maximum 10 year temperatures of the locations installed (both max, min), work under expected conditions of max Fog, dust, rain and other conditions, be resilient to failures in network and power as noted. The design should state % uptime of any given sensor, % uptime of any given junction/ fraud station and add up to a Gross Resilience number which is how many toll km worth of toll will be lost worst case in a given year and a mechanism to statistically measure and audit this every quarter.

B. Additional scope for PMU Support during Implementation phase

The programme management unit (PMU) support shall start upon on-boarding of the Implementing Agency, as per requirement of IHMCL/NHAI. The board activities to be carried out are as below:

SI#	Broad task	Sub-tasks
8	Programme Management	Assist in overall programme management during implementation phase of the project, including the following broad activities, but not limited:
	Support ("PMU Phase")	 i. Develop the project plan and project charter ii. Coordinate workshops and discussion meetings with various stakeholders
		iii. Ensure that the technology standards, guidelines & frameworks are adhered to during implementation.iv. Assist in drafting and issuance of Government Orders/Circulars
		 v. Supervise/ Monitor the performance of the Implementing Agency against the base project plan vi. Apprise client/ stakeholders about the progress of the Implementation Agency and timely raise alarms in case any slippages of timeliness/ contractual obligations are envisaged/ observed. vii. Validate the work executed by the Implementing Agency and assist IHMCL/ NHAI to process the contractual obligations with the Implementing Agency. viii. Monitoring the performance of the overall system in terms of availability & efficiency against the service levels already defined for implementing agency ix. Monitoring the deployment and commissioning of necessary System and SLA monitoring
		 x. Supervise/ Monitor the operations and maintenance of the overall system as per the standards and requirements defined for Implementing Agency, including but not limited to resolution of issues, availability of the system, updating hardware or system software etc. xi. Ensure that all the outcome/ deliverable, as envisaged in the Implementing Agency RFP/ Contract, are adhered by them.
		Deliverable during PMU phase
		Monthly Progress Report by the 5 th of every succeeding month throughout the PMU phase

C. Key Resource Requirement (Revised)

i. Design Phase

SI#	Resources required	No. of Resources	Estimated man- month
1.	Team Leader	1	12
2.	GNSS Expert	1	9
3.	Legal & Regulatory expert	1	6
4.	Finance & PPP expert	1	3
5.	Public Procurement & Bid Process Management Expert	1	6
6.	Senior Consultant (Management)	2	12
7.	Other Domain Expert (Subject Matter Expert)	1	9

ii. PMU Phase

SI#	Other Domain Expert (Subject Matter Expert) Resources required	No. of Resources	Estimated man-month
1.	Team Leader	1	12
2.	GNSS Expert	1	6
3.	Senior Consultant (Project Management Expert)	2	24
4.	Other Domain Expert (Subject Matter Expert)	1	3

The PMU phase shall start w.e.f. the issuance of LoA or Work Order to the Implementing Agency.

Minimum requisite Qualification & Experience of additional resources (CV not required to be submitted during bidding phase)

S.No.	Resource Name	Minimum Education	Experience
1.	Senior Consultant (Management)	B.E. + MBA	 Minimum 7 years' experience of working in projects related to infrastructure and/or IT domains. Experience in preparation of technical document for solutions in implementing infrastructure or IT related projects
2.	Senior Consultant (Project Management Expert)	B.E. + MBA	 Minimum 7 years' experience of working in projects related to infrastructure and/or IT domains. At least 5 years' Experience in providing PMU support in large-scale Government projects to infrastructure and/or IT domains

S.No.	Resource Name	Minimum Education	Experience
3.	Other Domain Expert (Subject Matter Expert)	Post graduate degreee in the subject matter of specialistation (as per requirement) from an Institute of repute	 At least 15 years of experience in the subject domain. The domain expert resources shall be deployed as per requirement of the project and in consultation with IHMCL.

D. Deliverables & Timelines (Revised)

	Timelines for submission	
Deliverable #1 Literature survey & reverse engineering of case studies	Submission & Presentation on of 1 st Draft Report of Deliverable #1	T + 6 weeks
Deliverable #2 Current practice, Option	Submission & Presentation on of 1 st Draft Report of Deliverable #2	T + 10 weeks
analysis and readiness assessment for GNSS based tolling in India	Submission of Final Report & Presentation of Deliverable #2	Within 15 days of presentation of 1 st Draft Report
Deliverable #3 Report on Standards & specification of the proposed GNSS based tolling system	Submission & Presentation on of 1 st Draft Report of Deliverable #3	T + 18 weeks
	Submission of Final Report & Presentation of Deliverable #3	Within 15 days of presentation of 1 st Draft Report
Deliverable #4 Report on Changes to	Submission & Presentation on of 1 st Draft Report of Deliverable #4	T + 12 weeks
legislation & regulatory matters	Submission of Final Report & Presentation of Deliverable #4	Within 1 month of presentation of 1 st Draft Report
Deliverable #5 Draft RFP for Selection of	Submission & Presentation on of 1 st Draft Report of Deliverable #5	T + 22 weeks
Implementing agency for GNSS based tolling in India	Submission of Final Report & Presentation of Deliverable #5	Within 4 weeks presentation of 1 st Draft Report
Deliverable #6 Bid Observation Report	Submission of Bid Observation Report	T+ 38 weeks

The above deliverables should be supported by an attestation signed by the Team Lead and the Consulting head/partner of the firm that:

- a. All significant approaches especially the ones with the potentially best possible outcomes have been presented fairly and transparently,
- b. All suggestions, objections, or ideas from experts both in-house and from the advisory meetings have been summarised fully along with reasons for acceptance or otherwise.

Annexure 3 - Payment Milestones - Revised

1. The payment Milestone for various deliverables shall be released as under:

Milestone #	Deliverable	Amount payable (in Rs.)	
Milestone 1	a. Submission of Deliverable #1 - Literature survey & reverse engineering of case studies, including Report 1 (a) and Report 1 (b)	10% of SI. # 1 (A) in Form 2A: Summary of Costs	
	 b. Submission of Deliverable #2 - Current practice, Option analysis and readiness assessment for GNSS based tolling (or the selected technology) in India 		
Milestone 2	Submission of Deliverable #3 - Report on Standards & specification of the proposed GNSS (or the selected technology) based tolling system	10% of SI. # 1 (A) in Form 2A: Summary of Costs	
	b. Approval on Deliverable # 4 Report on Changes to legislation & regulatory matters		
Milestone 3	Approval on Deliverable #5 Draft RFP for Selection of Implementing agency for GNSS (or the selected technology) based tolling in India	10% of SI. # 1 (A) in Form 2A: Summary of Costs	
	Release of RFP for selection of Implementing agency for GNSS (or the selected technology) based tolling in India		
Milestone 4	Completion of Bid Process Management for Selection of Implementing agency for GNSS tolling in India and Submission Bid Evaluation report.	15% of SI. # 1 (A) in Form 2A: Summary of Costs	
Milestone 5	Issuance of Letter of Award (LoA) and Contract Signing with Implementing agency	5% of SI. # 1 (A) in Form 2A: Summary of Costs	

2. Balance payment of SI. # 1 (A) in Form 2A – Summary of Costs, shall be linked to the **Outcome Parameters** of the above deliverables during design phase and shall be released as per Payment Milestone as under:

Milestone #	Outcome Parameters/ Milestone	Amount payable (in Rs.)
Milestone 6	Completion of UAT of GNSS (or the selected technology) based tolling system in India	10% of SI. # 1 (A) in Form 2A: Summary of Costs
Milestone 7	Upon Go-Live of GNSS (or the selected technology) based tolling system in India	10% of SI. # 1 (A) in Form 2A: Summary of Costs
Milestone 8	On-boarding of 1 Million vehicles on GNSS (or the selected technology) based tolling	5% of SI. # 1 (A) in Form 2A: Summary of Costs

Milestone #	Outcome Parameters/ Milestone	Amount payable (in Rs.)	
	system in India, Or, Cumulative toll collection via the new system of INR 1000 Crore , whichever earlier.		
Milestone 9	On-boarding of 5 Million vehicles on GNSS (or the selected technology) based tolling system in India, Or, Cumulative toll collection via the new system of INR 2500 Crore , whichever earlier.	5% of SI. # 1 (A) in Form 2A: Summary of Costs	
Milestone 10	PMU Support – Payment shall be released in equated quarterly payments upon commencement of PMU phase (i.e. w.e.f. the issuance of LoA or Work Order to the Implementing Agency)	20% of SI. # 1 (A) in Form 2A: Summary of Costs	

3. **Payment under Out-of-Expenses head**, as per SI. # 3 (C) in Form 2A – Summary of Costs shall be reimbursed on submission of Invoices with supporting bills, subject to maximum as specified in the Financial Proposal (Form 2C).

Annexure 4 – Revised Financial/Commercial Bid Format

1. Form 2A: Summary of Costs

S. No.	Particulars	Amount (in Rs.)
1	Total Amount of Design Phase - (A) (Refer Form 2B below)	
2	Out of Pocket Expenses - (B) (Refer Form 2C below)	
	Total (A+B), excluding GST	

2. Form 2B: Breakdown of Remuneration (man month rate)

S. No.	Name of Resource	Position	Deliverables Involved	Unit Cost (per man month rate)	Total Man- month required	Amount (in Rs.)
1.		Team Leader			24	
2.		GNSS Expert			15	
3.		Legal & Regulatory expert			6	
4.		Finance & PPP expert			3	
5.		Public Procurement & Bid Process Management Expert			6	
6.		Senior Consultant (Management) - 1			6	
7.		Senior Consultant (Management) - 2			6	
8.		Other Domain Expert (Subject Matter Expert)			12	
9.		Senior Consultant (Project Management Expert) - 1			12	
10.		Senior Consultant (Project Management Expert) - 2			12	
	Total (Should be equal to (A) in SI # 1 of Form 2A)					

3. Form 2C: Estimate of Out-of-Pocket Expenses & Miscellaneous Expenses

S. No.	Description	Unit	Quantity	Unit Price (in Rs.)	Amount (in Rs.)
	Travel expenses (air fare, taxi, parking, toll etc.)				
2	Meal expenses;				
3	Administrative expenses;				
4	Lodging Expenses if work demands overnight stays				
5	Printing. Stationery, etc.				
6	Miscellaneous expenses				
	Total (Should be equal to (B) in SI # 2 in Form 2A)				