CORRIGENDUM-1

Pre-bid clarification for selection of agency for installation, commissioning, operation and maintenance of advanced driver assistance system (ADAS) and driver fatigue & monitoring system (DFMS)/DASHCAM in buses under CRUT on solution as a service (SaaS) model vide tender ref. No. 854/CRUT, Dtd.17.04.2025

Sr. No	RFP Clause No	RFP Clause			Revised Clause		
		Sr. No	**Particulars**	**Details**	**Sr. No**	**Particulars**	**Details**
1	C. Bid Data Sheet Page No.8 & 9	9.	Last date for receipt of Technical and financial proposals (Through Speed Post /Registered Post / Courier).	07.05.2025 till 4:00 PM	9.	Last date for receipt of Technical and financial proposals (Through Speed Post /Registered Post / Courier).	06.06.2025 till 04:00 PM
		10.	Date and Time of Opening of Technical proposals.	8.05.2025 at 12:00 PM	10.	Date and Time of Opening of Technical proposals.	09.06.2025 at 06:00 PM
		11.	Date and Time of opening of financial proposals.	To be intimated later.	11.	Date and Time of opening of financial proposals.	To be intimated later

Sd/-

General Manager (P&A)

Capital Region Urban Transport

SL. NO.	TENDER CLAUSE NUMBER	CLAUSE TITLE	AS PER RFP	BIDDERS QUERIES / JUSTIFICATION BY BIDDER	CLARIFICATION SHOUGHT BY CRUT
1.	Clause no- 4. Sl. No. 2 & 3	Eligibility Criteria for Bidders	The bidder must meet the following financial criteria: • Minimum average annual turnover of INR 15 crores over the last three financial years (FY 2021-22, FY 2022-23, and FY 2023-24). • In the case of a consortium, the Lead Partner or other partner(s) or collectively must meet the minimum average annual turnover requirement of INR 15 crores over the same period.	Annual Turnover and Net Worth criteria mention consideration of the last 3 financial years. As the financial year 2024–25 has been completed and audited for some companies (including ours), we request to consider the FY 2024–25 for calculating Annual Turnover and Net Worth. This will help new/startup companies with completed audited financials to participate fairly.	RFP Prevails
2.	Clause no 4. Sl. No. 3	Eligibility Criteria for Bidders	The bidder must meet the following Net worth criteria: • Minimum average annual Net worth of INR 2 crores over the last three financial years (FY 2021-22, FY 2022-23, and FY 2023-24). • In the case of a consortium, the Lead Partner or other partner(s) or collectively must meet the minimum average annual Net worth of INR 2 crores over the same period.	The minimum average annual Net Worth of INR 2 crores over the last 3 financial years. We respectfully submit that the Net Worth criteria may be high for startup and emerging companies. We request you to consider revising it to INR 1–1.5 crores to ensure broader participation and support innovation-driven Indian MSMEs.	RFP Prevails

3.	Clause no. 2.4	Bus ADAS-DFMS infrastructure Overview	Breath Analyser	The mention of "Breath Analyser" technology is noted, but no detailed technical specifications are provided in the RFP. Kindly confirm whether technical specifications for the Breath Analyser are required to be proposed by the bidders, or whether it will be standardized/defined by the authority separately.	MQ3 sensor based solutions 1. Detection Range: 25-500 ppm (parts per million) of alcohol gas concentration. 2. Operating Voltage: 12-24 ± 0.1V (DC). 3. Operating Temperature: -10°C to 50°C. 4. Sensitivity: High sensitivity to alcohol, with a fast response time.
4.	Clause no . 2.4	Technical Specification – Collision Avoidance	Collision Prevention and Advanced Emergency Braking System	Technology related to Collision Prevention and Advanced Emergency Braking System (AEBS). It appears that this technology is only available with one OEM in India under patent, which may restrict fair competition. Also, the practicality of this technology on Indian roads with heavy traffic and unpredictable driving behaviour is questionable. We request that this requirement be reconsidered or removed to ensure a level playing field for all participants.	Advanced Emergency Braking System (AEBS) is not part of the RFP. Refer RFP for details.
5.	Clause no- 5 & 6	EMD and Tender Cost Exemption	A sum of Rs. 5,00,000 (Rupees Five lakhs only) shall be paid towards Earnest Money Deposit in the form of Demand Draft (DD) from any Nationalized Bank or Scheduled Bank drawn in favor of "Capital Region Urban Transport, Bhubaneswar", Odisha	The RFP requires submission of EMD and Tender Cost We kindly request exemption from EMD and Tender Cost as we are a registered MSME and Startup entity. As per the prevailing government guidelines supporting MSMEs, such exemptions are permitted to encourage startup participation and innovation. We request the concerned authority to consider this relaxation to ensure wider and fair	EMD Exemption is allowed to bidder having MSME certificate certified and inspected by any State/Central government organization.

				participation of emerging technologies and MSME startups.	
6.		General	General	Technical specifications appear proprietary We request the inclusion of generalized and non-proprietary specifications to allow fair participation by multiple vendors. Proprietary requirements may unintentionally restrict participation and innovation from emerging players. A more open technical specification format would enable a broader set of solutions, encouraging indigenous and innovative approaches, especially from startups and MSMEs.	RFP Prevails
7.	Clause no- 5 & 6	EMD and Tender Cost Exemption	A sum of Rs. 5,00,000 (Rupees Five lakhs only) shall be paid towards Earnest Money Deposit in the form of Demand Draft (DD) from any Nationalized Bank	Is there MSME Exemption for EMD , TENDER DOCUMENTS ,Financial Criteria eligibility as we are Indian Manufacturing company.	EMD Exemption is allowed to bidder having MSME certificate certified and inspected by any State/Central government organization.

8.				1.Due to tender required only radar or any technology to measure 2. Is the ICCC is the hardware part of scope of supply? Please describe specific requirement part of ICCC. 3. What is storage required in NVR 4. Kindly Specify number and types of manpower 5. Number of users for BI and Applicaon as concurrent and fixed. Is a separate app expected for crew members and control room operators? Please list expected features in the mobile interface 8.Change Management Scope Is the bidder responsible for changes arising from CRUT's evolving operaonal scope (e.g., addional cies or buses)? How will such scope expansions be handled commercially?	1. Radar Based CPEWS 2. Refer RFP 3. Data of more than 7 Days in device 4. Selected SI has to deploy adequate technical resources (On Site) for handholding and O&M for project duration. 5. 25-100
9.	Clause no. 16	Information Data sheet	Joint Venture/Consortium	Maximum two members including OEM AllowedConsidering the extensive hardware and software requirements across diverse technologies such as ADAS, DFMS, MOIS, BSIS, AI cameras, and proximity sensors—many of which are still evolving and not entirely manufactured in India—may we request that internationally certified OEMs (not sharing a land border with India) be allowed to participate through a consortium? The current clause appears to favor a limited set of providers and may hinder broader competition.	RFP Prevails

| 10. | Clause no. 1.2 | Project Objectives, Overview and Components | Objective: 1 – Collision Prevention and Emergency Warning System (CPEWS) The Collision Prevention and emergency warning system (CPEWS) detects critical proximity to a vehicle in front, warns the driver, and provides assistance to prevent collision. If the system detects critical proximity to a stationary or moving vehicle/commuter(s) ahead, it prepares the warning system for the possibility of an emergency stop. Parameters: i. Supply, install, and configure of sensors/Radar/AI Cameras. ii. Deploy the Back office solution for real time monitoring and reporting. iii. Integrate the system with CRUT integrated command and control center (ICCC) system. | Objective 1 – Collision Prevention and Emergency Warning System (CPEWS) Kindly clarify whether the CPEWS hardware is expected to be AI camera-based or radar-based. Additionally, the system description only mentions warning the driver and does not specify integration with the vehicle's braking system. We would like to highlight that retrofitting such braking integration on heavy commercial vehicles without OEM support could void manufacturer warranties and is not generally advisable. | CPEWS should be RADAR based solution |

11.	Clause no. 1.2	Project Objectives, Overview and Components	Objective: 2 – Blind Spot Information System (BSIS) Blind-spot monitoring uses a set of sensors mounted on the side mirrors or rear bumper to detect vehicles in the adjacent lanes. If the sensors detect something, they'll alert driver via an audible and/or visual warning. Some vehicles even use a camera as the main part of the system or to complement the sensors. Parameters: i. Supply, install, and configure of Proximity sensors and cameras Obstacle identified as target Alarms and warning signals. ii. Deploy the Back office solution for real time monitoring and reporting. iii. Integrate the system with CRUT integrated command and control center (ICCC) system. Objective: 3 – Moving Off Information System (MOIS) A system used to detect and inform the driver of the presence of pedestrians and cyclists in the close-proximity forward blind-spot of the vehicle and, if deemed necessary warn the driver of a potential collision. Parameters: i. Supply, install, and configure of Proximity sensors and cameras Obstacle identified as target Alarms and warning signals. ii. Deploy the Back office solution for real time monitoring and reporting. iii. Integrate the system with CRUT integrated command and control	Objective 2 – Blind Spot Information System (BSIS) & Objective 3 – Moving Off Information System (MOIS) As per industry standards, BSIS and MOIS are designed to provide audio-visual alerts directly to the driver within the vehicle cabin, rather than transmitting such alerts to a backend system. Can you confirm if backend integration is indeed expected? Also, in dense urban traffic, excessive alerts due to constant proximity of vehicles or pedestrians may overwhelm the driver and impact alert efficacy. Your clarification on this would be highly appreciated.	Backend Integration Required

			center (ICCC) system.		

12.	Section 1.2	Project Objectives, Overview and Components	Objective: 5 – Incident Management SystemEfficient and coordinated management of incident which reduces their adverse impact on public safety, traffic conditions and the local economy.i. Reduced vehicle delays and enhanced safety to motorists through reduction of incident frequency and improved response and clearance times.ii. An event data recorder, similar to an accident data recorder (ADR) is a device installed in some automobiles to record information related to traffic collisions.	Objective 5 – Incident Management SystemKindly confirm whether the Incident Management System (IMS) is expected to report only incidents involving the specific bus unit equipped with ADAS-DFMS, or also broader traffic-related incidents. If the latter, it appears to require features akin to map-based analytics, possibly outside the scope of this system. Further clarification is requested.	Incident Management System (IMS) is expected to report only incidents involving the specific bus unit equipped with ADAS-DFMS,
13.	Clause no. 2.4	2.4. Bus ADAS-DFMS infrastructure Overview	Buses will be integrated with CCC through Bus Driver Units or On-Board Units. Obus/bdus will communicate with CCC with a GSM service. Officials will be monitoring the real time bus movement from the CCC.	2.4 Bus ADAS-DFMS Infrastructure Overview The schematic indicates AEBS (Automatic Emergency Braking System) integration, which contrasts with the stated objective of CPEWS. This may indicate a preference for a specific bidder setup. Additionally, the schematic includes a breath analyzer which is not mentioned in the RFP's functional requirements. Kindly clarify if these are mandatory or illustrative.	AEBS is not in the scope of work under this RFP & Breath Analyzer is Mandatory.

| 14. | Clause no. 4 | Incident Management System | Incident management is the process of managing multi-agency, multi-jurisdictional responses to disruptions. Efficient and coordinated management of incidents reduces their adverse impacts on public safety, traffic conditions, and the local economy. Incident management yields significant benefits through reduced vehicle delays and enhanced safety to motorists through the reduction of incident frequency and improved response and clearance times. Incident management is a planned effort to use all resources available to reduce the impact of incidents and improve the safety of all involved. An incident is any non-recurring event that impacts the transportation system. Incident management system is envisaged to be implemented as part of ADAS-DFMS which shall facilitate communication of activities internally to enterprise and externally as well. IMS shall act as a single point of communication exchange for all activities related to incident management. | Incident Management System

The RFP outlines overlapping functions for ADAS and IMS. Could you please confirm if both systems are expected to perform concurrently, or if each has distinct, non-overlapping roles as inferred? Clear separation of responsibilities will help ensure appropriate system design and compliance. | Incident Management System (IMS) is expected to report only incidents/accidents involving the specific bus equipped with ADAS-DFMS, |

| 15. | Clause no. 5.2 | Data Storage | The design of the database system shall be arranged to keep track of all valid SC in circulation. This information shall aid in reporting any abnormal usage of stored value or trips and in providing refunds for corrupted SC. The database system shall satisfy the following requirements:

ü Data storage capacity shall be sufficient to maintain 12 months transaction data available on line for ad hoc report generation and other investigations. The volume of data to be calculated for this requirement shall assume 500,000 transactions per day. The database shall be easily expanded to handle double the transaction over the next five years. | The RFP requires storage of 500,000 daily "transactions" for 12 months. Could you please define what constitutes a "transaction" in this context? Are individual alerts from ADAS and DFMS to be counted as transactions? This clarification will help in estimating appropriate cloud storage capacity. | Shall be sufficient for storing one years of events based data. |

| 16. | Clause no. 10 | Technical Requirements: Hardware/Devices (per Bus) | Technical Requirements: Hardware/Devices (per Bus) | The specifications for both the driver cabin DFMS camera and the passenger door side camera appear to be identical. Kindly confirm whether this is intentional or if there is a specific differentiation in their technical requirements. | Specification of Side Camera is as below :1. Resolution: High-resolution video cameras, often with 3D or infrared capabilities, to ensure accurate counting even in low-light or crowded conditions 2. Sensors: Equipped with infrared, 3D, or video-based sensors for precise data collection.3. Data Transmission: Real-time data transfer to an onboard unit, which then sends the data to a remote server via Wi-Fi or other network protocols.4. Durability: Designed to be waterproof, resistant to low temperatures, and vandal-proof.5. Illumination: Built-in near-infrared LED illuminators for clear imaging in various lighting conditions.6. Field of View: Wide-angle lenses to cover multiple entrances of a vehicle.7. Processing Power: Onboard processing units to handle data compression and transmission efficiently.8. Compliance: Adheres to data privacy standards, such as GDPR, by encrypting sensitive data. |

17.		General Eligibility	OEM must submit declaration regarding their own manufacturing setups and shall not have 3rd party manufacturing from any company blacklisted in India or any company sharing land border with India. The IPR/copyright of source code of firmware/software etc.	Tender appears to prefer domestically manufactured ADAS products We respectfully request the tendering authority to also consider reliable, proven, imported ADAS systems provided by experienced global OEMs from countries such as Korea, Israel, and Japan. These OEMs have been delivering such solutions for decades and have established service infrastructure in India. Given that indigenous manufacturing of such advanced systems is still evolving in India, allowing foreign OEMs will ensure access to mature, field-tested solutions with consistent and accurate performance.	RFP Prevails
18.	Clause no. 10.Technical Requirements: Hardware/Devices (per Bus)	Technical Specifications	Technical Requirements: Hardware/Devices (per Bus)	Technical specifications seem tailored to a specific Indian manufacturer We kindly urge the authority to revise the technical specifications to a more generalized and open format that invites fair participation from a broader pool of capable bidders. This will promote innovation, ensure competition, and avoid undue advantage to any specific manufacturer. The current specifications also appear vague and require more clarity to better define the required technological outcomes.	RFP Prevails

19.		Warranty & Support	Technical Requirements: Hardware/Devices (per Bus)	Local support requirement and warranty enforcementWe request the authority to consider allowing international support mechanisms, including remote diagnostics and local channel partner-based services. We affirm that our offered systems meet more than 25 % local content (as per DPIIT OM Nos. P-45021/2/2017-PP (BE-II) dated 16.09.2020 and P45021/102/2019-BE-II-Part(1) dated 04.03.2021) and fall under Class-II supplier category.	OEMs, under Class-II supplier category are allowed to bid.
20.		Business Intelligence Platform / Page 8	Technical Requirements: Hardware/Devices (per Bus)	Requirements for Interactive Visualisation and Custom Dashboards The Business Intelligence module mentioned involves multiple stakeholders (e.g., ITS providers, OEMs, ticketing agencies) and typically requires 3–6 months of collaborative development. However, we offer comprehensive pre-developed dashboards with functionalities like Driver Behavior, Fuel Consumption, Alarm Distribution, and Vehicle Mileage. We request permission to deploy such cost-effective, ready solutions with the provision for future customization to save project time and public expenditure.	Selected SI has to provide Interactive Visualisation and Custom Dashboards for their proposed solutions.

21.		General Eligibility	Technical Requirements: Hardware/Devices (per Bus)	Restriction to domestic manufacturers may limit solution quality We respectfully request the authority to explicitly allow participation of foreign OEMs with proven ADAS-DFMS solutions that are globally deployed and have demonstrated repeatable performance with minimal error. This inclusion would ensure the adoption of the most reliable technology available internationally while leveraging local support infrastructure through authorized Indian partners.	RFP Prevails
22.	Clause no. 13.1. Serial N0.3,	Technical Bid Evaluation, Turn over	Criteria: Financial Turnover: Minimum average annual turnover of the bidder/consortium must be INR 15 Crores from the last three (3) financial years (FY 21-22, FY 22-23 and FY 23-24) Basis of Evaluation: • INR 15 Crores: 10 Marks • INR 15 to 30 Cr: 15 Marks • More than 30 Cr: 20 marks	Justification for Change: The project requires substantial upfront investment in technology, infrastructure, and operations under a SAAS model. Increasing the turnover threshold to INR 60 crores ensures participation of financially capable and credible bidders, reducing project execution risk and ensuring service continuity. Proposed Revised Clause: Criteria: Financial Turnover: Minimum average annual turnover of the bidder/consortium must be INR 60 Crores from the last three (3) financial years (FY 21-22, FY 22-23 and FY 23-24) Basis of Evaluation: • INR 60 Crores: 10 Marks • INR 60 to 70 Cr: 15 Marks • More than 70 Cr: 20 marks	RFP Prevails

23.	Clause no. 13.1. Serial N0.3,	Technical Bid Evaluation, Networth	Criteria: The Bidder/consortium should have average net worth at least INR 2 Cr for last three (3) years. (FY 2021-22, FY 2022-23 and FY 2023-24) Basis of Evaluation: (i) INR 2 Crores: 10 Marks (ii) INR 2 to 3 Cr: 15 Marks (iii) More than 3 Cr: 20 Marks	Justification for Change: The project demands significant upfront investment and sustained financial strength to ensure successful implementation and long-term service delivery under the SAAS model. Increasing the net worth requirement to INR 10 crores ensures only financially robust bidders participate, minimizing the risk of default and enhancing project reliability. Proposed Revised Clause: Criteria: The Bidder/consortium should have average net worth at least INR 10 Cr for last three (3) years. (FY 2021-22, FY 2022-23 and FY 2023-24) Basis of Evaluation: (i) INR 10 Crores: 10 Marks (ii) INR 10 to 12 Cr: 15 Marks (iii) More than 12 Cr: 20 Marks	RFP Prevails
24.	Clause no. 14.1.	Terms of payment, SaaS Payment	A. SaaS PaymentProcurement, Installation and Testing of Hardware:Procurement of Hardware, installation, configuration, testing, commissioning of ADAS-DFMS solution, Go-live of entire ADAS-DFMS components and Operation & Maintenance SupportPayment proportions (Hardware Cost)Annuity Plan (Quarterly equal payments after Go-Live) on acceptance of Quarterly Progress Report	Justification for Change:Advance payment is essential to cover high upfront costs of hardware procurement, ensuring timely delivery and implementation.Proposed Revised Clause:A. SaaS PaymentProcurement, Installation and Testing of Hardware:Procurement of Hardware, installation, configuration, testing, commissioning of ADAS-DFMS solution, Go-live of entire ADAS-DFMS components, and Operation & Maintenance Support.Payment proportions (Hardware Cost):70% payment on delivery of infra and	RFP Prevails

			remaining 30% on Go Live	
25.	Clause no.3.	3 Functional Requirement Collision Prevention and Emergency Warning System (CPEWS) Point no	A failure warning when there is a failure in the CPEWS that prevents the requirements of this standard of being met. There shall not be an appreciable time interval between each CPEWS self-check, and subsequently there shall not be an appreciable delay in illuminating the warning signal, in the case of an electrically detectable failure. Failures due to temporary sensor blocking, for instance due to a mounted mud-plough, shall be detected within a driving time of maximum [300] seconds.	Need Clarity.	Refer AIS 185
26.	Clause no.3.		A deactivation warning, if the vehicle is equipped with a means to manually deactivate the CPEWS, shall be given when the system is deactivated.	It is not recommended to deactivate. We can provide camera discontinuation warning on platform	Refer AIS 185

27.	Clause no.3.		When a vehicle is equipped with a means to deactivate the CPEWS function, the following conditions shall apply as appropriate: • The CPEWS function shall be automatically reinstated at the initiation of each new ignition cycle. • A constant optical warning signal shall inform the driver that the CPEWS function has been deactivated. The yellow warning signal may be used for this purpose and the same will be transmitted to ICCC.	1. Manual Deactivation is not recommended as it will not suffice our purpose. 2. Deactivation will be provided in the form of camera disconnect action at vehicle level and ccc level	Refer AIS 185
28.	Clause no.3.		The failure warning referred above shall be a constant yellow optical warning signal.	Single colour icon will be provide on display to provide signal. Need Clarity on yellow optical warning	Refer AIS 185
29.	Clause no.3.		Each CPEWS optical warning signal shall be activated either when the ignition (start) switch is turned to the "on" (run) position or when the ignition (start) switch is in a position between the "on" (run) and "start".	Need clarity-ignition (start) switch is turned to the "on" (run) position or when the ignition (start) switch is in a position between the "on" (run) and "start".. There are only two terminal 1 is ignition and 2nd battery.	Refer AIS 185
30.	Clause no.3.		The BSIS shall inform the driver about nearby bicycles that might be endangered during a potential turn, by means of an optical signal, so that the vehicle can be stopped before crossing the bicycle trajectory.	Kindly confirm BSIS Requires for 4 side Cameras or two side Cameras	As Per RFP
31.	Clause no.3.		It shall also inform the driver about approaching bicycles while the vehicle is stationary before the bicycle reaches the vehicle front, taking into account a	Kindly confirm BSIS Requires for 4 side Cameras or two side Cameras	BSIS Requires two side Cameras

			reaction time of 1.4 seconds.		
32.	Clause no.3.		It shall also inform the driver about approaching bicycles while the vehicle is stationary before the bicycle reaches the vehicle front, taking into account a reaction time of 1.4 seconds.	Kindly confirm BSIS Requires for 4 side Cameras or two side Cameras	BSIS Requires two side Cameras
33.	Clause no.3.		It may be deactivated manually. In the case of a manual deactivation, it shall be reactivated upon each activation of the vehicle master control switch or ignition on	Manual Deactivation of the system is not recommended as it can create data loss issues	Refer AIS 185
34.	Clause no.3.		The BSIS also shall provide the driver with a failure warning when there is a failure in the BSIS that prevents the requirements of this standard from being met.	Need Clarity on warning.	RFP Prevails
35.	Clause no.3.		• The warning signal above shall be a signal differing, e.g. in mode or activation strategy, from the information signal.	Need Clarity on warning.	RFP Prevails
36.	Section:3	Payment	SaaS model: CRUT shall pay flat-rate monthly Subscription fee per Bus towards procurement, installation, commissioning and operation & maintenance of ADAS-DFMS for 3 years (This includes but not limited to, Cost of Hardware, software and customization of software, annual licenses, manpower, hosting charges and SIM charges etc. For the contract period of three years). SI to quote Subscription charges per bus per month.	The envisaged 100% SaaS Model is not appropriate for the implementation planned, specifically during the installation stage as the 520 Nos of buses need to be fitted with Adac system which might take 5-6 months of time with depot wise access to the available buses etc. , during this phase the ownership would be wage/not clear. Moreover, any damages/Thieft case of the devices would not have been covered under SaaS as the SaaS would start from Go-live date. Hence, A hybrid	RFP Prevails

				model shall be adopted with Project being segmented into a) One time installation b) SaaS in 40:60 Pro-rata ratio.	
37.	Section: 13.1, d S.No. 2	NVR	AI-Driven Video Analytics Project Successfully Implemented at a Leading Organization in last 3 years.	The envisaged project is completely different from any AI-Driven Video Analytics, as Video Analytics are Centralized Processing platforms and this project defines and demands Edge Level processing. Hence, generic CCTV based Video Analytics shall not be considered. Only Vehicle Mounted Video Analytics project experience shall be acceptable.	RFP Prevails
38.	Section: 2.1	(Terms of Reference), A-Hardware Components, S.No.3 ,	Supply installation and configure of Network Video Recorder in Buses.	NVR- It is recommended to includes various other Edge Computing devices like Dashcam, AI Compute systems to make the RFP more inclusive.	RFP Prevails
39.	Section: 3,	Functional Requirements, CPEWS & BSIS,	The Entire Functional requirement : Table content	It is clearly evident from the given functional requirement that the solution defines integrated Front Scanning mm Radar with 150 Mtrs as minimum range along with 360 Deg Ultrasonic Proximity Sensors & cameras for BSIS with local HMI for driver, however the same is not	RFP Prevails

				clearly mentioned in the BoQ. Hence, confirm the BoQ clearly for techno-commercial considerations.	
40.	Section: PS and GPRS based Vehicle tracking unit – Signal Control Unit	GPS and GPRS based Vehicle tracking unit – Signal Control Unit ,	Entire Section defines the feature set of Signal Control Unit	It is recommended to include on-board storage in the Signal Control Unit as this unit shall record local events along with videos of incidents in case of 4G/LTE signal outages. And the GPS Sensor shall be AIS-140 Compliant.	RFP Prevails
41.	Section: 10	Technical Requirements: Hardware/Devices (per Bus),	Connectivity: Support for interfaces like Camera Serial Interface (CSI)-2 or Ethernet for data transmission to the Single Control Unit (SCU).	Please note that CSI-2 is short distance High speed comm. Interface cannot be used in Bus environment, hence the viable interface as per the specification is Ethernet mentioned in AI Camera (Front), AI Camera (Driver Cabin), AI Camera (Passenger Door Side), AI Camera (Left and Right Side) & AI Camera (Rear), which makes the entire solution restricted to Ethernet based AI camera & NVR based SCU. Please also include OEM specific interfacing/Communication technologies for seamless performance & system integration.	Can be wired/harness/VGA/HDMI based
42.	Section: 10	Technical Requirements: Hardware/Devices (per Bus),	Technical requirements,	Please refer the entire Section of Technical requirements, The FOV of all the camera needs to be realistic to the application/role defined, as generic 120 to 140 Deg FOV is not practical moreover it adds lot of optical distortion for the AI unit	RFP Prevails

			to perform analytics, hence the same shall be reviewed and amended to 80 deg or greater	
43.	Section: 10	Technical Requirements: Hardware/Devices (per Bus),	OEM should be active company and should have direct presence in India from last five years (not as joint venture, partnership firms or through any other association) & manufacturing in India since last five years (not as joint venture, partnership firms or through any other association) at the time of bidding. Documentary evidence should be submitted. OEM should have direct service center in Odisha & technical support Toll Free/ Online /offline in India. • Bidder shall ensure compliance to the Office Memorandum for insertion of Rule 144 (xi) in the General Finance Rules (GFR)-2017 bearing reference number F.No. 6/18/2019-PPD dated 23 July 2020 or latest, by the Public Procurement Division, Department of Expenditure, Ministry of Finance. Noncompliant bid(s) will be summarily rejected. OEM must submit declaration regarding their own manufacturing setups and shall not have 3rd party manufacturing from any company blacklisted in India or any company sharing land border with India. The IPR/copyright of source code of	Please clarify as the definition of OEM provided contradicts the GOI Order under GFR 144(xi) issued on 23rd July 2020, which allows JV, partnerships & local production partnership with global OEMs except the OEM who are from Country sharing land border. It is requested to only follow the GOI Order as issued on 23rd July 2020, multiple definitions of the OEM or manufacturers cannot independently verified or followed with clarity.	RFP Prevails

			firmware/software etc. Should not reside in countries sharing land borders with India. OEM should submit supporting document to establish proof of this.		
44.	Section: 10	Technical Requirements: Hardware/Devices (per Bus),	Proposed AI cameras should have ISO 9001, 14001, 20000, 27001, 45001, ISO/IEC 27032:2012 (Cyber Security), 39001, ISO 50001:2018 Certificates.	Please refer the relevance of ISO certifications for OEM/ Product in the envisaged requirement. It is recommended to drop the not available ISO certifications of the Product.	Proposed AI cameras should have ISO 27001 and ISO/IEC 27032:2012 (Cyber Security).
45.	Clause- 1.2.	Project Objectives, Overview and Components	Project Objectives, Overview and Components	Project Objectives, Overview and Components For CPEWS , BSIS, MOIS, DFMS System to work well, we will require inputs from vehicle CAN. Kindly confirm the make/model, year of manufacture of the buses to figure out the CAN DBC. We may also require support from bus OEM, in this regard for effective working of the system, via CRUT.	RFP Prevails
46.	Objective: 1 –	Collision Prevention and Emergency Warning System (CPEWS),		If the system detects critical proximity to a stationary or moving vehicle/commuter(s) ahead, it prepares the warning system for the possibility of an emergency stop.The system will not be able to stop the vehicle on its own, it will only provide a warning to the driver.Please confirm if this is okay.	RFP Prevails

47.	Clause-2.	Scope of work,	SI would also be responsible for the integration of any other devices and equipment supplied by any other vendor that is part of the existing ADAS-DFMC solution.	These devices all use manufacturer specific protocols. In order to achieve this integration, APIs from all the manufacturers will be required including set up space in the data center, which cannot be forecasted today, as it may change from man. to man. We request you to keep the scope of integration of the devices from the diff OEMs to the backend system via APIs.	RFP Prevails
48.	Clause-2.1.	Overview of scope of work,	4. Internet	4. Internet At depots, do we also need to provide desktop/control room infrastructure including internet bandwidth? Please clarify.	Selected SI to provide connectivity for their on Bus devices and proposed solution
49.	Clause-21	Driver Fatigue Management System (DFMS),	21.Any new symbols developed for the purpose of a visual warning are recommended to be constructed using similar elements to and keeping coherence with ISO 2575:2010+A7:2017 K.21 and/or ISO 2575:2010+A7:2017 K.24.	21.Any new symbols developed for the purpose of a visual warning are recommended to be constructed using similar elements to and keeping coherence with ISO 2575:2010+A7:2017 K.21 and/or ISO 2575:2010+A7:2017 K.24. 1. The following ISO Standard amendment 7 has been withdrawn, and now only points to ISO 2575:2010. 2. Please confirm if they are mandatory.	Any new symbols developed for the purpose of a visual warning are recommended to be constructed using similar elements to and keeping coherence with ISO 2575:2010 or latest amendment

50.	Clause-22		22.The contrast of the symbol with the background in sun light, twilight and night conditions are recommended to be in accordance with ISO 15008:2017.	22. The contrast of the symbol with the background in sun light, twilight and night conditions are recommended to be in accordance with ISO 15008:2017. Please confirm if they are mandatory.	RFP Prevails
51.	Clause-29 . B		29. b. Its correct functionality and the software integrity, by the use of an electronic vehicle interface, such as device1 to connect to the electronic vehicle interface, such as an OBD scan tool, where the technical characteristics of the vehicle allow for it and the necessary data is made available. SI shall ensure to make available the technical information for the use of the electronic vehicle interface.	29. b. Its correct functionality and the software integrity, by the use of an electronic vehicle interface, such as device1 to connect to the electronic vehicle interface, such as an OBD scan tool, where the technical characteristics of the vehicle allow for it and the necessary data is made available. SI shall ensure to make available the technical information for the use of the electronic vehicle interface. While we can provide the hardware interface on this, al ot of the time information is encrypted and manufacturer specific. We will require active support from the bus chassis manufacturer to interpret this data and send it to the backend data center.	Selected SI to propose suitable solution

| 52. | Clause-33 | | 33.The information on full test methodology referred shall include:• Provide evidence that the complementary measurement(s) or the combination of the primary (KSS or alternative measure) and complementary measurements are a valid and accurate means to assess driver drowsiness.• Provide information on how the data of the primary and complementary measurements were analyzed and collated to assess the effectiveness of the system.• Provide evidence that the drowsiness threshold being used in the validation testing is equivalent to a KSS level referred. | 33.The information on full test methodology referred shall include:• Provide evidence that the complementary measurement(s) or the combination of the primary (KSS or alternative measure) and complementary measurements are a valid and accurate means to assess driver drowsiness.• Provide information on how the data of the primary and complementary measurements were analyzed and collated to assess the effectiveness of the system.• Provide evidence that the drowsiness threshold being used in the validation testing is equivalent to a KSS level referred.KSS is normally used for academic & research. For DFMS, if we use this, it will become very complicated. | RFP Prevails |
| 53. | Clause- 4. | Incident Management System, | Surveillance system in Bus | Surveillance system in Bus How do you want the recorded videos from NVR to be transferred from the ICCC. Do you need it manually via SD card or automated data transfer through Wifi installed at different depots which will enable NVR to send data to the depot via Wifi and then to the ICCC via some captive network or public network (private VPN). | via public network |

54.	Clause- 4.2.	Enterprise Management System & Security Solutions,	Web Application Monitoring System	Web Application Monitoring System The system being provided as part of this RFP like CPEWS, BSIS, MOIS, and DFMS are systems which are not being built or developed specifically for this requirements. These are products which we have are as cots as commercially available solution, and may not require a need for an application monitoring Software. Please confirm if this is mandatory.	RFP Prevails
55.	Clause- 7.	Helpdesk Services,	Helpdesk Services	Helpdesk Services Where this need to be setup - CRUT or our own premise does. if in CRUT premises, who will provide the electricity and infrastructure. Is this a 24x7 helpdesk.	RFP Prevails
56.	Clause- 8.9.	Cloud hosting and Integration	Cloud hosting and Integration	Cloud hosting and Integration Weather cloud hosting or deployment in CRUT suggested data center, both can be supported, but this need to be confirmed before project initiation, accordingly HW resources will be procured. It may not be possible to go from Data Center to cloud Hosting or vice-versa.	RFP Prevails
57.	Clause- 13.	Bills of Material;	7 Lidar (Front)	7 Lidar (Front) Kindly elaborate on its requirement. Why is this mandatory.	RFP Prevails
58.	Annexure-7 (Financial bid)	SaaS model	SI to quote Subscription charges per bus per month.	Why only SI are eligible , and why not OEM ?	SI/OEM are eligible

59.	Clause- 4	Eligibility criteria	Minimum annual average turnover of 15 crisis required	Require relaxation of the number for MSME OEM.	RFP Prevails
60.	Clause-Objective-1 of 1.2 of TERMS OF REFERENCE	Collision Prevention and Emergency Warning System (CPEWS)	Collision Prevention and Emergency warning system	There is no mention of automatic braking of the vehicle which is required to avoid any potential accident.	RFP prevails
61.	Clause-Objective 4 of 1.2 of Terms of reference of	Driver Fatigue Management System (DFMS)	Driver Fatigue Management System (DFMS)- There is photo of alcohol breath anayzer in the diagram which is on page 34	there is NO mention of alcohol detection system and we think that having the same in the system would definitely contribute a lot in reducing the accidents.	Refer corrigendum
62.	Clause no- 2.1	ADAS DFMS Cover view.	Requirement of Data center	Who shall be responsible to building and maintaining the data center ?	RFP prevails
63.	Clause no- .1. Overview of scope of work	1.overview scope of work 2.NVR required 3.Disaster recovery center and Hosting ?	Proximity sensors inside the bus	Proximity sensors inside the bus 1Why are the sensors required inside the bus ? Does it require a CCTV camera solution inside the bus for continuously monitoring the passengers ? However nowhere in the requirements above have been mentioned about the CCTV. 2.What is NVR mean which says network video recorder? There are no specs for the same 3.Can you please explain in detail what is disaster center and hosting required ?	RFP prevails

64.	section 2.4	Bus ADAS-DFMS infrastructure Overview	The photo shows the picture of lidar, alcohol breath analyzer and reverse camera too.	The photo shows the picture of lidar, alcohol breath analyzer and reverse camera too. There is NO mention of any of the requirement for alcohol breath analyzer or reverse camera anywhere in the document.	Refer corrigendum
65.	Clause- 4	Incident management system	Provides comprehensive end-to-end performance management across key parts of the IT infrastructure. It allows identifying trends in performance in order to avert possible service problems and consists of:	The type of incidents that are mentioned in the document which needs to be delivered, are difficult to achieve in terms of many external factors. Please clarify as to how to achieve those parameters.	RFP prevails
66.	Section 4.2	Enterprise Management System & Security Solutions	Enterprise Management System and security solutions	Enterprise Management System and security solutions This section is part of ITS and not ADAS solutions and involves comprehensive IT infra for the same. Are we expected to deliver all the points mentioned under this point ?	Selected SI has to proposed suitable EMS to manage their solution
67.	Clause no-1 (Table)	Business Intelligence	Business Intelligence	There is NO reference of anything ADAS or the products that the customer has to provide in this section of BI.	RFP prevails
68.	Section 4.3	Functional requirements for Security Management System	Functional requirements for Security Management System	Functional requirements of Security management system. This section is part of ITS and not ADAS solutions and involves comprehensive IT infra security for the same. Are we expected to deliver all the points mentioned under this point ?	Selection 4.3 and 4.4 removed
69.	Section 4.4	Identity and Access Management	Identity and Access Management	This section is part of ITS and not ADAS solutions and involves comprehensive IT infra security for the same. Are we expected to deliver all the points mentioned under this point ?	Selection 4.3 and 4.4 removed

70.	Section 4.5	Log record collection and management	Log Record Collection and Management	This section is part of ITS and not ADAS solutions and involves comprehensive IT infra security for the same. Are we expected to deliver all the points mentioned under this point ?	RFP prevails
71.	Clause no-10 (Table)	Technical requirements	AI camera (side left and right)	AI camera (side left and right) There was NO mention of cameras on the sides in the document overall scope of work - page 32	RFP prevails
72.	Clause no-10 (Table)	Technical requirements	Lidar	Lidar Why is the Lidar required to be mandatory when the ADAS functionality can be achieved using RADAR ?	Bidder to propose LiDAR/RADAR based solution
73.	Clause- 17	PBG	The PBG of project should be 5% of the contract value shall be submitted within 30days of notification of award	Require relaxation on the % terms post notification other award	RFP Prevails

Sd/-
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