



रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड
भारत सरकार का एक "नवरत्न" केंद्रीय सार्वजनिक क्षेत्र उद्यम

<u>पूर्वी क्षेत्र कार्यालय</u> 19वीं मंजिल, ऑरोरा वॉटरफ्रंट, जीएन 34/1, सेक्टर V, बिधाननगर, कोलकाता, पश्चिम बंगाल 700091	<u>कॉर्पोरेट कार्यालय</u> प्लेट-ए, 6वीं मंजिल, ऑफिस टॉवर-2, एनबीसीसी बिल्डिंग, ईस्ट किदवाई नगर, नई दिल्ली- 110023
<u>Eastern Region Office</u> 19th Floor, Aurora Waterfront, GN 34/1, Sector V, Bidhannagar, Kolkata, West Bengal 700091	<u>Corporate Office</u> Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023

ईओआई संख्या (EOI No.):

RAILTEL/ER/MKT/EOI/2026-27/001, DTD 01-04-2026

ओडिशा भर में फैले टीवीईटी संस्थानों में एआई आधारित सीसीटीवी के एसआईटीसी और ओडिशा में ओएंडएम के साथ कमांड कंट्रोल सेंटर की स्थापना के लिए रेलटेल के पैनल में शामिल बिजनेस एसोसिएट / ओईएम / ओईएम अधिकृत पार्टनर / वितरक में से उपयुक्त बैकएंड पार्टनर का चयन।

Invitation for Expression of Interest For

Selection of Suitable Backend Partner from RailTel Empanelled Business Associate / OEM / OEM Authorised Partner / Distributor for "SITC of AI based CCTV at TVET Institutions spread across Odisha, and the setup of Command Control Centre with O&M in Odisha."

EOI NOTICE

RailTel Corporation of India Ltd.

19th Floor, Aurora Waterfront, GN 34/1, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

EXPRESSION OF INTEREST

EOI Notice No: RAILTEL/ER/MKT/EOI/2026-27/001 DTD 01.04.2026

रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड (जिसे आगे रेलटेल के नाम से जाना जाएगा) ओडिशा भर में फैले टीवी और शिक्षा एवं प्रशिक्षण संस्थानों में एआई आधारित सीसीटीवी के एसआईटीसी और ओडिशा में संचालन एवं रखरखाव सहित कमांड कंट्रोल सेंटर की स्थापना के लिए रेलटेल के सूचीबद्ध व्यावसायिक सहयोगी/ओईएम/ओईएम अधिकृत भागीदार/वितरक में से उपयुक्त बैकएंड पार्टनर के चयन हेतु सूचना और सूचना के उत्तर आमंत्रित करता है।

RailTel Corporation of India Ltd., (hereafter referred to as RailTel) invites EOIs for “Selection of Suitable Backend Partner from RailTel Empanelled Business Associate / OEM / OEM Authorised Partner / Distributor for “SITC of AI based CCTV at TVET Institutions spread across Odisha, and the setup of Command Control Centre with O&M in Odisha.”

विवरण निम्नानुसार है/ The details are as under:

1	ईओआई फ्लोटिंग की तिथि Date of EOI Floating	01.04.2026
2	ईओआई के तहत बोलियां प्रस्तुत करने की अंतिम तिथि Last date for submission of Bids against EOI	04.04.2026 up to 11:00 Hours
3	ईओआई के तहत प्राप्त बोलियों को खोलना Opening of Bids received against EOI	04.04.2026 at 11:30 Hours
4	बोली प्रणाली Bidding System	Single Stage-Single Packet System
5	ईओआई का अनुमानित मूल्य Estimated Value of EOI	Partner's Bid Value
6	ईओआई दस्तावेज लागत (कर सहित) (वापसी योग्य नहीं) EOI document cost (inclusive tax) (non-refundable)	Rs. 5,900/- Incl. GST (Five Thousand Nine Hundred only)

7	बयाना राशि जमा (ईएमडी)/ Earnest Money Deposit (EMD)	Rs. 5,00,000/- (Five Lakhs Only) to be submitted along with EOI. (To be submitted via online bank transfer). The balance 1% amount of Value of Project (subject to maximum of 100 Lakhs) is to be submitted in the form of BG/online transfer before award of PO/WO to Partner (in case work is awarded to RailTel by end customer).
8	प्रस्तावों की वैधता/ Validity of offers	90 days from the date of opening of Offers
9	कार्य पूर्ण करने की अवधि/ Completion Period of the work	As per End Customer Confirmation.

नोट: रेलटेल अपने विवेकानुसार उपरोक्त तिथियों में परिवर्तन करने का अधिकार सुरक्षित रखता है।/

Note: RailTel reserves the right to change the above dates at its discretion.

ईओआई सूचना और ईओआई दस्तावेज रेलटेल की वेबसाइट पर उपलब्ध हैं और इसे <https://www.railtel.in> या ई-निविदा पोर्टल <https://railtel.enivida.com> से डाउनलोड किया जा सकता है। ऑनलाइन बोली जमा करने के लिए निविदाकर्ता को <https://railtel.enivida.com> पोर्टल से ईओआई दस्तावेज की आधिकारिक ऑनलाइन प्रति अनिवार्य रूप से डाउनलोड करनी होगी।

EOI Notice and EOI Document are available on RailTel's website and can be downloaded from <https://www.railtel.in> or from the e-Tendering portal <https://railtel.enivida.com>. For online bid submission, the tenderer will have to necessarily download an official online copy of the EOI document from the portal <https://railtel.enivida.com>.

प्रस्ताव जमाकर्ता रुचि की अभिव्यक्ति की तैयारी, प्रस्तुत करने/भाग लेने से संबंधित सभी लागतों को वहन करेगा। रेलटेल इन लागतों के लिए किसी भी तरह से जिम्मेदार या उत्तरदायी नहीं होगा, चाहे बोली प्रक्रिया के आचरण या परिणाम कुछ भी हों।

The Respondent shall bear all cost associated with preparation, submission/participation of the Expression of Interest. RailTel in no way will be responsible or liable for these costs regardless of the conduct or outcome of the bidding process.

इस ईओआई के लिए भविष्य की सभी जानकारी अर्थात शुद्धिपत्र / परिशिष्ट / संशोधन आदि केवल ई-निविदा पोर्टल पर पोस्ट किए जाएंगे। ईओआई दस्तावेज की मुद्रित प्रति रेलटेल कार्यालय से उपलब्ध नहीं की जाएगी।

All future information viz. corrigendum /addendum/ amendments etc. for this EOI shall be posted on this e-Tendering Portal only. Printed copies of the EOI document will not be

provided from the RailTel office.

प्रस्ताव उपर्युक्त तिथि को उन प्रस्ताव जमाकर्ताओं की उपस्थिति में खोले जाएंगे जो उपस्थित होना चाहते हैं। यदि बोली प्राप्ति/खोलने की तिथि को अवकाश होता है, तो इसे अगले कार्य दिवस पर किया जाएगा।

The offers shall be opened on above mentioned date in the presence of those Respondents who choose to be present. If the receipt/opening bid date happens to be a holiday, the same shall be done on the next working day.

आरसीआईएल बिना किसी कारण के प्रस्तावों को स्वीकार/अस्वीकार करने का अधिकार सुरक्षित रखता है होगा।/

RCIL reserves the right to accept/reject the offers without any reason.

ईएमडी ईनिविदा पोर्टल के माध्यम से ऑनलाइन कोलकाता में देय रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड के पक्ष में जमा होना चाहिए। बोलीदाता को प्रस्ताव के साथ ऑनलाइन बैंक ट्रांसफर विवरण जैसे यूटीआर नंबर दिनांक और बैंक साझा करने की आवश्यकता है।

The EMD should be submitted in the favour of RailTel Corporation of India Limited payable at KOLKATA through online via eNivida Portal. Bidder needs to share the online bank transfer/DD/Pay Order/Banker's Cheque details like UTR No. date and Bank along with the proposal.

टिप्पणी : एक कार्यशील ईओआई होने के नाते, इस ईओआई के लिए एमएसई के लिए ईओआई दस्तावेज लागत और ईएमडी प्रस्तुत करने से कोई छूट उपलब्ध नहीं है। इसलिए, बोलीदाताओं को अपने प्रस्ताव के साथ ईओआई दस्तावेज लागत और ईएमडी प्रस्तुत करना चाहिए, जिसमें विफल होने पर उनके प्रस्ताव को मूल्यांकन के लिए नहीं माना जाएगा, और सरसरी तौर पर अस्वीकार कर दिया जाएगा। एमएसई के लिए खरीद वरीयता भी इस ईओआई के लिए लागू नहीं है

Note: Being a works EOI, no exemption from submission of EOI document cost and EMD is available for MSEs for this EOI. Hence, the bidders should submit the EOI Document Cost & EMD along with their offer, failing which their offer will not be considered for evaluation, and will summarily be rejected. Purchase preference to the MSEs is also not applicable for this EOI

बोलियों की भाषा: बोली में सभी जानकारी हिंदी या अंग्रेजी में होगी। किसी अन्य भाषा में सूचना के साथ हिंदी/अंग्रेजी में उसका अनुवाद संलग्न होगा। इसका अनुपालन करने में विफल रहने पर बोली को अयोग्य घोषित कर दिया जाएगा। अर्थ में किसी भी विसंगति की स्थिति में, सभी दस्तावेजों की अंग्रेजी भाषा की प्रति मान्य होगी।

Language of Bids: All information in the bid shall be in Hindi or English. Information in any other language shall be accompanied by its translation in Hindi/English. Failure to comply

with this shall disqualify a bid. In the event of any discrepancy in meaning, the English Language copy of all documents shall prevail.

पात्र बीए(एस)/ओईएम/ओईएम अधिकृत भागीदार/वितरक को ईओआई दस्तावेज के लिए इस आमंत्रण से संबंधित सभी संचार निम्नलिखित नामित संपर्क व्यक्तियों के माध्यम से निर्देशित करना आवश्यक है:/

Eligible BA(s)/OEM/OEM authorized partner/distributor are required to direct all communications related to this Invitation for Eoi document, through the following Nominated Point of Contact persons:

Level:1 Contact:

Sh. Kuldeep Norge (Asst General Manager/Marketing/ER)

Email: kuldeep.n@railtelindia.com;

Contact: +91- 9007041222

Level:2 Contact:

Sh. Abhishek Mani (Sr Dy GM/Marketing/ER)

Email: abhishekmani@railtelindia.com;

Contact: +91-6289857500

Level: 3 Contact:

Sh Narayan Mukherjee (ED/Marketing/ER)

Email: narayan@railtelindia.com

Contact: +91-9007044110

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CHAPTER 1 SUBMISSION OF BID

a) This EOI should be duly submitted online using e-Procurement Portal <https://railtel.enivida.com>.

- 1..1 The offer shall be submitted in Single packet on eNivida Portal as per instructions given.
- 1..2 Tenderer shall quote in SOR provided in eNivida portal. In case the schedule of requirement quoted by tenderer is incomplete with reference to EOI document, the offer is liable to be rejected.
- 1..3 Any document submitted/uploaded in eNivida portal must be duly signed & stamped/digitally signed by the tenderer in each page.
- 1..4 The rates quoted should be written both in words and figures. The unit of rates should be in metric system and as per EOI specification/schedule. In case of difference between words and figures, the rate in words will prevail. If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected by the purchaser accordingly.
- 1..5 Tenderers are requested to go through all the conditions of the EOI document and note that, by submitting the EOI documents, duly signed, they have accepted these conditions and undertake to abide by these conditions (unless specifically disagreed to clause wise).
- 1..6 **ATTESTATION OF ALTERATION:** No scribbling is permissible in the EOI documents. Bids containing erasures and alterations in the EOI documents are liable to be rejected. Any correction made by the tenderer/ tenderers in his/their entries must be signed (not initiated) by him/them.

b) COVER-01:

- i. EOI Document Fee, EMD, Credential & Technical Bid: This shall contain UTR Numbers of transaction/ Date of online transaction of EMD and EOI Fee amount paid online in RailTel Collection Account/proof of transaction to be enclosed.
- ii. Documents as per the eligibility criteria and Credential & Technical Bid shall be submitted. These documents should be in conformance to the eligibility criteria/Credential.

- iii. Financial Part: This shall contain only the Price bid against the SOR in excel format.

c) E-tendering Instructions to Bidders

- i. **GENERAL:** These Special Instructions (for e-Tendering) supplement, as given above. Submission of Bids only through online process is mandatory for this EOI.

E-Tendering is a methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, RailTel has decided to use the portal <https://railtel.enivida.com>. Bidder Enrolment can be done using "Online Bidder Enrolment".

The instructions given below are meant to assist the bidders in registering on the e- tender Portal, and submitting their bid online on the e-tendering portal as per uploaded bid. More information for submitting online bids on the eNivida Portal may be obtained at: <https://railtel.enivida.com>

- ii. **GUIDELINES FOR REGISTRATION:**

1. Bidders are required to enrol on the e-Procurement Portal: <https://railtel.enivida.com/bidderRegistration/newRegistration> or click on the link "**Bidder Enrolment**" available on the home page of e-tender Portal by paying the Registration fee of Rs. 2000/-+ Applicable GST.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their account.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (**Only Class III Certificates with signing + encryption key usage**) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) with their profile.

5. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC /e-Token.
7. The scanned copies of all original documents should be uploaded in pdf format on e-tender portal.
8. After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id eprocurement@railtelindia.com for activation of account.

iii. SEARCHING FOR EOI DOCUMENT:

1. There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.
2. Once the bidders have selected the tenders they are interested in, bidders can pay the EOI fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then bidder may download the required documents / EOI schedules, Bid documents etc. Once bidder pay both fee EOI will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the EOI document.

iv. PREPARATION OF BIDS:

1. Bidder should take into account any corrigendum published on the EOI document before submitting their bid.
2. Please go through the EOI notice and the EOI document carefully to understand the documents required to be submitted as part of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the EOI document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Colour option, which helps in

reducing size of the scanned document.

4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.
5. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click “New” to upload new documents.

v. SUBMISSION OF BIDS:

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the EOI document as a token of acceptance of the terms and conditions laid down by RailTel.
3. Bidder has to select the payment option as “e-payment” to pay the EOI fee / EMD as applicable and enter details of the instrument.
4. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the financial bid has been given as a standard BOQ format with the EOI document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the **Sky-Blue Coloured** (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the file name. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. The uploaded EOI documents become readable only after the EOI opening by the authorized bid openers.
7. Upon the successful and timely submission of bid click "Complete" (i.e. after Clicking "Submit" in the portal), the portal will give a successful Bid submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
8. The EOI summary has to be printed and kept as an acknowledgement of the submission of the Bid. This acknowledgement may be used as an entry pass for any bid opening meetings.
9. For any clarification in using eNivida Portal:
 - a. Any queries relating to the EOI document and the terms and conditions contained therein should be addressed to the EOI Inviting Authority for a EOI or the relevant contact person indicated in the EOI Document.
 - b. Any queries relating to the process of online bid submission or queries relating to e- tender Portal in general may be directed to the Helpdesk Support.
 - c. Please feel free to contact eNivida Helpdesk (as given below) for any query related to e-tendering.
 - d. Phone No. 011-49606060/8448288988
 - e. Mail id: - enividahelpdesk@gmail.com
10. Documents to be submitted: Following documents shall be submitted in Technical and Financial bid as given below:

(a) **“TECHNICAL BID”**; -The bid shall consist of the following: -

- a. Offer Letter.
- b. Signed Copy of EOI Document/ Corrigenda.
- c. E-receipt of EMD.
- d. E-receipt of EOI Document fee.
- e. Power of attorney/Authorization (The original/Notarized copy also to be submitted offline).
- f. Complete technical data and particulars.
- g. Clause wise compliance to EOI conditions.
- h. Documentary proof of qualifying criteria.
- i. Affidavit (The original copy also to be submitted offline).
- j. Certificate by bidders sharing a land border with India.
- k. Any other document asked in the EOI Document but not listed above.

(b) **“PRICE BID”** Shall contain the financial bid for “Schedule of requirements” only.

Note: Non submission of the above-mentioned documents may lead to rejection of the bid.

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CHAPTER 2: LIST OF DOCUMENTS TO BE SUBMITTED OFFLINE

2.1 The above-mentioned documents are to be submitted in offline mode and these should reach RailTel Office before opening of the bids:

- a) Power of attorney/Authorization.
- b) Affidavit (Annexure-4).
- c) Integrity pact (2 copies) (Applicable for work of more than 15 Crores)

2.2 Address for submission of offline documents:

RailTel Corporation of India Limited, Eastern Region,
Aurora Waterfront, 19th floor, GN 34/1, Sector V,
Salt Lake, Bidhannagar, Kolkata-91 (WB)

Or RailTel Territory Office (Bhubaneswar / Ranchi / Patna / Guwahati/ NJP)

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CHAPTER 3: IMPORTANT POINTS

1. RailTel Empanelled Business Associate(s)/OEM/OEM authorised partner/distributor are required to submit soft copy of response through Online on RailTel's eNivida portal at <https://railtel.enivida.com> duly signed by Authorized Signatories with Company seal and stamp.
2. The EOI response is invited from BA(s)/OEM/OEM authorised partner/distributor. A prospective bidder can be empanelled during the preboarding/onboarding process i.e. Partner who have applied for empanelment with RailTel can also participate duly submitting the mail sent to RailTel & proof of payment of empanelment fee.
3. BA(s)/OEM/OEM authorised partner/distributor can participate as a sole bidder or as a consortium (maximum three members are allowed in the consortium).
4. If, the interested partner is OEM/OEM authorised partner/distributor, it should submit the supporting document for the same.
5. All the documents must be submitted with proper indexing and page numbering.
6. **This is an EOI for BA(s)/OEM/OEM authorised partner/distributor for preparation of techno-commercial proposal for end customer of RailTel.**
7. Transfer and Sub-letting. The Partner has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present.
8. Partner once selected has to ensure all technical documents/ solution documents related to OEM before submission of RailTel's Proposal.
9. Installation, commissioning and integration should be done by OEM or their authorized agencies only. If authorized agencies are involved, RailTel should be informed in writing before finalization.
10. Partner/Consortium has to ensure OEM support (of its product including customization part) till the expiry of contract period.
11. Partner/Consortium has to ensure validity of all licenses from implementation stage to the expiry of contract period.
12. RailTel at its discretion may select an offer which does not fulfil the eligibility criteria, if otherwise found suitable as per the requirement of CoR

13. Partner has to mandatorily facilitate in getting MAF/necessary OEM Documentation to be submitted to end customer/RailTel as & when demanded after receiving Work Order from end customer.
14. Any items not mentioned in EOI, if required for completeness of project, will be responsibility of Partner / Consortium.
15. The number of institutions to be covered under SOW is based on initial survey and is tentative. Any addition/variation in number of institutions is also required to be covered under complete scope of work.
16. Any addition/variation in quantity of BoQ line items will be governed by unit price quoted by the bidder and same unit price will be applicable during the entire tenure of the project.

CHAPTER 4: DETAILS OF THE PROJECT

1. PROJECT BACKGROUND AND OBJECTIVE OF EOI

RailTel's esteemed customer, **Odisha Skill Development Authority** intends to select agency for SITC of AI based CCTV at TVET Institutions spread across Odisha, and the setup of Command Control Centre with O&M in Odisha.

Total indicative list of institution is as follows: 6 Polytechnic Institutions, 9 ITIs and 9 SDC.

RailTel is inviting EOIs from RailTel's Empanelled Partners/ OEM/ OEM authorised partner/distributor for the selection of suitable partner & Submission of Proposal for Scope of work as described below:

2. SCOPE OF WORK

Partner has to survey and submit proposal for SITC of AI based CCTV at TVET Institutions spread across Odisha, and the setup of Command Control Centre with O&M in Odisha

Project Highlights

- AI-Based Student and Teacher Attendance
- AI-Based Teacher performance monitoring
- AI-Based Student Cheating and Behavior Monitoring
- AI-based authorized entry in the school building premises
- 24*7*365 days Video surveillance and recording for 30 days
- Incidental alerts and periodic reporting mechanism.

- Integrated Centralized Command Control center for centralized monitoring & reporting

Overall Project Understanding

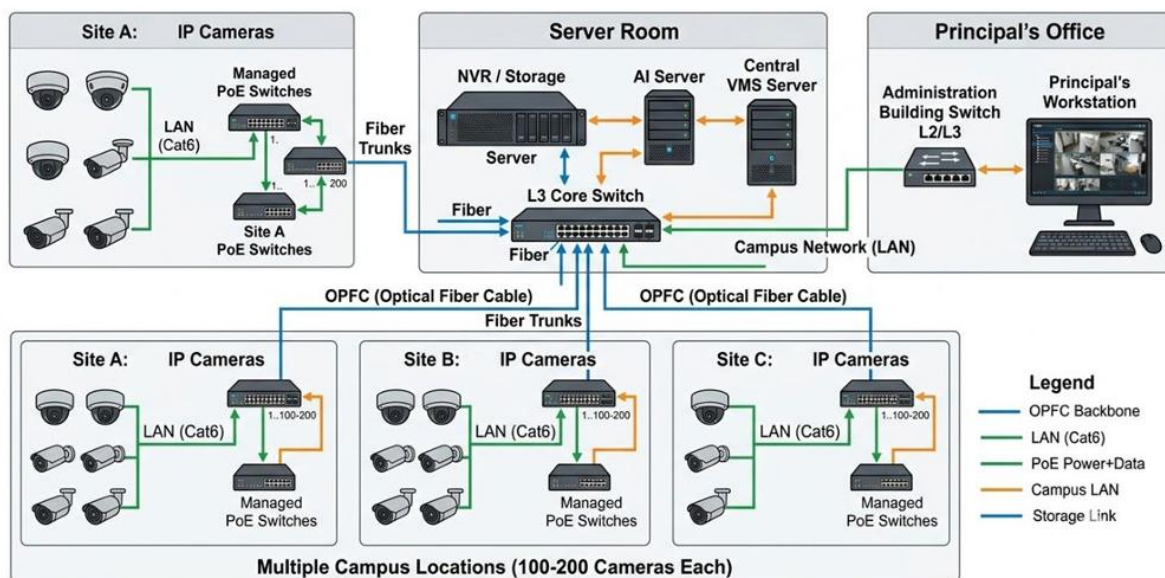
- Setup of CCTV with AI at 6 Polytechnics, 9 ITIs, and 9 SDC
- Setup of Centralised Command-and-Control centre
- Minimum 30 days data of Video Archival at each location
- AI-based Attendance Dashboard Preparation at each school
- Setup of SD WAN at each defined Polytechnic, ITI, SDC, and ICC
- 3-year Operation and Maintenance for the complete solution across all locations

Key Components

- Approx. 2518,+ 4 MP Varifocal IP Dome cameras with IR
- AI licenses for facial-based attendance, Student attendance
- 30 days of recording with data availability in NVR at 24 Schools/ institutions.
- Hyperscale high availability connectivity through SD WAN with Dual ISP
- Command & Control Centre with a centralised dashboard
- Centralized dashboard for analytics, reporting for data analysis and training

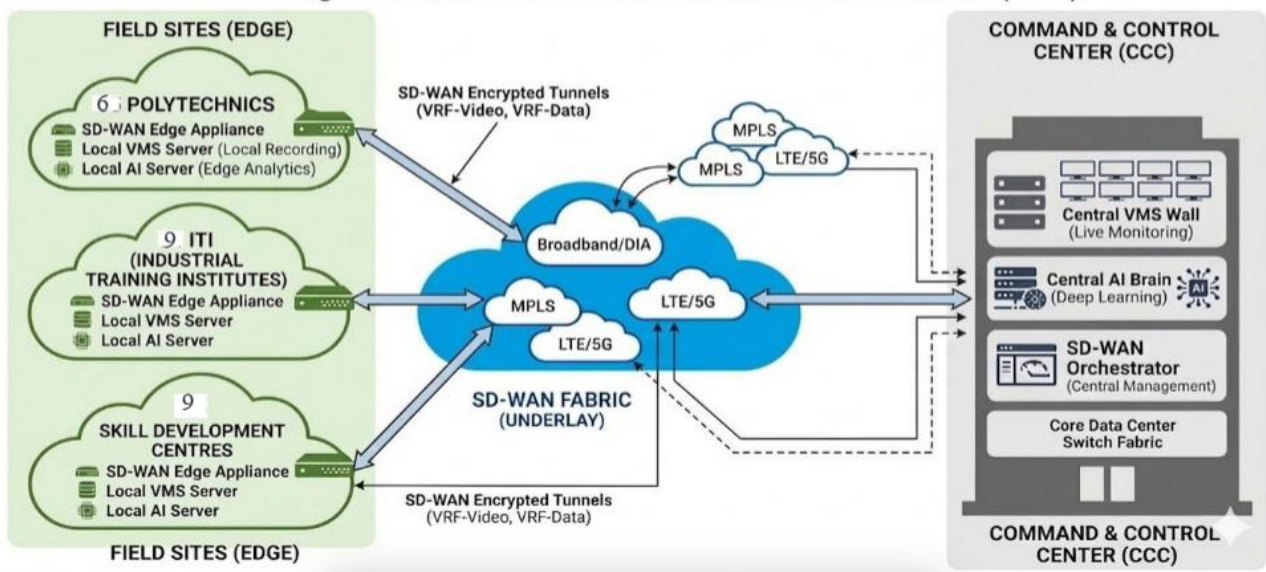
System Architecture

Integrated CCTV & AI Security System Architecture

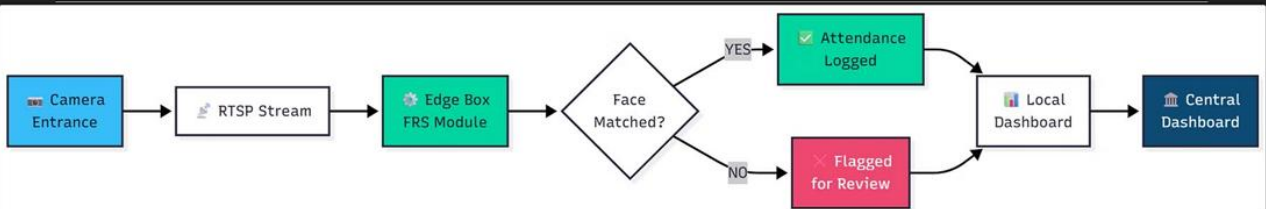


System Architecture Network Structure

HIGH-SCALE SD-WAN DIRECT-TO-CCC ARCHITECTURE for VMS and AI INTEGRATION

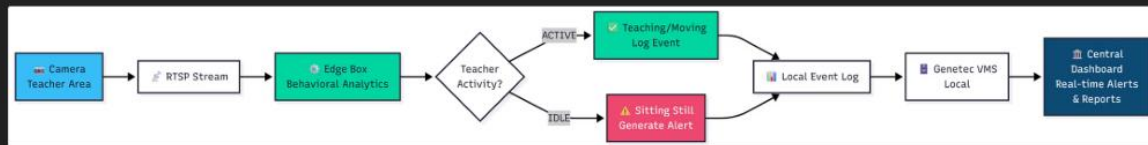


Use Case 1: FRS-Based Attendance System



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Use Case 2: Teacher Activity Monitoring Student cheating detection



How It Works

Single camera captures teacher workspace from side or back angle. Another camera captures the classroom and detects if any student is facing backwards. Edge box analyzes posture and movement to detect idle periods and cheating.

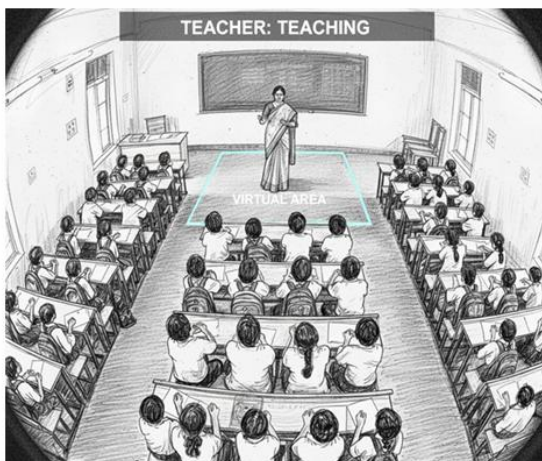
Key Metrics

- Idle duration in minutes
- Frequency of idle incidents per day/week
- Student turning their head
- Real-time notification to HQ dashboard

Key assumptions

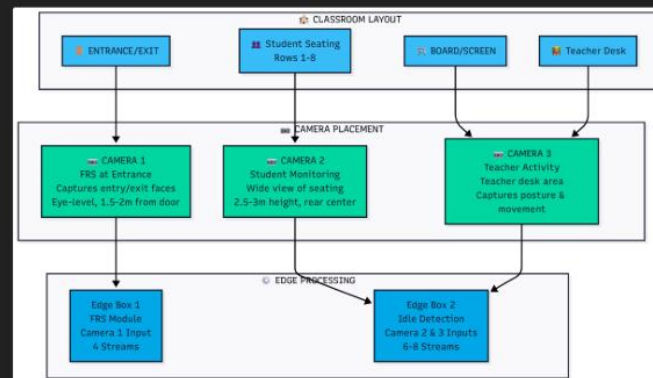
- Attendance captured ONCE when students enter classroom
- No exit tracking
- Students turning backward during exams is considered cheating here.

Camera View



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Camera Placement Strategy



Camera 1: FRS

Eye-level position, 1.5-2m from door, well-lit area for optimal facial recognition

Camera 2: Students

Mounted at 2.5-3m height, covers entire classroom for comprehensive monitoring

Camera 3: Teacher

Positioned to capture teacher's desk and board area, monitors posture and activity

SD WAN SOLUTIONS

HOW SDWAN IMPROVES WAN CONNECTIVITY?



SD-WAN Secured Overlay + Underlay

Active + Active WAN Links

Application Aware Routing

Performance Based Routing

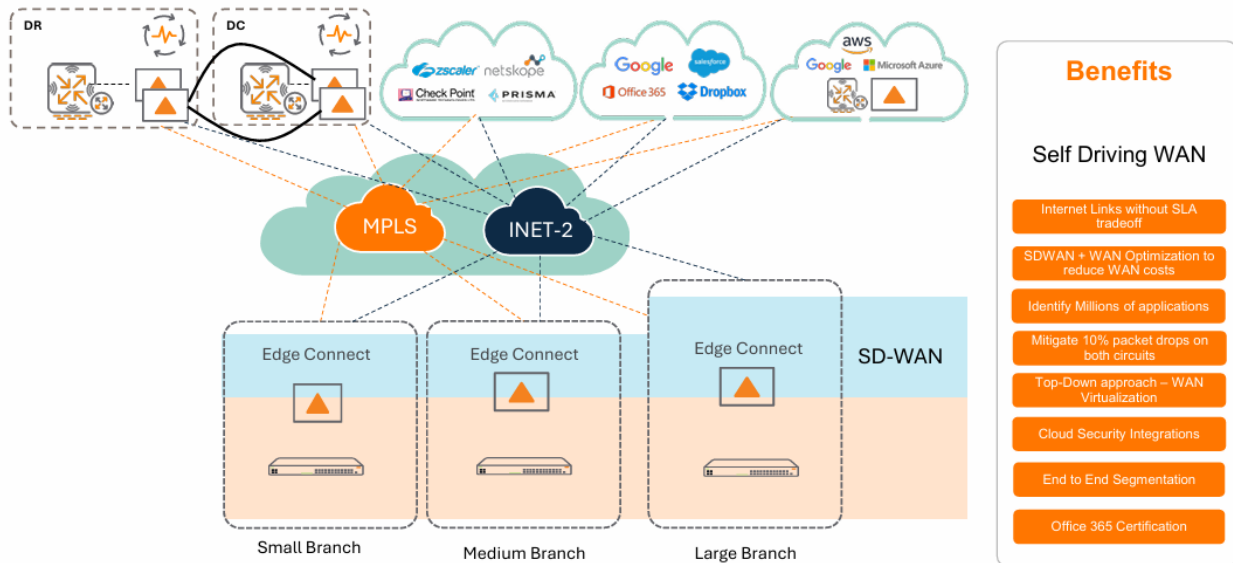
Centralized Management

Analytical Visibility

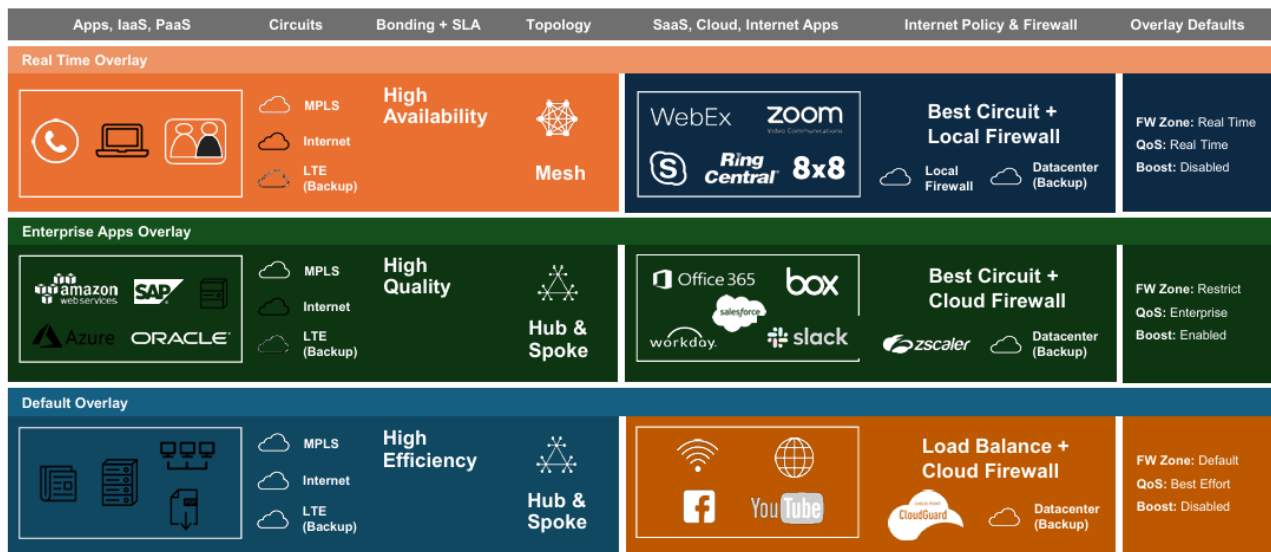


RAILTEL

High Level Design



Business Driven- SD WAN Policies



It will be responsibility of Partner to comply all extent guidelines and regulations of Central/State Govt. including Make in India or any other concerned entities including DoT/TEC in respect of supply of new equipment and services from time to time. In addition, Partner will also comply any change in the rules and regulations by Govt. or any other entities DoT/TEC. Partner should submit an undertaking in this regard in their bid.

The Empanelled partner is expected to have excellent execution capability and good understanding of customer local environment.

3. RESPONSE TO EOI GUIDELINES

3.1 Language of Proposals

The proposal and all correspondence and documents shall be written in English in soft copy through an email.

3.2 RailTel's Right to Accept/Reject responses

RailTel reserves the right to accept or reject any response and annul the bidding process or even reject all responses at any time prior to selecting the partner, without thereby incurring any liability to the affected partner or Business Associate or without any obligation to inform the affected partner or partners about the grounds for RailTel's action.

3.3 EOI response Document

The partner is expected to examine all instructions, forms, terms and conditions and technical specifications in the bidding documents. Submission of bids, not substantially responsive to the bidding document in every aspect will be at the partner's risk and may result in rejection of its bid without any further reference to the partner.

All pages of the documents shall be signed by the partner including the closing page in token of his having studied the EOI document and should be submitted along with the bid.

3.4 Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of 60 days from the date of opening of EOI.

3.5 Bidding Process

The bidding process as defined in Chapter 1.

3.6 Bid Earnest Money (EMD)

3.6.1. The Partner shall furnish a sum as given in EOI Notice via online transfer from any scheduled bank in India in favour of "RailTel Corporation of India Limited" along with the offer or directly through e-Nivida portal. This will be called as EOI EMD.

3.6.2. Offers not accompanied with valid EOI Earnest Money Deposit shall be summarily rejected.

3.6.3. Partner has to furnish Earnest Money Deposit (for balance amount as mentioned in the customer's Bid as and if applicable) for the bid to RailTel. The selected Business Associate shall have to submit a Bank Guarantee against EMD in proportion to the quoted value/scope of work to RailTel before submission of bid to end customer as and if applicable. If customer asks EMD in Online Transfer then BA shall have to submit the EMD in Online Transfer only.

3.6.4. Return of EMD for unsuccessful Business Associates: EOI EMD of the unsuccessful Business Associate shall be returned without interest after completion of EOI process.

3.6.5. Return of EMD for successful Business Associate: EOI-EMD (Earnest Money Deposit) of the successful partner will be discharged / returned on receipt of Security Deposit and Performance Bank Guarantee as applicable (clause no. 3.7) from Business Associate.

3.6.6. Forfeiture of EOI EMD and or Penal action as per EMD Declaration.

3.6.6.1. The EOI EMD may be forfeited and or penal action shall be initiated if a Business Associate withdraws his offer or modifies the terms and conditions of the offer during validity period.

3.6.6.2. In case of non-submission of SD/PBG (as per clause no. 3.7) lead to forfeiture of EOI EMD and or suitable action as prescribed in the EMD Declaration shall be initiated as applicable.

3.7 Security Deposit / Performance Bank Guarantee (PBG):

3.7.1 SECURITY DEPOSIT: *(As per Back-to-back terms and to be levied only if customer is levying on RailTel).* ~~The successful tenderer shall submit 5% of total value of the Service including GST detailed in the Purchase Order/Letter of Acceptance towards Security Deposit in the form of online transfer or irrevocable Bank Guarantee from any scheduled commercial bank (either private or PSU) but not from any cooperative bank or NBFC, within 30 days of issue of the Purchase Order/Letter of Acceptance or may be recovered at the rate of 10% of the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the RailTel may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract. The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of~~

~~Maintenance period plus 90 days and shall be extended from time to time, depending upon extension of contract granted. All other terms & Conditions of Bank Guarantee shall be applicable as mentioned in clause No. 3.7.2.~~

~~In case the bid is successful, the PBG of requisite amount proportionate to the agreed scope of work will have to be submitted to RailTel.~~

3.7.2 Performance Bank Guarantee : The successful tenderer shall submit **5%** of total value of the Service including GST detailed in the Purchase Order/ Letter of Acceptance towards Performance Guarantee* in the form of online transfer or irrevocable Bank Guarantee from any scheduled commercial bank (either private or PSU) but not from any cooperative bank or NBFC, within 30 days of issue of the Purchase Order/Letter of Acceptance, failing which a penal interest of 15% per annum shall be charged for the delayed period i.e. beyond 30 (thirty) days from the date of issue of PO/LOA, till the date PBG is received, which may be considered only up to 60 days of issuance of PO/LOA.

If, the PBG is not submitted by the successful partner within 60 days of issuance of PO/LOA, RailTel reserves the right to terminate the contract.

* Round off to higher Rs. 1000/- (One thousand).

3.7.2.1 The PBG shall be initially valid up to stipulated completion of all contractual obligations including warranty obligations (if applicable) plus 90 days along with a claim period of 12 months (time period between expiry date and claim date) on top of guarantee period (if applicable) under the contract.

Note:

A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.

Detail for online SFMS confirmation using the platform is as below:

BG advising message – IFN 760COV/ IFN 767COV via SFMS
To mandatorily send the Cover message at the time of BG issuance.

IFSC Code of ICICI Bank to be used (ICIC0000007).
Mention the unique reference (RAILTEL6103) in field 7037

- 3.7.2.2 Any performance security up to a value of Rs. 5 Lakhs is to be submitted through online transfer only.

RailTel's Bank Account Details for online submission of Performance Guarantee amount are given as below:

- Company Name: RailTel Corporation of India Ltd.
- Bank Name: Union Bank of India
- Branch Name: Camac Street Branch
- Bank IFSC: UBIN0540161
- Account Type: Current Account
- Account No.: 401601010519491

- 3.7.2.3 No Interest on Earnest Money and Performance Security: No interest shall be paid on the amount of earnest money and Performance Security held by RailTel, at any stage.

- 3.7.2.4 The Performance Bank Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA)/Purchase Order has been issued, but before signing of the contract agreement. In case, the time for completion of work gets extended, the contractor shall get the validity of PBG. extended to cover such time for completion of work plus 90 days with a claim period of 12 months (time period between expiry date and claim date) on top of guarantee period.

- 3.7.2.5 The value of PBG to be submitted by the contractor will not change for variation up to 25% (either increase or decrease). In case during the course of execution, value of the contract increases by more than + 25% of the original contract value, an additional Performance Bank Guarantee amounting to 10% (ten percent) for the excess value over the original contract value shall be deposited by the contractor.

- 3.7.2.6 The Performance Bank Guarantee (PBG) shall be released on completion of Contract including warranty period obligations under the contract, duly adjusting any dues recoverable from the successful tenderer.

- 3.7.2.7 Wherever the contracts are rescinded, the Performance Bank Guarantee shall be en-cashed and the balance work should be got done separately.
- 3.7.2.8 In case the customer has sought PBG of the contract in the terms of Indemnity Bond from RailTel, the selected partner has to provide the equivalent value PBG from scheduled Bank to RailTel. No Indemnity Bond from Selected Partner will be accepted in lieu of PBG from Scheduled Bank.
- 3.7.2.9 If the service period gets extended by virtue of extension or any other reason by end customer, PBG should also be extended accordingly.
- 3.7.2.10 RailTel shall also be entitled to make recoveries from the Partner's bills, PBG or from any other amount due to him, any payment made to him due to inadvertence, error, collusion, misconception or misstatement.
- 3.7.2.11 The PBG should have validity for a period as per Customer PO to RailTel and shall be on back-to-back basis. The PBG may be discharged / returned by RailTel upon being satisfied that there has been due performance of the obligations of the Partner under the contract. In the event, CSP being unable to service the contract for whatsoever reason, RailTel would invoke the PBG at its discretion. Notwithstanding and without prejudice to any rights whatsoever of RailTel under the contract in the matter, the proceeds of the PBG shall be payable to RailTel as compensation for any loss resulting from the Partner's failure to complete its obligations under the contract. RailTel shall notify the Partner in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Partner is in default.
- 3.7.2.12 If customer ask for submission for value more than 5%, same also needs to be submitted by the selected business partner.

- 3.8 Last date & time for Submission of EOI response
EOI response must be submitted to RailTel at eNivida Portal of RailTel not later than the specified date and time mentioned in the preamble.
- 3.9 Modification and/or Withdrawal of EOI response

- 3.9.1 EOI response once submitted will be treated as final and no modification will be permitted except with the consent of the RailTel.
- 3.9.2 No Partner shall be allowed to withdraw the response after the last date and time for submission.
- 3.9.3 The successful Partner will not be allowed to withdraw or back out from the response commitments. In case of withdrawal or back out by the successful business associate, the Earnest Money Deposit shall be forfeited and all interests/claims of such Business Associate shall be deemed as foreclosed.
- 3.10 Partner with lowest (L1) offer will be selected for exclusive pre-bid arrangement for optimizing technical and commercial solutions so that the most winnable solution is submitted to end customer. The final Proposal will be prepared jointly with the selected Business Associate so that the optimal bid can be put with a good chance of winning the RFP.
- 3.11 Clarification of EOI Response:
- To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the Business Associate for clarification. The response should be in writing and no change in the price or substance of the EOI response shall be sought, offered or permitted.
- 3.12 Period of Association/Validity of Agreement: RailTel will enter into an agreement with selected partner with detailed Terms and conditions.

4. EVALUATION CRITERIA

- 4.1 The BA(s)/OEM/OEM authorised partner/distributor are first evaluated on the basis of the Eligibility Criteria as per clause 14.
- 4.2 The BA(s)/OEM/OEM authorised partner/distributor who fulfils the Eligibility criteria of Bidding shall be further evaluated on the basis of Technical Evaluation and Financial evaluation.
- 4.3 For the opened bid as per outcome of the Eligibility criteria above, the partner will be selected on the lowest quote (L-1) basis for complete 'Scope of Work' as mentioned in the EOI document and documents of technical specifications of Customer, subject to the respective overall bid is in compliance to the requirements of this EOI. The so selected partner will be termed as 'Commercially Suitable Partner (hereafter referred to as 'CSP')'. It is re-mentioned, that the final selection of CSP will be on the L-1 basis only. Further, RailTel reserves the right to have negotiation with the CSP at any stage before issuing Work Order.

4.4 Deleted

4.5 RailTel reserves the right to accept or reject the response against this EOI, without assigning any reasons. The decision of RailTel is final and binding on the participants. The RailTel evaluation committee will determine whether the proposal/ information is complete in all respects and the decision of the evaluation committee shall be final.

4.6 All General requirement mentioned in the Technical Specifications are required to be complied. The solution proposed should be robust and scalable.

5. PAYMENT TERMS

5.1 Payment Terms are levied on back-to-back basis including any advance/ Mobilization advance.

5.2 However, for any Advance / Mobilisation Advance, the requisite amount of Bank Guarantee / FDR (in lien to RailTel Corporation of India Ltd (Payable at Kolkata) shall be submitted to RailTel. The BG/FDR shall be valid till atleast till 1 Month after "Go-Live". Agreement & LOA shall be executed before any payment/advance payment is made.

5.3 Payment will be released after receipt of payment from end customer for the same work / services. Any deduction /Penalties levied on RailTel invoices will be deducted in totality (full amount, which ever levied by Customer) from CSP's invoices.

5.4 Deleted

5.5 Documents list required at the time of payment/invoice submission by selected partner shall be:

- i. PO/LOA copy issued to selected partner.
- ii. Submission/Declaration of applicable SD/BG amount against PO issued to selected partner/vendor.
- iii. Signed Agreement Copy
- iv. Original Invoice for the period/item claimed.
- v. TDS declaration.
- vi. Receipted Challan/ Consignment Note of all the consignments.
- vii. Manufacturer's Test / Inspection Certificate from end customer. (Not Applicable for Software Items)
- viii. Manufacturer's Warranty /Guarantee Certificate. (Not Applicable for

Software Items)

- ix. Partners Certificate of Dispatch
- x. E-way bill
- xi. Insurance of the materials in favour of RailTel (Not Applicable for Software Items)
- xii. PAN, GST Registration Certificates
- xiii. Any other document mentioned in customers tender.

**** Any deduction/LD/Penalties levied by Customer on invoices of RailTel will be deducted from CSP's invoices or PBG.**

- 5.6 Payment will only be released once GSTR-1 and GST-3B is filed by the partner for claimed invoice.
- 5.7 The last bills shall be settled after end of the contract period after adjusting all outstanding dues.
- 5.8 No interest is payable on any amount whatsoever to the successful Partner.
- 5.9 Bill Passing Authority: RailTel's authorized representative
- 5.10 Bill Paying Authority: Finance Head/ER

6. SERVICE LEVEL AGREEMENT (SLA)

- 6.1 Partner shall propose their SLA terms as proposal, however final SLA terms as agreed by RailTel's Customer will be referred. The selected partner will be required to adhere to the SLA matrix. Any deduction by Customer from RailTel payments on account of SLA breach which is attributable to Partner will be passed on to the Partner in full monetary terms.
- 6.2 Penalty (full amount, which ever levied by Customer will be deducted at the time of payment.

7. Insurance

Projects should be covered under Contractors/Partners "All Risk Insurance" policy irrespective of the fact whether terms and conditions of the customers agreement/Tender requires the same or not.

The Insurance cover should be effective from the date of commencement of project till the project is handed over to the customer.

Responsibility of taking the Project insurance should be of Business Associates (BAs)/sub-contractors and RailTel shall be the beneficiary in the said policy.

The insurance policy shall remain live during entire period of the project execution till the project is handed over to the customer. The insurance policy shall cover the entire material purchased under the project including installation cost. In case terms and conditions of agreement with customers requires any additional insurance such as warranty period the compliance of the same should also be ensured.

The following insurance should be taken:

- a) Transit Insurance by the Supplier of the material.
- b) Contractors All Risk Insurance till PAC by the Business Associates (BAs) or Contractors who is responsible for Installation and commissioning.

The CSP shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the CSP or RailTel as per customer tender specified terms. The CSP shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work. The risk of goods shall remain with CSP till the completion of contract. Claimant of insurance shall be in the name of RailTel Corporation of India Ltd and shall be kept valid till completion of contract.

7.1. INSURANCE OF MATERIALS: The Contractor shall take out and keep in force a Policy or policies of Insurance for all machine & materials including RailTel supply materials/equipment.

- (i) The Contractor should, however, insure the stores brought to HQ, site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act on force from time to time.
- (ii) It may be noted that the beneficiary of the insurance policy should be RailTel, or the policies should be pledged in favour of RailTel/Railway. The contractor shall keep the policy/policies current till the completion of the contract.
- (iii) For the purpose of enabling the contractor to take the insurance cover in connection with this contract, the Executive Director or its representatives will advise the approximate price of all the RailTel supply materials to the Contractor.

8. Liquidated Damages:

RailTel will levy the liquidated damages imposed by customer to partner on value terms at the time of releasing of payment.

Note: Full amount of LD will be charged, which ever levied by customer on RailTel.

9. Delivery & Inspection

- 9.1 Partner shall propose their Delivery terms in the submitted proposal, however final Payment terms as agreed by RailTel's Customer will be referred.
- 9.2 All the material should be made available for Inspection by RailTel nominated person/agency.
- 9.3 Partner will be custodian of all the material till installation and commissioning of system.
- 9.4 Charges for any 3rd party inspection should be under scope of Partner.

10. PROVISIONAL ACCEPTANCE TESTING:

- 10.1. Immediately after the completion of the work in all aspects, the Bidder shall certify and advise the purchaser in writing that the installation is complete, commissioned and ready for handing over to customer.
- 10.2. The tests will be conducted jointly by purchaser and Bidder as soon as possible after receipt of such advice of completion of the work from the Bidder. The test schedule shall be finalized mutually between the Bidder and RailTel. Any component/modules/sub-assemblies or equipment failing during the commissioning shall be replaced/repared free of cost by bidder.
- 10.3. Purchaser's Engineer shall issue a Provisional Acceptance Certificate (PAC) after successful Supply, installation, integration & commissioning covering all materials and services included in the Schedule of Requirements after the acceptance test as per the approved test procedure have been completed and the performance has been found to meet the specifications. RailTel's decision in this respect shall be final. The Provisional Acceptance Certificate (PAC) shall be signed by both the parties. The period of Comprehensive Maintenance shall commence from the date of issue of Provisional Acceptance Certificate (PAC).

11. FINAL ACCEPTANCE TESTING:

- 11.1. The final acceptance of the works shall take effect after "contract period validity as agreed by RailTel's end customer" of issue of Provisional Acceptance Certificates to , provided in any case that the Bidder has complied fully with his obligations in respect of each item under the contract
- 11.2. Notwithstanding the issue of Final Acceptance Certificate (FAC), the Bidder and the purchaser (subject to Sub Clause as above) shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of Final Acceptance Certificate which remains unperformed at the time such

certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

12. INSPECTION

- 12.1 Pre-shipment / pre-dispatch inspection shall be carried out at manufacturers/supplier's premises by RailTel's authorized representative. Traveling, lodging & boarding expenses of RailTel's representative and charges for 3rd party inspection, if any, shall be borne by RailTel but necessary facilities to carry out tests/inspection shall be provided by the manufacturer/supplier free of cost.
- 12.2 Along with inspection call, the supplier/manufacturer shall submit details of test procedures, program, parameters together with permissible values, etc., and their Quality Assurance Plan.
- 12.3 In case material/equipment fails during inspection, the fresh lot of material shall be offered without any extra cost, by the manufacturer/supplier. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's /supplier's account.

13. PARTNER'S PROFILE

The partner shall provide the information in the below table:

SN	ITEM	Details
1.	Full name of Partner's firm	
2.	Full address, telephone numbers, fax numbers, and email address of the primary office of the organization / main / head / corporate office	
3.	Name, designation and full address of the Chief Executive Officer of the partner's organization as a whole, including contact numbers and email Address	
4.	Full address, telephone and fax numbers, and email addresses of the office of the organization dealing with this EOI	
5.	Name, designation and full address of the person dealing with the EOI to whom all reference shall be made regarding the EOI enquiry. His/her telephone, mobile, Fax and email address	
6.	Bank Details (Bank Branch Name, IFSC Code, Account number)	
7.	GST Registration number	
8.	Whether owned by SC/ST	
9.	Whether owned by Women entrepreneur	

10	Whether MSME (attach Udhyam Aadhaar certificate and Number)	
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14. ELIGIBILITY CRITERIA FOR BUSINESS PARTNER OF RAILTEL

SN	Description	Requirement	Compliance
A	General, Technical, Financial & OEM Eligibility		
1	General	Partner should be any Firm (Limited/Pvt.Limited/LLP/ Partnership/Startup/Proprietary) registered in India for the last 3 years as on bid submission date.	1. Certificate of Incorporation/partnership deed/Start Up certificate/ Trade License (As applicable) 2. PAN, GSTIN Certificate
2	Financial	1. Partner / Any Consortium member should have average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the advertised value of the EOI (if advertised) or Quoted value against EOI. 2. Sole partner/ All consortium members should also have a positive net worth & be profitable in the last 3 financial years.	Documentary Evidence Required Certificate of Turnover, Positive Networth and Profitable from Chartered Accountant. Certificate should contain UDIN no. issued by ICAI.
3	Technical	The Partner must have completed similar nature of work during last 3 (Three) years ending Bid submission date as per following capacity 1. One Similar work, each costing not less than the amount equal to 35% of the advertised value of the EOI (if advertised) or Quoted value against EOI. OR 2. Two Similar works, each costing not less than the amount equal to 20% of the advertised value of the EOI (if advertised) or Quoted value against EOI. OR 3. Three Similar works, each costing not less than the amount equal to	Documentary Evidence Required: The bidder shall furnish Work order/ Purchase order / MOU along with Commissioning certificate / work completion certificate / Go-live certificate issued by customer.

SN	Description	Requirement	Compliance
		15% of the advertised value of the EOI (if advertised) or Quoted value against EOI. for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. OR The partner should possess a proven track record in completion of Similar Products/Services of at least 50% of Scope of work (No. of CCTV Camera) through one order in last 7 years for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. Similar Work means: Execution of CCTV Surveillance Project / ICT Project / IT or ITeS Projects for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. Large Enterprise means: Company having turnover of more than 250 Crs in previous audited financial year.	
B	Annexures		
i)	Annexure 1	Covering Letter: Self-certification duly signed by authorized signatory on company letter head.	
ii)	Annexure 2	The Partner should agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EOI is submitted. Self-certification duly signed by authorized signatory on company letter head.	
iii)	Annexure 3	An undertaking signed by the Authorized Signatory of the Partner	

SN	Description	Requirement	Compliance
		to be provided on letter head. The Partner/any of the OEM should not have been blacklisted/debarred by any Governmental/ Non-Governmental Organization in India as on bid submission date.	
iv)	Annexure-4	Format for Affidavit to be uploaded by Partner/Consortium with the EOI Response documents.	
v)	Annexure-5	Non-disclosure agreement by Partner/Consortium with RailTel.	
vi)	Annexure-6	Checklist of Documents	
vii)	Annexure-7	MAF Format (if Applicable)	
viii)	Annexure-8	Technical Proposal Document	
ix)	Annexure-9	CONSORTIUM AGREEMENT /MEMORANDUM OF AGREEMENT	
x)	Annexure-10	Undertaking of Service Level Compliance	
xi)	Annexure-11	Statement of No Deviation Declaration	
xii)	Annexure-12	Commercial Proposal Document	
xiii)	Annexure-13	Undertaking on Exit Management and Transition	
xiv)	Annexure-14	Declaration – Exclusivity of Participation	
xv)	Annexure-15	Integrity Pact Program & Proforma (If bid value is above 15 Crore)	
xvi)	Annexure -16	PROFORMA FOR PERFORMANCE BANK GUARANTEE	
xvii)	Annexure – 17	Contract Agreement	
xviii)	Annexure – 18	Standing Indemnity Bond	
xix)	Annexure – 19	Land Border Certificate	
xx)	Annexure – 20	Specification of Documents	
D	Other Documents		
i)	Power of Attorney	Power of Attorney and Board Resolution in favour of one of its employees who will sign the Bid Documents.	
ii)	BA empanelment letter & BG	Empanelment letter issued by RailTel and valid BG copy till bid opening date / Proof of Payment of	

SN	Description	Requirement	Compliance
		empanelment fee & mail sent to RailTel CO.	
iii)	Additional Documents to be Submitted	Technical Proposal with overview of the project: • Partner's Understanding of the Project & Scope of Work • Solution Architecture & Design (IT) • Approach & Methodology • Project Plan & Project Team's Experience • Operation and Maintenance Plan	
iv)	OEM Documents	1. MAF as per Annexure 7 (if applicable) 2. Compliance of Specification as given in Annexure 20 (in OEM Letterhead – if applicable)	

Important Note to Partners:

- RailTel at its discretion may select an offer which does not fulfil the eligibility criteria, if otherwise found suitable as per the requirement of CoR.

15. FAILURE AND TERMINATION

15.1 Failure and Termination: If the Contractor fails to deliver the supply and services or any instalment thereof within the period fixed for such delivery in the contract or as extended or at any time repudiates the contract before the expiry of such period the Purchaser may without prejudice to his other rights:

- 15.1.1 Recover from the Contractor as agreed liquidated damages and not by way of penalty a sum equivalent to Half per cent of the price of any stores (including elements of taxes, duties, freight, etc.) which the Contractor has failed to deliver within the period fixed for delivery in the contract or as extended for each week or part of a week during which the delivery of such stores may be in arrears where delivery thereof is accepted after expiry of the aforesaid period The upper limit for recovery of liquidated damages will be 10% (Ten Percent) of Total contract value provided in the contract or
- 15.1.2 Cancel the contract or a portion thereof and forfeit the security deposit and encash performance bank guarantee. or
- 15.1.3 Cancel the contract or a portion thereof and if so desired purchase or authorize the purchase of the stores not so delivered or others of a similar description (where stores exactly complying with particulars are not, in the

opinion of the Purchaser, which shall be final, readily procurable) at the risk and cost of the contractor.

It shall, however, be in the discretion of the Purchaser to collect or not the security deposit from the firm/firms on whom the contract is placed at the risk and expense of the defaulted firm.

Where action is taken under sub-clause (15.1.2) above, the contractor shall be liable for any loss which the purchaser may sustain on the account provided the purchase, or if there is an agreement to purchase, such agreement is made, in case of failure to deliver the stores within the period fixed for such delivery in the contract or extended within Nine months from the date of such failure and in case of repudiation of the contract before the expiry of the aforesaid period of delivery, within Nine months from the date of cancellation of the contract. The contractor shall not be entitled to any gain on such purchase and the manner and method of such purchase shall be in the entire discretion of the purchaser. It shall not be necessary for the purchaser to serve a notice of such purchase to the contractor.

15.2 Termination for Default: The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Tenderer, terminate this contract in whole or in part.

15.2.1 If the tenderer fails to deliver any or all of the goods within the time period(s) specified in the contract.

15.2.2 If the tenderer fails to perform any other obligation(s) under the contract; and

15.2.3 If the tenderer, in either of the above circumstance(s) does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

15.2.4 In case of any of the above circumstances the RailTel shall pay the supplier for all products and services delivered till point of termination as per terms and conditions of the contract.

However, any recovery and losses occurred to RailTel will be recovered from Contractor up to the value of contract.

15.2.5 If 10% or more equipment found to be failed frequently again and again, the bidder may be barred for participating in the tender for a period of two years besides the above penalties to be imposed. RailTel keeps the right

to terminate the contract in case of poor performance of quality and reliability of product supplied.

16. INDEMNITY BY CONTRACTOR:

16.1 The selected partner agrees to indemnify and hold harmless RailTel, its officers, employees and agents (each an "Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses, claims, damages, liabilities, costs (including reasonable attorney's fees and disbursements) and expenses (collectively, "Losses") to which the Indemnified party may become subject, in so far as such losses directly arise out of, in any way relate to, or result from.

a) Any mis-statement or any breach of any representation or warranty made by CSP or

b) The failure by the CSP to fulfill any covenant or condition contained in this contract by any employee or agent of the Bidder. Against all losses or damages arising from claims by third Parties that any Deliverables (or the access, use or other rights thereto), created by CSP pursuant to this contract, or any equipment, software, information, methods of operation or other intellectual property created by CSP pursuant to this contract, or the SLAs (i) infringes a copyright, trade mark, trade design enforceable in India, (ii) infringes a patent issues in India, or (iii) constitutes misappropriation or unlawful disclosure or used of another Party's trade secrets under the laws of India (collectively, "Infringement Claims"); or

c) Any compensation / claim or proceeding by any third party against RailTel arising out of any act, deed or omission by the CSP or

d) Claim filed by a workman or employee engaged by the CSP for carrying out work related to this agreement. For the avoidance of doubt, indemnification of Losses pursuant to this section shall be made in an amount or amounts sufficient to restore each of the Indemnified Party to the financial position it would have been in had the losses not occurred

16.2 Any payment made under this contract to an indemnity or claim for breach of any provision of this contract shall include applicable taxes.

16.3 Indemnity bond of proportionate amount to be submitted by contractor.

17. Materials supplied by RailTel will be supplied at customer designated store. Transportation of these material to site for installation shall be the responsibility of contractor.

- 18. VARIATION IN QUANTITY:** RailTel reserves the right to reduce or increase the quantity of any item as mentioned in the BoM/BoQ back-to-back as per requirement of End Customer.
- 19. Purchase Preference to bidders under make in India Policy:** The provisions of the revised “Public Procurement (Preference to Make in India) Order 2017” dated. 15.06.2017 & dated 16.09.2020 (or subsequent revisions, if any till opening of tender) by Department of Promotion of Industry and Internal Trade (DPIIT), GoI shall apply to this EOI.
- 20. FORCE MAJEURE CLAUSE:** On the occurrence of any unforeseen event, beyond the control of either Party, directly interfering with the delivery of Services arising during the currency of the contract, such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the affected Party shall, within a week from the commencement thereof, notify the same in writing to the other Party with reasonable evidence thereof. Unless otherwise directed by RailTel in writing, the contractor shall continue to perform its obligations under the contract as far as reasonably practicable and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. If the force majeure condition(s) mentioned above be in force for 90 days or more at any time, either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days’ notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other, save and except those which had occurred under any other clause of this contract before such termination.

Notwithstanding the remedial provisions contained in GCC-clause 22 or 29, none of the Party shall seek any such remedies or damages for the delay and/ or failure of the other Party in fulfilling its obligations under the contract if it is the result of an event of Force Majeure.

21. RESOLUTION OF DISPUTES:

21.1 Disputes and Excepted Matters

All disputes and differences between the parties hereto, as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question; or any other account whatsoever, but excluding the Excepted Matters (detailed below); arising out of or in connection with the contract, within twenty one (21) days from aggrieved Party notifying the other Party of such matters; whether before or after the completion/ termination of the contract, that cannot be resolved amicably between the Procurement Officer and the contractor within twenty one (21) days from aggrieved Party notifying the other Party of such matters, shall be hereinafter called the “Dispute”. The aggrieved party shall give a ‘Notice of Dispute’ indicating the Dispute and claims citing relevant Contractual clause to the

designated authority and requesting for invoking the following dispute resolution mechanisms. The Dispute shall be resolved without recourse to courts through dispute resolution mechanisms detailed subsequently, in the sequence as mentioned below, and the next mechanism shall not be invoked unless the earlier mechanism has been invoked or has failed to resolve it within the deadline mentioned therein.

1.1.1 Adjudication

1.1.2 Conciliation

1.1.3 Arbitration

21.2 Excepted Matters

Matters for which provision has been made in any Clause of the contract shall be deemed as 'excepted matters' (matters not disputable/ arbitrable), and decisions of RailTel, thereon shall be final and binding on the contractor. The 'excepted matters' shall stand expressly excluded from the purview of the sub-clauses below, including Arbitration. However, where RailTel has raised the dispute, this sub- clause shall not apply. Unless otherwise stipulated in the contract, excepted matters shall include but not limited to:

21.2.1 any controversies or claims brought by a third party for bodily injury, death, property damage or any indirect or consequential loss arising out of or in any way related to the performance of this Contract ("Third Party Claim"), including, but not limited to, a Party's right to seek contribution or indemnity from the other Party in respect of a Third-Party Claim.

21.2.2 Issues related to the pre-award tender process or conditions

21.2.3 Issues related to ambiguity in contract terms shall not be taken up after a contract has been signed. All such issues should be highlighted before the signing of the contract by the contractor.

21.2.4 Provisions incorporated in the contract, which are beyond the purview of RailTel or are in pursuance of policies of Government, including but not limited to:

21.2.4.1 Provisions of restrictions regarding local content and Purchase Preference to Local suppliers in terms of Make in India policy of the Government;

21.2.4.2 Provisions regarding restrictions on Entities from Countries having land- borders with India in terms of the Government's policies in this regard;

21.2.4.3 Purchase preference policies regarding MSEs and Start-ups.

21.3 Adjudication

After exhausting efforts to resolve the Dispute with the Purchasing Officer executing the contract on behalf of RailTel, the contractor shall give a 'Notice of Adjudication' specifying the matters which are in question, or subject of the dispute or difference indicating the relevant contractual clause, as also the amount of claim item-wise to Head of Procurement or any other authority mentioned in the contract (hereinafter called the "Adjudicator") for invoking resolution of the dispute through Adjudication. During his adjudication, the Adjudicator shall give adequate opportunity to the contractor to present his case. Within 60 days after receiving the representation, the Adjudicator shall make and notify decisions in writing on all matters referred to him. The parties shall not initiate, during the adjudication proceedings, any conciliation or arbitral or judicial proceedings in respect of a dispute that is the subject matter of the adjudication proceedings. If not satisfied by the decision in adjudication, or if the adjudicator fails to notify his decision within the abovementioned time-frame, the contractor may proceed to invoke the process of Conciliation as follows.

21.4 Conciliation of disputes

21.4.1 Any party may invoke Conciliation by submitting "Notice of Conciliation" to the Head of the RailTel Corporation of India Ltd. Since conciliation is a voluntary process, within 30 days of receipt of "Notice of Conciliation", the Head of the RailTel Corporation of India Ltd shall notify a sole Conciliator if the other party is agreeable to enter Conciliation. If the other party is not agreeable to Conciliation, the aggrieved party may invoke Arbitration.

21.4.2 The Conciliator shall proactively assist the parties to reach an amicable settlement independently and impartially within the terms of the contract, within 60 days from the date of appointment of the Conciliator.

21.4.3 If the parties reach an agreement on a dispute settlement, they shall draw up a written settlement agreement duly signed by the parties and conciliator. When the parties sign the settlement agreement, it shall be final and binding on the parties. The dispute shall be treated as resolved on the date of such agreement.

21.4.4 The parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.

21.4.5 Termination of Conciliation: Disputes shall remain alive if the conciliation is terminated as follows:

21.4.5.1 By written declaration of the conciliator, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of such declaration; or

21.4.5.2 By a written declaration of any party to the conciliator to the effect that the conciliation proceedings are terminated, on the date of such declaration; or

21.4.5.3 If the parties fail to reach an agreement on a settlement of the dispute, within 60 days of the appointment of Conciliator

21.4.6 On termination of Conciliation, if the dispute is still alive, the aggrieved party shall be free to invoke Arbitration.

21.5 Arbitration Agreement

21.5.1 This Arbitration Agreement (hereinafter referred to as this "Agreement") relating to this Contract (hereinafter called the "Main Agreement" for this agreement) is made under the provisions of The Arbitration and Conciliation Act, 1996 as amended from time to time and the rules thereunder (hereinafter called The Arbitration Act). This Agreement shall continue to survive termination, completion, or closure of the Main Agreement for 120 days after that.

21.5.2 Subject to aforesaid provisions, relevant clauses of the contract shall apply to the appointment of arbitrators and arbitration proceedings under this Agreement.

21.5.3 The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 provides parties to a dispute (where one of the parties is a Micro or Small Enterprise) to be referred to Micro and Small Enterprises Facilitation Council if the dispute is regarding any amount due under Section 17 of the MSMED Act, 2006. If a Micro or Small Enterprise, being a party to dispute, refers to the provisions in MSMED Act 2006, these provisions shall prevail over this Agreement.

21.6 Notice for Arbitration

21.6.1 Authority to Appoint Arbitrator(s): For this Arbitration Agreement 'The Appointing Authority', to appoint the arbitrator shall be Head of the RailTel Corporation of India Ltd named in the contract and includes if there be no such authority, the officer who is for the time being discharging the functions of that authority, whether in addition to other functions or otherwise.

21.6.2 In the event of any dispute as per GCC-clause 28.1 above, if the Adjudicator fails to decide within 60 days (as referred in GCC-

clause 28.3 above), or the Conciliation is terminated (as referred in sub-clause 28.4 above) then, parties to the contract, after 60 days but within 120 days of 'Notice of Dispute' (clause 28.1 above) shall request the Appointing Authority through a "Notice for Arbitration" in writing requesting that the dispute or difference be referred to arbitration.

21.6.3 The "Notice for arbitration" shall specify the matters in question or subject of the dispute or difference indicating the relevant contractual clause, as well as the amount of claim item-wise.

21.7 Reference to Arbitration

After appointing Arbitrator(s), the Appointing Authority shall refer the Dispute to them. Only such dispute or difference shall be referred to arbitration regarding which the demand has been made, together with counter-claims or set off. Other matters shall be beyond the jurisdiction of Arbitrator(s)

21.8 Appointment of Arbitrator

21.8.1 Qualification of Arbitrators:

21.8.1.1 In the case of retired officers of The RailTel Corporation of India Ltd, he shall have retired in the rank of Senior administrative grade (or equivalent) and shall have retired at least 1 years prior and must not be over 70 years of age on the date of Notice for arbitration.

21.8.1.2 He/ they shall not have had an opportunity to deal with the matters to which the contract relates or who, in the course of his/ their duties as officers of the RailTel Corporation of India Ltd, expressed views on any or all of the matters under dispute or differences. A certification to this effect shall be taken from Arbitrators. The proceedings of the Arbitral tribunal or the award made by such Tribunal shall, however, not be invalid merely for the reason that one or more arbitrators had in the course of his service, an opportunity to deal with the matters to which the contract relates or who in the course of his/ their duties expressed views on all or any of the matters under dispute.

21.8.1.3 An Arbitrator may be appointed notwithstanding the total no. of arbitration cases in which he has been appointed in the past.

21.8.1.4 Not be other than the person appointed by The Appointing Authority and that if for any reason that is not possible, the

matter shall not be referred to arbitration at all.

21.9 Replacement of Arbitrators

If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator, or in the event of the arbitrator dying, neglecting/ unable or unwilling or refusing to act for any reason, or his award being set aside by the court for any reason, or in the opinion of The Appointing Authority fails to act without undue delay, the Appointing Authority shall appoint new arbitrator/ arbitrators to act in his/ their place in the same manner in which the earlier arbitrator/ arbitrators had been appointed. Such a re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator (s).

21.10 Appointment of Arbitrator

21.10.1 In cases where the total value of all claims in question added together does not exceed Rs 50,00,000/- (Rupees Fifty Lakh only), the Arbitral Tribunal shall consist of sole Arbitrator. For this purpose, The Appointing Authority shall send to the contractor, within 60 days from the day of receipt of a written and valid notice for arbitration, a panel of at least four (4) names of retired officers, duly indicating their retirement dates.

21.10.2 The contractor shall be asked to nominate at least two names out of the panel for appointment as his nominee within 30 days from the dispatch date of the request by The Appointing Authority. The Appointing Authority shall appoint at least one out of them as the sole arbitrator within 30 days from the receipt of the names of the contractor's nominees.

21.10.3 In cases where the total value of all claims in question added together exceeds Rs 50,00,000/- (Rupees Fifty Lakh only), the Arbitral Tribunal shall consist of three (3) retired Officers of the RailTel Corporation of India Ltd. For this purpose, The Appointing Authority shall send a panel of at least four (4) names of such Officer(s) empaneled to work as Arbitrators duly indicating their retirement date to the contractor within 60 days from the day when a written and The Appointing Authority receives valid demand for arbitration.

21.10.4 The contractor shall be asked to nominate at least 2 names out of the panel for appointment as his nominee within 30 days from the dispatch date of the request by The Appointing Authority. The Appointing Authority shall appoint at least one out of them as the

contractor's nominee. It shall also simultaneously appoint the balance number of arbitrators either from the panel or outside the panel, duly indicating the 'Presiding Arbitrator' from amongst the 3 arbitrators so appointed, within 30 days from the receipt of the names of Contractor's nominees.

- 21.10.5 If the contractor does not suggest his nominees for the arbitral tribunal within the prescribed timeframe, The Appointing Authority shall proceed for appointment of the arbitral tribunal within 30 days of the expiry of such time provided to the contractor.

21.11 Failure to appoint Arbitrators.

If The Appointing Authority fails to appoint an arbitrator within 60 (sixty) days, then subject to the survival of this Arbitration Agreement, in international commercial arbitration, the Supreme Court of India shall designate the arbitral institution for the appointment of arbitrators. In case of national arbitrations, the High Court shall designate arbitral institutions. The Arbitration Council of India must have graded these arbitration institutions. These arbitral institutions must complete the selection process within thirty days of accepting the request for the arbitrator's appointment.

21.12 Arbitral Procedure

- 21.12.1 **Effective Date of Entering Reference:** The arbitral tribunal shall be deemed to have entered the reference on the date on which the arbitrator(s) have received notice of their appointment. All subsequent time limits shall be counted from such date.
- 21.12.2 **Seat and Venue of Arbitration:** The seat of arbitration shall be the place from which the Purchase Order or the contract is issued. The venue of arbitration shall be the same as the seat of arbitration. However, in terms of section 20 of The Arbitration Act, the arbitrator, at his discretion, may determine a venue other than the seat of the arbitration without in any way affecting the legal jurisdictional issues linked to the seat of the arbitration.
- 21.12.3 If the Adjudication and/ or Conciliation mechanisms had not been exhausted before such reference to Arbitration, the Arbitrator should ask the aggrieved party to approach designated authority for such mechanisms before the Arbitration proceedings are started.
- 21.12.4 The claimant shall submit to the Arbitrator(s) with copies to the respondent his claims stating the facts supporting the claims along with all the relevant documents and the relief or remedy sought against each claim within 30 days from the date of appointment of the Arbitral Tribunal unless otherwise extension has been granted

by Arbitral Tribunal.

- 21.12.5 On receipt of such claims, the respondent shall submit its defence statement and counter claim(s), if any, within 60 days of receipt of the copy of claims, unless otherwise extension has been granted by Arbitral Tribunal.
- 21.12.6 No new claim shall be added during proceedings by either party. However, a party may amend or supplement the original claim or defence thereof during arbitration proceedings subject to acceptance by the Tribunal having due regard to the delay in making it.
- 21.12.7 Statement of claims, counterclaims and defence shall be completed within six months from the effective reference date.
- 21.12.8 Oral arguments to be held on a day-to-day basis: Oral arguments as far as possible shall be heard by the arbitral tribunal on a day-to-day basis, and no adjournments shall be granted without sufficient cause. The arbitrator(s) may impose an exemplary cost on the party seeking adjournment without sufficient cause.
- 21.12.9 Award within 12 (twelve) months: The arbitral tribunal is statutorily bound to deliver an award within 12 (twelve) months from the date when the arbitral tribunal enters reference. The award can be delayed by a maximum of six months only under exceptional circumstances where all parties consent to such extension of time. The court's approval shall be required for further extension if the award is not made out within such an extended period. During the period of an application for extension of time is awaiting before the court, the arbitrator's proceedings shall continue until the disposal of the application.

21.13 Fast Track Procedure

The parties to arbitration may choose to opt for a fast-track procedure either before or after the commencement of the arbitration. The award in fast-track arbitration is to be made out within six months, and the arbitral tribunal shall be entitled to additional fees. The salient features of the fast-track arbitration are:

- 21.13.1 The dispute is to be decided based on written pleadings only.
- 21.13.2 Arbitral Tribunal shall have the power to call for clarifications in addition to the written pleadings where it deems necessary.
- 21.13.3 An oral hearing may be held only if all the parties request or the arbitral tribunal considers it necessary.
- 21.13.4 The parties are free to decide the fees of the arbitrator(s) for fast-

track procedure.

21.14 Powers of Arbitral Tribunal to grant Interim Relief

The parties to arbitration may approach the arbitral tribunal for seeking interim relief on the grounds available under section 9 of the act. The tribunal has the powers of a court while making interim awards in the proceedings before it.

21.15 Confidentiality

As provided in Section 42A of The Arbitration Act, all the details and particulars of the arbitration proceedings shall be kept confidential, except in certain situations like if the disclosure is necessary for the implementation or execution of the arbitral award.

21.16 Obligation During Pendency of Arbitration

Performance of the contract shall, unless otherwise directed by RailTel, continue during the arbitration proceedings, and no payment due or payable by RailTel shall be withheld on account of such proceedings, provided; however, it shall be open for Arbitral Tribunal to consider and decide whether or not the performance of the contract or payment therein should continue during arbitration proceedings.

21.17 The Arbitral Award

21.17.1 In the case of the Tribunal, comprising of three members, any ruling on award shall be made by a majority of members of the Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

21.17.2 The arbitral award shall state item-wise the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award can be inferred from it.

21.17.3 It is further a term of this arbitration agreement that where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made in terms of Section 31 (7) (a) of The Arbitration Act.

21.17.4 The award of the arbitrator shall be final and binding on the parties to this contract.

21.17.5 A party may apply for corrections of any computational errors, typographical or clerical errors, or any other error of similar nature occurring in the award or interpretation of a specific point of the

award to the Tribunal within 60 days of receipt of the award.

- 21.17.6 A party may apply to the Tribunal within 60 days of receiving the award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

21.18 Savings

The Arbitral Tribunal shall decide any matter related to Arbitration not covered under this Arbitration Agreement as per the provisions of The Arbitration Act.

21.19 Cost of Arbitration and fees of the Arbitrator(s)

- 21.19.1 The concerned parties shall bear the cost of arbitration in terms of section 31 (A) of The Arbitration Act. The cost shall inter-alia include fees of the Arbitrator. Further, the fees payable to the Arbitrator shall be governed by instructions issued on the subject by RailTel and/ or the Government from time to time, in line with the Arbitration and Conciliation Act, irrespective of the fact whether the Arbitrator is appointed by RailTel or the Government under this clause or by any court of law unless directed explicitly by Hon'ble court otherwise on the matter. A sole arbitrator shall be entitled to a 25% extra fee over such a prescribed fee.
- 21.19.2 The arbitrator shall be entitled to a 50 percent extra fee if the award is made within 6 months in terms of provisions contained in section 29(A) (2) of The Arbitration Act.
- 21.19.3 Besides the above, Arbitrator shall also be entitled to this extra fee in cases where Fast Track Procedure in terms of section 29 (B) of The Arbitration Act is followed.

22. APPLICABLE LAW: The work orders will be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing. Any default in the terms and conditions of the EOI by the bidder will lead to rejection of bid/work order and forfeiture of EMD/Security Deposit & Performance Guarantee Amount.

23. INTELLECTUAL PROPERTY RIGHTS: The Selected Partner will indemnify RAILTEL of any infringement of third-party rights be they under the Patents Act or the IPR.

24. Eligibility of bidders from specified countries

24.1 Orders issued by the Government of India restricting procurement from bidders from certain countries that share a land border with India shall apply to this EOI.

- 1) Any bidder (as defined in GCC-clause 2.5) from a country that shares a land border with India, excluding countries as listed on the website of the Ministry of External Affairs, to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects (hereinafter called 'Restricted Countries') shall be eligible to bid in this tender only if Bidder is registered with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). Bidders shall enclose the certificate in this regard in Form 1.2.
- 2) In Bids for Turnkey contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from such Restricted Countries unless such contractor is similarly registered. In such cases, the bidders shall enclose the certificate in Form 1.2.
- 3) If Bidder has proposed to sub-contract Services or incidental Goods directly/indirectly from the vendors from such countries, such vendor shall be required to be registered with the Competent Authority. However, if Bidder procures raw material, components, and sub-assemblies from such countries' vendors, such vendors shall not require registration.
- 4) "Bidder from such Restricted Countries" means :-
 - a. An entity incorporated, established, or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established, or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established, or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity. Agent is a person employed to do any act for another, or to represent another in dealings with third persons.; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium/ joint venture where any member falls under any of the above
- 5) The beneficial owner shall mean:
 - a. In a company or Limited Liability Partnership, the beneficial owner is the natural person(s). Whether acting alone or together or through one or more juridical persons, controlling ownership interest or exercises control through other means.

Explanation-

- i. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of the company's shares or capital or profits.

- ii. "Control" shall include the right to appoint a majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder agreements or voting agreements;
- b. In the case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together or through one or more juridical persons, has ownership of entitlement to more than fifteen percent of capital or profits.
- c. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- d. Where no natural person is identified under 5 (a) or (b) or (c) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
- e. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

25.EXIT MANAGEMENT

25.1 Exit Management Purpose

- a) This clause sets out the provision, which will apply during Exit Management period. The parties shall ensure that their respective associated entities carry out their respective obligation set out in this Exit Management Clause.
- b) The exit management period starts, in case of expiry of contract, at least 03 months prior to the date when the contract comes to an end or in case of termination contract, on the date when the notice of termination is sent to the CSP. The exit management period ends on the date agreed upon by RailTel or Three (03) months after the beginning of the exit management period, whichever is earlier.

- 25.2 Confidential Information, Security and Data: CSP will promptly, on the commencement of the exit management period, supply to RailTel or its nominated agencies the following (if asked by RailTel in writing):

a) Information relating to the current services rendered and performance data relating to the performance of the services; documentation relating to the project, project's customized source code (if any); any other data and confidential information created as part of or is related to this contract;

b) All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable RailTel and its nominated agencies, or its replacing vendor to carry out due diligence in order to transition the provision of the services to RailTel or its nominated agencies, or its replacing vendor (as the case may be).

25.3 Employees : Promptly on reasonable request at any time during the exit management period, the CSP shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide RailTel a list of all employees (with job titles and communication address), dedicated to providing the services at the commencement of the exit management period; To the extent that any Transfer Regulation does not apply to any employee of the CSP, RailTel or the replacing vendor may make an offer of contract for services to such employees of the CSP and the CSP shall not enforce or impose any contractual provision that would prevent any such employee from being hired by RailTel or any replacing vendor.

25.4 Rights of Access to Information: Besides during the contract period, during the exit management period also, if asked by RailTel in writing, the CSP shall be obliged to provide an access of information to RailTel and / or any Replacing Vendor in order to make an inventory of the Assets (including hardware / software / active / passive), documentations, manuals, catalogues, archive data, Live data, policy documents or any other related material.



Annexure 1: Format for OFFER LETTER

OFFER LETTER (To be on company letter head)

Eol Reference No:

Date:

To,
The Principle Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector
V, Bidhannagar, Kolkata, West Bengal
700091

Dear Sir,

SUB: Participation in the Eol process

Having examined the Invitation for Eol document bearing the reference number _____ released by your esteemed organization, we, undersigned, hereby acknowledge the receipt of the same and offer to participate in conformity with the said Invitation for Eol document.

If our application is accepted, we undertake to abide by all the terms and conditions mentioned in the said Invitation for Eol document.

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for Eol document, are true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our Eol is liable to be rejected.

We hereby Submit EMD amount of Rs. _____ issued vide _____ from Bank _____.

Authorized
Signatory Name
Designation

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Annexure 2: Format for Self-Certificate & Undertaking

Self-Certificate (To be on company letter head)

EOI Reference No:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th
Floor, Aurora Waterfront, opposite
NALBAN, Sector V, Bidhannagar, Kolkata,
West Bengal 700091

Dear Sir,

Sub: Self Certificate for Tender, Technical & other compliances

- 1) Having examined the technical specifications mentioned in this EOI & end customer tender, we hereby confirm that we meet all specification.
- 2) We_____agree to abide by all the technical, commercial & financial conditions of the end customer tender for which EOI is submitted (except pricing, termination & risk purchase rights of the RailTel). We understand and agree that RailTel shall release the payment to selected sole partner after the receipt of corresponding payment from end customer by RailTel. Further we understand that in case we fail to execute assigned portion of work, then the same shall be executed by RailTel through third party or departmentally at the risk and cost of selected partner.
- 3) We agree to abide by all the technical, commercial & financial conditions of the end customer's tender for the agreed scope of work for which this EOI is submitted.
- 4) We hereby agree to comply with all OEM technical & Financial documentation including MAF, Technical certificates/others as per end-to-end requirement mentioned in the end customer's tender. We are hereby enclosing the arrangement of OEMs against each of the BOQ item quoted as mentioned end customer's tender. We also undertake to submit MAF and other documents

required in the end Customer organization tender in favour of RailTel against the proposed products.

- 5) We hereby certify that any services, equipment and materials to be supplied are produced in eligible source country complying with OM/F. No. 6/18/2019 dated 23rd July 2020 issued by DoE, MoF.
- 6) We hereby undertake to work with RailTel as per end customer's tender terms and conditions. We confirm to submit all the supporting documents constituting/ in compliance with the Criteria as required in the end customer's tender terms and conditions like technical certificates, OEM compliance documents.
- 7) We understand and agree that RailTel is intending to select CSP who is willing to accept all terms & conditions of end customer organization's tender for the agreed scope of work. RailTel will strategies to retain scope of work where RailTel has competence.
- 8) We hereby agree to submit that in case of being selected by RailTel as sole partner/ consortium for the proposed project (for which EOI is submitted), we will submit all the forms, appendix, relevant documents etc. to RailTel that is required and desired by end Customer well before the bid submission date by end customer and as and when required.
- 9) We hereby undertake to sign Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.
- 10) Deleted

Authorized

Signatory

Name &

Designation



Annexure 3: Undertaking for not Being Blacklisted/Debarred

<On Company Letter Head>

To,

The Principle Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector
V, Bidhannagar, Kolkata, West Bengal
700091

Subject: **Undertaking for not Being Blacklisted/Debarred**

We, Company Name, having its registered office at Address hereby declares that that the Company has not been blacklisted/debarred by any Governmental/ Non-Governmental organization in India for past 3 Years as on bid submission date.

Date and Place

Authorized Signatory's Signature:

Authorized Signatory's Name and Designation:

Partner's Company Seal:

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Annexure 4: Format of Affidavit

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY SOLE PARTNER/ ALL CONSORTIUM PARTNERS ALONGWITH THE EOI DOCUMENTS

(To be executed in presence of public notary on non-judicial stamp paper of the value of Rs. 100/-. The paper has to be in the name of the partner) **

I..... (Name and designation)** appointed as the attorney/authorized signatory of the partner (including its constituents),

M/s (hereinafter called the partner) for the purpose of the EOI

documents for the work of as per the EOI No.

of (RailTel Corporation of India Ltd.), do hereby solemnly affirm and state on the behalf of the BA including its constituents as under:

1. I/we the partner (s), am/are signing this document after carefully reading the contents.
2. I/we the partner (s) also accept all the conditions of the EOI and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the EOI documents from RailTel website www.railtel.enivida.com. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the EOI document. In case of any discrepancy noticed at any stage i.e. evaluation of EOI, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the EOI by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of EOI, it shall lead to forfeiture of the EOI EMD besides banning of business for five years on entire

RailTel. Further, I/we (insert name of the partner)** and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.

8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT SEAL AND SIGNATURE OF THE PARTNER

VERIFICATION

I/We above named EOI do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

Place: Dated:

SEAL AND SIGNATURE
OF THE PARTNER

**The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by partner. Attestation before Magistrate/Notary Public.

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Annexure-5: Non-Disclosure Agreement (NDA) Format**NON-DISCLOSURE AGREEMENT**

This Non-Disclosure Agreement (this “**Agreement**”) is made and entered into on this _____ day of _____, 2024 (the “**Effective Date**”) at _____.

By and between

RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905), a Public Sector Undertaking under Ministry of Railways, Govt. of India, having its registered and corporate office at Plate-A, 6th Floor, Office Block, Tower -2, East Kidwai Nagar, New Delhi-110023, (hereinafter referred to as '**RailTel**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of the ONE PART,

And

_____ (CIN: _____), a company duly incorporated under the provisions of Companies Act, _____ having its registered office at _____, (hereinafter referred to as '**_____**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of OTHER PART

RailTel and _____ shall be individually referred to as “Party” and jointly as “Parties”

WHEREAS, RailTel and _____, each possesses confidential and proprietary information related to its business activities, including, but not limited to, that information designated as confidential or proprietary under Section 2 of this Agreement, as well as technical and non-technical information, patents, copyrights, trade secrets, know-how, financial data, design details and specifications, engineering, business and marketing strategies and plans, forecasts or plans, pricing strategies, formulas, procurement requirements, vendor and customer lists, inventions, techniques, sketches, drawings, models, processes, apparatus, equipment, algorithms, software programs, software source documents, product designs and the like, and third party confidential information (collectively, the “**Information**”);

WHEREAS, the Parties have initiated discussions regarding a possible business relationship for _____.

WHEREAS, each Party accordingly desires to disclose certain Information (each Party, in such disclosing capacity, the “**Disclosing Party**”) to the other Party (each Party, in such receiving capacity, the “**Receiving Party**”) subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the receipt of certain Information, and the mutual promises made in this Agreement, the Parties, intending to be legally bound, hereby agree as follows:

1. Permitted Use.

(a) Receiving Party shall:

- (i) hold all Information received from Disclosing Party in confidence;
- (ii) use such Information for the purpose of evaluating the possibility of entering into a commercial arrangement between the Parties concerning such Information; and

(iii) restrict disclosure of such Information to those of Receiving Party's officers, directors, employees, affiliates, advisors, agents and consultants (collectively, the "**Representatives**") who the Receiving Party, in its reasonable discretion, deems need to know such Information, and are bound by the terms and conditions of (1) this Agreement, or (2) an agreement with terms and conditions substantially similar to those set forth in this Agreement.

(b) The restrictions on Receiving Party's use and disclosure of Information as set forth above shall not apply to any Information that Receiving Party can demonstrate:

(i) is wholly and independently developed by Receiving Party without the use of Information of Disclosing Party;

(ii) at the time of disclosure to Receiving Party, was either (A) in the public domain, or (B) known to Receiving Party;

(iii) is approved for release by written authorization of Disclosing Party; or

(iv) is disclosed in response to a valid order of a court or other governmental body in the India or any political subdivision thereof, but only to the extent of, and for the purposes set forth in, such order; provided, however, that Receiving Party shall first and immediately notify Disclosing Party in writing of the order and permit Disclosing Party to seek an appropriate protective order.

(c) Both parties further agree to exercise the same degree of care that it exercises to protect its own Confidential Information of a like nature from unauthorised disclosure, but in no event shall a less than reasonable degree of care be exercised by either party.

2. **Designation.**

(a) Information shall be deemed confidential and proprietary and subject to the restrictions of this Agreement if, when provided in:

(i) written or other tangible form, such Information is clearly marked as proprietary or confidential when disclosed to Receiving Party; or

(ii) oral or other intangible form, such Information is identified as confidential or proprietary at the time of disclosure.

3. **Cooperation.** Receiving Party will immediately give notice to Disclosing Party of any unauthorized use or disclosure of the Information of Disclosing Party.

4. **Ownership of Information.** All Information remains the property of Disclosing Party and no license or other rights to such Information is granted or implied hereby. Notwithstanding the foregoing, Disclosing Party understands that Receiving Party may currently or in the future be developing information internally, or receiving information from other parties that may be similar to Information of the Disclosing Party. Notwithstanding anything to the contrary, nothing in this Agreement will be construed as a representation or inference that Receiving Party will not develop products, or have products developed for it, that, without violation of this Agreement, compete with the products or systems contemplated by Disclosing Party's Information.

5. **No Obligation.** Neither this Agreement nor the disclosure or receipt of Information hereunder shall be construed as creating any obligation of a Party to furnish Information to the other Party or to enter into any agreement, venture or relationship with the other Party.

6. **Return or Destruction of Information.**

(a) All Information shall remain the sole property of Disclosing Party and all materials containing any such Information (including all copies made by Receiving Party) and its Representatives shall be returned or destroyed by Receiving Party immediately upon the earlier of:

- (i) termination of this Agreement;
- (ii) expiration of this Agreement; or
- (iii) Receiving Party's determination that it no longer has a need for such Information.

(b) Upon request of Disclosing Party, Receiving Party shall certify in writing that all Information received by Receiving Party (including all copies thereof) and all materials containing such Information (including all copies thereof) have been destroyed.

7. Injunctive Relief: Without prejudice to any other rights or remedies that a party may have, each party acknowledges and agrees that damages alone may not be an adequate remedy for any breach of this Agreement, and that a party shall be entitled to seek the remedies of injunction, specific performance and/or any other equitable relief for any threatened or actual breach of this Agreement

8. Notice.

(a) Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows, with notice deemed given as indicated:

- (i) by personal delivery, when delivered personally;
- (ii) by overnight courier, upon written verification of receipt; or
- (iii) by certified or registered mail with return receipt requested, upon verification of receipt.

(b) Notice shall be sent to the following addresses or such other address as either Party specifies in writing.

RailTel Corporation of India limited:

Attn: _____
 Address: _____
 Phone: _____
 Email: _____

 Attn: _____
 Address: _____
 Phone: _____
 Email: _____

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9. Term, Termination and Survivability.

(a) Unless terminated earlier in accordance with the provisions of this agreement, this Agreement shall be in full force and effect for a period of _____ years from the effective date hereof.

(b) Each party reserves the right in its sole and absolute discretion to terminate this Agreement by giving the other party not less than 30 days' written notice of such termination.

(c) Notwithstanding the foregoing clause 9(a) and 9 (b) , Receiving Party agrees that its obligations, shall:

(i) In respect to Information provided to it during the Term of this agreement, shall survive and continue even after the expiry of the term or termination of this agreement; and

(ii) not apply to any materials or information disclosed to it thereafter.

10. Governing Law and Jurisdiction. This Agreement shall be governed in all respects solely and exclusively by the laws of India without regard to its conflicts of law principles. The Parties hereto expressly consent and submit themselves to the jurisdiction of the courts of New Delhi.

11. Counterparts. This agreement is executed in duplicate, each of which shall be deemed to be the original and both when taken together shall be deemed to form a single agreement

12. No Definitive Transaction. The Parties hereto understand and agree that no contract or agreement with respect to any aspect of a potential transaction between the Parties shall be deemed to exist unless and until a definitive written agreement providing for such aspect of the transaction has been executed by a duly authorized representative of each Party and duly delivered to the other Party (a "**Final Agreement**"), and the Parties hereby waive, in advance, any claims in connection with a possible transaction unless and until the Parties have entered into a Final Agreement.

13. Settlement of Disputes:

- a) The parties shall, at the first instance, attempt to resolve through good faith negotiation and consultation, any difference, conflict or question arising between the parties hereto relating to or concerning or arising out of or in connection with this agreement, and such negotiation or consultation shall begin promptly after a Party has delivered to another Party a written request for such consultation.
- b) In the event of any dispute, difference, conflict or question arising between the parties hereto, relating to or concerning or arising out of or in connection with this agreement, is not settled through good faith negotiation or consultation, the same shall be referred to arbitration by a sole arbitrator.
- c) The sole arbitrator shall be appointed by CMD/RailTel out of the panel of independent arbitrators maintained by RailTel, having expertise in their respective domains. The seat and the venue of arbitration shall be New Delhi. The arbitration proceedings shall be in accordance with the provision of the Arbitration and Conciliation Act 1996 and any other statutory amendments or modifications thereof. The decision of arbitrator shall be final and binding on both parties. The arbitration proceedings shall be conducted in English Language. The fees and cost of arbitration shall be borne equally between the parties.

14. CONFIDENTIALITY OF NEGOTIATIONS

Without the Disclosing Party's prior written consent, the Receiving Party shall not disclose to any Person who is not a Representative of the Receiving Party the fact that Confidential Information has

been made available to the Receiving Party or that it has inspected any portion of the Confidential Information or that discussions between the Parties may be taking place.

15. REPRESENTATION

The Receiving Party acknowledges that the Disclosing Party makes no representation or warranty as to the accuracy or completeness of any of the Confidential Information furnished by or on its behalf. Nothing in this clause operates to limit or exclude any liability for fraudulent misrepresentation.

16. ASSIGNMENT

Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

17. EMPLOYEES AND OTHERS

Each Party shall advise its Representatives, contractors, subcontractors and licensees, and shall require its Affiliates to advise their Representatives, contractors, subcontractors and licensees, of the obligations of confidentiality and non-use under this Agreement, and shall be responsible for ensuring compliance by its and its Affiliates' Representatives, contractors, subcontractors and licensees with such obligations. In addition, each Party shall require all persons and entities who are not employees of a Party and who are provided access to the Confidential Information, to execute confidentiality or non-disclosure

agreements containing provisions no less stringent than those set forth in this Agreement. Each Party shall promptly notify the other Party in writing upon learning of any unauthorized disclosure or use of the Confidential Information by such persons or entities.

18. NO LICENSE

Nothing in this Agreement is intended to grant any rights to under any patent, copyright, or other intellectual property right of the Disclosing Party, nor will this Agreement grant

the Receiving Party any rights in or to the Confidential Information of the Disclosing Party, except as expressly set forth in this Agreement.

19. RELATIONSHIP BETWEEN PARTIES:

Nothing in this Agreement or in any matter or any arrangement contemplated by it is intended to constitute a partnership, association, joint venture, fiduciary relationship or other cooperative entity between the parties for any purpose whatsoever. Neither party has any power or authority to bind the other party or impose any obligations on it and neither party shall purport to do so or hold itself out as capable of doing so.

20. UNPULISHED PRICE SENSITIVE INFORMATION (UPSI)

_____ agrees and acknowledges that _____, its Partners, employees, representatives etc., by virtue of being associated with RailTel and being in frequent communication with RailTel and its employees, shall be deemed to be "Connected Persons" within the meaning of SEBI (Prohibition of Insider Trading) Regulations, 2015 and shall be bound by the said regulations while dealing with any confidential and/ or price sensitive information of RailTel. _____ shall always and at all times comply with the obligations and restrictions contained in the said regulations. In terms of the said regulations, _____ shall abide by the restriction on communication, providing or allowing access to any Unpublished Price Sensitive Information (UPSI) relating to RailTel as well as restriction on trading of its stock while holding such Unpublished Price Sensitive Information relating to RailTel

21. MISCELLANEOUS

This Agreement constitutes the entire understanding among the Parties as to the Information and supersedes all prior discussions between them relating thereto. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party by its authorized representative. The failure or delay of any Party to enforce at any time any provision of this Agreement shall not constitute a waiver of such Party's right thereafter to enforce each and every provision of this Agreement. In the event that any of the terms, conditions or provisions of this Agreement are held to be illegal, unenforceable or invalid by any court of competent jurisdiction, the remaining terms, conditions or provisions hereof shall remain in full force and effect. The rights, remedies and obligations set forth herein are in addition to, and not in substitution of, any rights, remedies or obligations which may be granted or imposed under law or in equity.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date set forth above.

_____ : **RailTel Corporation of India Limited:**

By _____ By _____

—

Name:

Title:

Name:

Title:

Witnesses

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Annexure-6: CHECKLIST

S. No.	Document	Submitted/ Complied or Not	Page No./ Ref. No. of offer
1	Offer Letter (Mandatory)		
2	Self-Certificate for Tender, Technical & other compliances		
3	Undertaking for not Being Blacklisted/Debarred		
4	Notarized Affidavit (Mandatory)		
5	Non-Disclosure Agreement		
6	MAF/ MOU		
7	Technical Proposal Document		
8	Consortium Agreement (If Applicable)		
9	Undertaking of Service Level Compliance		
10	Statement of No Deviation from Requirement Specifications		
11	Commercial Proposal Document		
12	Price Bid (In Excel Format downloaded from eNivida Portal (Mandatory))		
13	Undertaking on Exit Management and Transition		
14	Integrity Pact		
15	Standing Indemnity Bond		
16	Land Border Certificate		
17	Power of Attorney/ Authorization (Mandatory)		
18	Complete EOI document duly signed & stamped as a token of acceptance (Mandatory)		
19	Earnest Money Deposit (EMD) to be submitted online on eNivida Portal (Mandatory)		
20	Cost of EOI Document to be submitted online on eNivida Portal (Mandatory)		
21	Offline Submission of Power of Attorney/ Authorization, Notarized Affidavit & 2 copies Integrity Pact (Mandatory)		
22	CA Certificates/ Audited balance sheets in support of financial eligibility criteria (Mandatory)		
23	Experience Certificates/Completion Certificates in support of technical eligibility criteria (Mandatory)		
24	Supporting Documents under make in India Policy (if applicable)		
25	Any other relevant document, not listed above		

Annexure-7: MAF/ MOU and other Documents

Dated: DD/MM/YYYY

To,
The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Reference: EOI Number RAILTEL/ER/MKT/EOI/2026-27/001 dtd. 01-04-2026

Subject: EOI Name _____.

Sir,

We _____, (name and address of the manufacturer) who are established and reputed manufacturers of _____ having factories at _____ (addresses of manufacturing locations) do hereby authorize M/s _____ (name and address of the Bidder) to bid, negotiate and conclude the contract with you against the above-mentioned tender for the above equipment manufactured by us.

Yours faithfully,

For and on behalf of M/s _____ (Name of the manufacturer)

Seal & Signature of OEM _____

Name and Title of Signatory: _____

Designation : _____ Date: _____

Note: This letter of authority should be on the letterhead of all the hardware manufacturer (OEM) and should be signed by the person (from OEM Side) competent and having the power of attorney to bind the manufacturer.

~~## Partner shall also arrange other OEM Authorisations/Documents as required in CoR Tender.~~

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Annexure 8 - Technical Proposal Document**(On the Partner's Letterhead)****Tender Ref. No.:****Date:**

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Subject: Submission of Technical Proposal

Dear Sir/Madam,

We, the undersigned, express our commitment to provide Systems Implementation solutions to RailTel Corporation of India Limited in response to your Request for Proposal dated [insert date] and our Proposal. Our submission comprises this Technical Bid and the Financial Bid, submitted separately.

We affirm that all information and statements in this Technical Bid are accurate, and we acknowledge that any misrepresentation may result in our disqualification.

If our Proposal is accepted, we commit to initiating the Implementation services related to the assignment no later than the date indicated in the Data sheet.

We agree to adhere to all the terms and conditions outlined in the tender document and confirm that the validity of our bid extends for 60 days, as specified in the tender document.

Furthermore, we declare that we are not insolvent, in receivership, bankrupt, or undergoing winding up. Our affairs are not administered by a court or a judicial officer, our business activities have not been suspended, and we are not subject to legal proceedings for any of the aforementioned reasons.

We acknowledge that RailTel Corporation of India Limited is not obligated to accept any Proposal received.

Yours sincerely,
(Seal & Signature of the Authorized signatory of the Partner)

Name:**Designation:****Place:****Date:**

Annexure-9: CONSORTIUM AGREEMENT / MEMORANDUM OF AGREEMENT

(On Stamp Paper of appropriate value)

This Consortium Agreement is executed at on this _ day of . BETWEEN

M/s. , a Company incorporated under the Companies Act, 1956 and having its Registered Office at acting through its Managing Director, duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the „LEAD MEMBER“ which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the ONE Part;

AND

M/s. , a Company having its Office at and Office at , acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (“Participant member”) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART”

AND

M/s. , a Company having its Office at and Office at , acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (“Participant member”) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART”

Whereas RailTel Corporation of India Ltd. (hereinafter referred to as „RCIL“) has invite tenders for the “(NAME OF WORK)” in terms of the tender documents issued for the said purpose and the eligibility conditions required that the applicants bidding for the same should meet the conditions stipulated by RCIL for participating in the bid by the Consortium for handling the project for which the tender has been floated by RCIL.

AND WHEREAS in terms of the bid documents the parties jointly satisfy the eligibility criteria laid down for a bidder for participating in the bid process by forming a Consortium between themselves.

AND WHEREAS the parties hereto have discussed and agreed to form a Consortium for participating in the aforesaid bid and have decided to reduce the agreed terms to writing.

NOW THIS CONSORTIUM Agreement hereby WITNESSES:

- a. That in the premises contained herein the Lead Member and the Participant Member having decided to pool their technical know-how, working experiences and financial resources, have formed themselves into a Consortium to participate in the tender process for “(NAME OF WORK)” in terms of the tender invited by RailTel Corporation of India Ltd., (RCIL).
 - b. That the members of the Consortium have represented and assured each other that they shall abide by and be bound by the terms and conditions stipulated by RCIL for awarding the tender to the Consortium so that the Consortium may take up the
1. aforesaid “(NAME OF WORK)” in case the Consortium turns out to be the successful bidder in the bid being invited by RCIL for the said purpose.

2. That the members of the Consortium have satisfied themselves that by pooling their technical know-how and technical and financial resources, the Consortium fulfills the prequalification/eligibility criteria stipulated for a bidder, to participate in the bid for the said tender process for "(NAME OF WORK)"
3. That the Consortium have agreed to nominate any one of , and as the common representative who shall be authorized to represent the Consortium for all intents and purposes for dealing with the Government and for submitting the bid as well as doing all other acts and things necessary for submission of bid documents such as Tender Application Form etc., Mandatory Information, Financial Bid. Etc., and such other documents as may be necessary for this purpose.
4. That if any change in the membership of the Consortium be required to be made by the members of the Consortium, the same shall be done with the consent of RCIL subject to the conditions as may be stipulated by them in this regard.
5. That in case to meet the requirements of bid documents or any other stipulations of RCIL, it becomes necessary to execute and record any other documents amongst the members of the Consortium, they undertake to do the needful and to participate in the same for the purpose of the said project.
6. That it is clarified by and between the members of the Consortium that execution to this Consortium Agreement by the members of the Consortium does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Consortium shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Consortium Agreement is limited in its operation to the specified project.
7. That the Members of the Consortium undertake to specify their respective roles and responsibilities for the purposes of implementation of this Consortium Agreement and the said project, if awarded to the Consortium, to meet the requirements and stipulations of RCIL.
8. The consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by Consortium to take advantage of certain developments during evaluation stage will render the bid liable to be REJECTED.
9. All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.
10. Each Consortium member has minimum 20% contribution in the work and role/scope of each member is enclosed.
11. Power of Attorney by all members of the Consortium in favor of the Lead Member is also enclosed

IN FAITH AND TESTIMONY WHEREOF, THE PARTIES HERETO HAVE SIGNED THESE PRESENTS ON THE DATE, MONTHS AND YEAR FIRST ABOVE WRITTEN

1. () 2. () 3. ()

Managing Director

Managing Director

Managing Director

For (Name of company)

For (Name of company)

For (Name of company)

WITNESSES:

1.

2.

Enclosure:

Board resolution of each of the Consortium Members authorizing:

- (i) Execution of the Consortium Agreement, and Appointing the authorized signatory for such purpose.

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Annexure 10- Undertaking of Service Level Compliance

(On the Partner's Letterhead)

Tender Ref. No.:

Date:

To

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN,
Sector V, Bidhannagar, Kolkata, West
Bengal 700091

Dear Sir/Madam,

Sub: Undertaking on Service Level Compliance

1. I/We as Implementing Agency do hereby undertake that we shall monitor, maintain, and comply with the service levels stated in the tender to provide quality service to end customer of RailTel referred in this tender.
2. However, if the proposed resources, Infrastructure and ICT components are found to be insufficient in meeting the tender and/or the service level requirements given by RCIL, then we will augment the same without any additional cost to RCIL.

Yours sincerely

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

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**Annexure 11 - Statement of No Deviation from Requirement Specifications
(On the Partner's Letterhead)**

Tender Ref. No.:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Sir,

There are no technical deviations (null deviations) from the requirement specifications of Tender items and schedule of requirements. The entire work shall be performed as per your specifications and documents.

This is to certify that our proposed solution meets all the requirements of the Tender including but not limited to Scope of Work, stated Project Outcomes (including SLAs), Business Requirements and Functional Specifications/ Requirements.

We further certify that our proposed solution meets, is equivalent or better than the minimum technical specifications as given in the tender.

We understand that the Bill of Quantity provided in the tender is indicative, we confirm that we have undertaken our own assessment to finalize the components and quantity.

In case, any item of hardware or software is found non-compliant at any stage during project implementation, it would be replaced with a fully compliant product/solution at no additional cost to end customer. In case of non-adherence of this activity, RCIL reserves the right to cancel the contract, in case the said Contract is awarded to us by RCIL.

We further confirm that our commercial proposal is for the entire scope of work, comprising all required components and our obligations, for meeting the scope of work.

Thanking you, Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

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Annexure 12 - Commercial Proposal Document

EOI Ref. No.:

Date:

(Format for reporting commercials and mandatory letters that needs to be part of the commercial proposal document. Breakdown of cost mentioned, cost of each component, operating cost, employee cost, cost of operations and management, any other cost which the Partner feels.)

To

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Subject: Submission of Commercial proposal

Reference: EOI No:

Dated:

We, the undersigned Partner, having read and examined in detail the EOI documents for “

_____. I / we do hereby propose to provide services as specified in the EOI documents number -----
-Dated <dd/mm/yy>

1. PRICE PROPOSAL AND VALIDITY

All the prices mentioned in our tender are in accordance with the terms as specified in the tender documents. All the prices and other terms and conditions of this tender are valid for a period of 60 days from opening of EOI.

We hereby confirm that our tender prices include all taxes. However, all the taxes are quoted separately under relevant sections.

We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other corporate Tax in altered under the law, we shall pay the same.

2. UNIT RATES

We have indicated in the relevant schedules enclosed the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

3. DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the tender documents except for the variations and deviations, all of which have been detailed out exhaustively in the following statement, irrespective of whatever has been stated to the contrary anywhere else in our proposal. Further, we agree that additional conditions, if any, found in the tender documents, other than those stated in deviation schedule, shall not be given effect to.

4. TENDER PRICING

We further confirm that the prices stated in our proposal are in accordance with your Instruction to Partners included in TENDER documents.

5. QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Partners. In case you require any other further information/documentary proof in this regard before evaluation of our tender, we agree to furnish the same in time to your satisfaction.

6. PROPOSAL PRICE

We declare that our Proposal Price is for the entire scope of the work as specified in the Schedule of Requirements and TENDER documents.

7. PERFORMANCE BANK GUARANTEE BOND

We hereby declare that in case the contract is awarded to us, we shall submit the PBG in the form prescribed in Proforma of Bank Guarantee towards PBG. We hereby declare that our TENDER is made in good faith, without collusion or fraud and the information contained in the TENDER is true and correct to the best of our knowledge and belief. We understand that our TENDER is binding on us and that you are not bound to accept a TENDER you receive. We confirm that no Technical deviations are attached here with this commercial offer.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Designation:

Place:

Date:

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Annexure 12-A – Price Bid Format

Please refer the excel price bid format and use the same for bidding purpose.

S.No	Description	UOQ	Total Qty	Unit Rate in INR	Tax (%)	Unit rate inclusive of Tax	Total Amount (in INR incl Tax)
1	4MP Varifocal FRSDome Camera for Entry/Exit monitoring	Nos	1,612		18%	₹ 0.00	₹ 0.00
2	4 MP Varifocal Dome Camera for Teacher performance monitoring	Nos	452		18%	₹ 0.00	₹ 0.00
3	4 MP, varifocal Dome Camera for Student behaviour monitoring (Chitting	Nos	454		18%	₹ 0.00	₹ 0.00
Common Material For location							
Active Components							
4	24 Port L2 POESwitch with Single mode SFP	Nos	169		18%	₹ 0.00	₹ 0.00
5	24 Port L3 Switch with Single mode SFP	Lot	15		18%	₹ 0.00	₹ 0.00
6	32 Channel NVRwith 30 days Data Archival	Set	14		18%	₹ 0.00	₹ 0.00
7	64 Channel NVRwith 30 days Data Archival	Set	5		18%	₹ 0.00	₹ 0.00
8	96 Channel NVRwith 30 days Data Archival	Set	23		18%	₹ 0.00	₹ 0.00
9	Workstation with 22" Monitor in administrative office	Nos	24		18%	₹ 0.00	₹ 0.00
10	Management Server (12C, 64 GB RAM) (Type-1)	Nos	9		18%	₹ 0.00	₹ 0.00
11	Management Server (24C, 96 GB RAM) (Type-2)	Nos	6		18%	₹ 0.00	₹ 0.00
12	Management Server (24C, 128 GB RAM) (Type-3)	Nos	5		18%	₹ 0.00	₹ 0.00
13	Management Server (32C, 128 GB RAM) (Type-4)	Nos	4		18%	₹ 0.00	₹ 0.00
14	LPU (With 16GB)	Nos	454		18%	₹ 0.00	₹ 0.00
15	LPU (With 8GB)	Nos	191		18%	₹ 0.00	₹ 0.00
Applications							
16	AI License - FRSLicense	Nos	2,518		18%	₹ 0.00	₹ 0.00
17	AI License - Teacher Performance License	Nos	452		18%	₹ 0.00	₹ 0.00
18	AI License - Student Behaviour License	Nos	454		18%	₹ 0.00	₹ 0.00
19	License for Central Application at each location for reporting	Nos	3,424		18%	₹ 0.00	₹ 0.00
20	End Point for Server based OS	Nos	18		18%	₹ 0.00	₹ 0.00

S.No	Description	UOQ	Total Qty	Unit Rate in INR	Tax (%)	Unit rate inclusive of Tax	Total Amount (in INR incl Tax)
21	End Point for Desktop	Nos	24		18%	₹ 0.00	₹ 0.00
Connectivity							
22	SD WAN Solution for location for ICC & District Office Connectivity	Lot	24		18%	₹ 0.00	₹ 0.00
23	Broadband for each location	Months	864		18%	₹ 0.00	₹ 0.00
Passive Components							
24	Network Switch and NVR Uplink OFC Patch cord	Set	388		18%	₹ 0.00	₹ 0.00
25	Factory Crimped 2 Mtr CAT-7 STP Patch cord	Nos	693		18%	₹ 0.00	₹ 0.00
26	6U Rack to Mount Network devices (600* 800)	Nos	69		18%	₹ 0.00	₹ 0.00
27	12U Wall mount Rack for NVR & Network Devices (800* 1000 mm)	Nos	53		18%	₹ 0.00	₹ 0.00
28	12U Wall mount Rack for NVR & Network Devices (800* 1200 mm)	Nos	24		18%	₹ 0.00	₹ 0.00
29	4P, Twisted, CU, CAT-6 Communication Cable for Video	Mtr	1,51,080		18%	₹ 0.00	₹ 0.00
30	12 Pair / 24 C Single Mode Armoured OFC Cable	Mtr	20,900		18%	₹ 0.00	₹ 0.00
31	6 Pair / 12 C Single Mode Armoured OFC Cable	Mtr	2,400		18%	₹ 0.00	₹ 0.00
32	PVC Conduits / DWG Pipes	Mtr	87,350		18%	₹ 0.00	₹ 0.00
33	12 Port Fully Loaded LIU	Nos	119		18%	₹ 0.00	₹ 0.00
34	6 Port Fully Loaded LIU	Nos	12		18%	₹ 0.00	₹ 0.00
35	Suspension unit for Camera mounting in true Ceiling as per location	Nos	524		18%	₹ 0.00	₹ 0.00
36	5 Mtr HDMI Cable for Workstation	Nos	24		18%	₹ 0.00	₹ 0.00
Electrical Equipments							
37	1 KVA UPS for Powering CCTV and Switch with 30 Min Backup	Nos	77		18%	₹ 0.00	₹ 0.00
38	2 KVA UPS for Powering CCTV and Switch with 30 Min Backup	Nos	33		18%	₹ 0.00	₹ 0.00
39	3 KVA UPS with 30 Min Backup for Server and Storage	Nos	24		18%	₹ 0.00	₹ 0.00
40	Surge Protector for electrical protection	Nos	24		18%	₹ 0.00	₹ 0.00
41	3C x 1.5 Sqmm, Multistranded, Armoured,	Mtrs	13,750		18%	₹ 0.00	₹ 0.00

S.No	Description	UOQ	Total Qty	Unit Rate in INR	Tax (%)	Unit rate inclusive of Tax	Total Amount (in INR incl Tax)
	CU, twisted Pair for Power to equipment						
42	Chemical earthing for location	Nos	83		18%	₹ 0.00	₹ 0.00
43	Green Colour earthing cable for network equipment across location	Mtr	4,150		18%	₹ 0.00	₹ 0.00
44	Electrical Accessories including MCB, Power Distribution Box	Lot	24		18%	₹ 0.00	₹ 0.00
Command & Control Centre (Qty Per Location)							
Monitoring Room							
45	Workstation with 3 Monitors for AI Dashboard and report viewing	Nos	4		18%	₹ 0.00	₹ 0.00
46	Operator Desk	Nos	4		18%	₹ 0.00	₹ 0.00
47	2* 2 LED Videowall with 55 " Screen	Lot	1		18%	₹ 0.00	₹ 0.00
48	Videowall controller with GPU cards and required cables	Nos	1		18%	₹ 0.00	₹ 0.00
Data Centre							
49	Server for AI Application & Events	Nos	6		18%	₹ 0.00	₹ 0.00
50	Storage for events	Nos	1		18%	₹ 0.00	₹ 0.00
51	Firewall with IDS and IPS	Nos	2		18%	₹ 0.00	₹ 0.00
52	Network Router	Nos	2		18%	₹ 0.00	₹ 0.00
53	SD Wan Solution for Command & Control centre	Nos	2		18%	₹ 0.00	₹ 0.00
54	24 Port L3 Switch for Connection to Server and Storage	Set	2		18%	₹ 0.00	₹ 0.00
55	24 Port Access Switch for Connection to end points	Set	2		18%	₹ 0.00	₹ 0.00
Software Licenses							
56	Application License for central Reporting	Nos	3,424		18%	₹ 0.00	₹ 0.00
57	Network Monitoring System for Network Components along with Hardware	Lot	1		18%	₹ 0.00	₹ 0.00
Connectivity							
58	SD Wan Solution for Command & Control centre	Set	1		18%	₹ 0.00	₹ 0.00
59	1 Gbps Lease Line for 3 Years	Months	36		18%	₹ 0.00	₹ 0.00
Passive Components							

S.No	Description	UOQ	Total Qty	Unit Rate in INR	Tax (%)	Unit rate inclusive of Tax	Total Amount (in INR incl Tax)
60	42 URack with Power Supply	Nos	2		18%	₹ 0.00	₹ 0.00
61	Factorycrimped 2 Mtr 4P, CAT-6EPatch Cord for End point connectivity	Nos	10		18%	₹ 0.00	₹ 0.00
62	Factorycrimped 3 Mtr OFCPatch Cord for connectivitybetween IT Components	Lot	1		18%	₹ 0.00	₹ 0.00
63	Electrical Accessories includingMCB, Power Distribution Box	Nos	1		18%	₹ 0.00	₹ 0.00
64	Air Conditioningwith controller for 24 hour operation	Nos	1		18%	₹ 0.00	₹ 0.00
65	10 KVAOnline UPSwith 30 Min Backup in HA	Nos	2		18%	₹ 0.00	₹ 0.00
66	EarthingSystem	Nos	2		18%	₹ 0.00	₹ 0.00
Safety Systems							
67	Biometric Access Control with EMLock and Power Supply, Exit Switch (UPSRoom, Viewingcentre, DC)	Set	3		18%	₹ 0.00	₹ 0.00
68	Fire extinguisher	Set	1		18%	₹ 0.00	₹ 0.00
69	Fire Alarm & Suppression System	Set	1		18%	₹ 0.00	₹ 0.00
70	Rodent Repellent System	Set	1		18%	₹ 0.00	₹ 0.00
Civil Work							
71	Setup of Command and Control centre with data Centre	Lot	1		18%	₹ 0.00	₹ 0.00
Project Operation & Maintenance							
72	ICCC Operators	Manmonth	144		18%	₹ 0.00	₹ 0.00
73	Technical engineer for SD WAN and DC maintenance	Manmonth	72		18%	₹ 0.00	₹ 0.00
74	Project Manager	Manmonth	36		18%	₹ 0.00	₹ 0.00
75	Operation & Maintenance for First Year	Nos	1		18%	₹ 0.00	₹ 0.00
76	Operation & Maintenance for Second Year	Nos	1		18%	₹ 0.00	₹ 0.00
77	Operation & Maintenance for Third Year	Nos	1		18%	₹ 0.00	₹ 0.00
Total Amount (in INR incl of GST)							₹ 0.00

Annexure – 13 - Undertaking on Exit Management and Transition**(On the Partner's Letterhead)**

TENDER Ref. No:

Date:

To,

The Principal Executive Director
 RailTel Corporation of India Ltd. 19th Floor,
 Aurora Waterfront, opposite NALBAN,
 Sector V, Bidhannagar, Kolkata, West
 Bengal 700091

Dear Sir/Madam,

Sub: Undertaking on Exit Management and Transition

1. I/We hereby undertake that at the time of completion of our engagement with RCIL, either at the End of Contract or termination of Contract before planned Contract Period for any reason, we shall successfully carry out the exit management and transition of this Project to RCIL or to an agency identified by RCIL to the satisfaction of RCIL. I/We further undertake to complete the following as part of the Exit management and transition:
 - a. We undertake to complete the updating of all Project documents and other artefacts and handover the same to RCIL before transition.
 - b. We undertake to design standard operating procedures to manage system (including application and IT systems), document the same and train Customer personnel on the same.
 - c. If RCIL decides to take over the operations and maintenance of the Project on its own or identifies or selects any other agency for providing operations & maintenance services on this Project, then we shall provide necessary handholding and transition support, which shall include but not be limited to, conducting detailed walkthrough and demonstrations for the IT Infrastructure, handing over all relevant documentation, addressing the queries/clarifications of the new agency with respect to the working / performance levels of the ICT components , conducting Training sessions etc.
2. I/We also understand that the Exit management and transition will be considered complete on the basis of approval from RCIL.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date

Annexure 14: Declaration – Exclusivity of Participation

EOI Ref No.

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Sub: Exclusive pre-RFP partnership arrangement with Empaneled business associate of RailTel for participating in the end customer RFP.

We, M/s <Name and Address of Partner> will not submit directly or indirectly our bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel).

Note: This undertaking has to be given with this EOI Response.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Designation:

Place:

Date:

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Annexure 15

Integrity Pact Program

RailTel has adopted Integrity Pact Program and for implementation thereof all TENDER/EOIs relating to procurement of OFC, quad cable, pre-fab shelters, electronic equipment and its installation and/or commissioning etc and other item(s) or activity/activities proposed to be carried out or required by the Company for the value exceeding Rs. 15 crores at a time including for repair and maintenance of cable/network and any other items required for special works assigned to RailTel/REL will be covered under the Integrity Pact Program and the vendors are required to sign the IP document and submit the same to RailTel/REL before or along with the bids.

- a) Only those vendors who have purchased the EOI/TENDER document and signed the IP document can send their grievances, if any, to the Independent External Monitors (IEMNs) through the nodal officer, i.e. Chief Vigilance Officer (CVO), RailTel.

Name of IEMs and contact details:

- | | |
|-------------------------------|---|
| 1. Shri. Vinit Kumar Jayaswal | E-Mail: gkvinit@gmail.com M.No. +91-9871893484 |
| 2. Shri. Punati Sridhar | E-Mail: poonatis@gmail.com M.No. +91-9448105097 |

Name & contact details of Nodal Officer (IP) in RailTel:

Chief Vigilance Officer, RailTel Corporation of India Ltd
6th Floor, Office Block Tower-2, NBCC Complex, East Kidwai Nagar, New Delhi-110023
E-Mail: cvo@railtelindia.com

- b) If the order, with total value equal to or more than the threshold value, is split to more than one vendor and even if the value of PO placed on any/each vendor(s) is less than the threshold value, IP document having been signed by the vendors at bid stage itself, the Pact shall continue to be applicable.
- c) Partner of Indian origin shall submit the Integrity Pact (in 2 copies) on a non-judicial stamp paper of Rs. 100/- duly signed by the person signing the bid. If the partner is a partnership or a consortium, the Integrity Pact shall be signed by all the partners or consortium members.
- d) Partner of foreign origin may submit the Integrity Pact on its company's letterhead, duly signed by the person signing the bid.
- e) The 'Integrity Pact' shall be submitted by the Partner duly signed in all pages along with the Bid in a separate envelope, duly superscripted with 'Integrity Pact'. Response received without signed copy of the Integrity Pact document will be liable to be rejected. Proforma for signing the Integrity Pact is available in Annexure-15 of this EOI document.
- f) One copy of the Integrity Pact shall be retained by RailTel and the 2nd copy will be issued to the representative of the partner during bid opening. If the Partners representative is not present during the Bid opening, the 2nd copy shall be sent to the partner by post/courier.
- g) The Integrity Pact is applicable in this EOI vide CVC circular no. 10/05/09 dated 18.05.09 and revised guideline of CVC circular no. 015/VGL/091 dated 13.01.17 or the latest updated from time to time shall be followed.

PROFORMA FOR “SIGNING THE INTEGRITY PACT”

RailTel Corporation of India Limited, hereinafter referred to as “The Principal”.

AND

....., hereinafter referred to as “The Partner/ Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s forThe Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Partner(s) and /or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the EOI process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - a. No employee of the Principal, personally or through family members, will in connection with the EOI for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The Principal will during the EOI process treat all Partner(s) with equity and reason. The Principal will in particular, before and during the EOI process, provide to all Partner(s) the same information and will not provide to any Partner(s) confidential/additional information through which the Partner(s) could obtain an advantage in relation to the process or the contract execution.
 - c. The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2- Commitments of the Partner(s) / Contractor(s)

1. The Partner(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the EOI process and during the contract execution.
 - a. The Partner(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal's employees involved in the EOI process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage during EOI process or during the execution of the contract.
 - b. The Partner(s)/Contractor(s) will not enter with other Partners into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications,

certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

- c. The Partner(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Partner(s) /Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Partner(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the partner(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Partner(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only.
 - e. The Partner(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
2. The Partner(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from EOI process and exclusion from future contracts

If the Partner(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Partner(s)/Contractor(s) from the EOI process or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annex-"B".

Section 4: Compensation for Damages

1. If the Principal has disqualified the Partner(s) from the EOI process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to be terminated the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5: Previous Transgression

1. The Partner declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the EOI process.
2. If the partner makes incorrect statement on this subject, he can be disqualified from the EOI process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

Section 6: Equal treatment of all Partners / Contractors/Subcontractors.

1. The Partner(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all partners, contractors and subcontractors.
3. The Principal will disqualify from the EOI process all partners who do not sign this Pact or violate its provisions.

Section 7: Criminal charges against violation by Partner(s) / Contractor(s) / Sub contractor(s)

If the Principal obtains knowledge of conduct of a Partner, Contractor or Subcontractor, or of an employee or a representative or an associate of a Partner, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8: Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, RailTel.
3. The Partner(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Partner(s)/ Contractor(s)/Subcontractor(s) with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the CMD, RailTel within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to provided to Independent Directors on the RailTel Board.
8. If the Monitor has reported to the CMD, RailTel, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CMD, RailTel has not, within the reasonable time taken visible

action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

9. The word 'Monitor' would include both singular and plural.

Section 9: Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Partners 6 months after the contract has been awarded.

If any claim is made / lodged by either party during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by CMD of RailTel.

Section 10: Other Provisions

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of the Principal)
(Office Seal)

(For & On behalf of Partner/Contractor)
(Office Seal)

Place _____

Date _____

Witness 1:
(Name & Address)

Witness 2:
(Name & Address)

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RAILTEL

Annexure-A to the Integrity Pact**GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS**

1.0 There shall be compulsory registration of agents for all global (Open) Tender and Limited Tender. An agent who is not registered with RailTel Units shall apply for registration in the prescribed Application -Form.

1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/ Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/ retainer-ship being paid by the principal to the agent before the placement of order by RailTel.

1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 DISCLOSURE OF PARTICULARS OF AGENTS/ REPRESENTATIVES IN INDIA, IF ANY.

2.1 Tenderers of Foreign nationality shall furnish the following details in their offer:

2.1.1 The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it shall be confirmed whether it is real substantial Company and details of the same shall be furnished.

2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/representatives in India.

2.1.3 Confirmation of the Tenderer that the commission/ remuneration if any, payable to his agents/ representatives in India, may be paid by RAILTEL in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

2.2.1 The name and address of the foreign principals indicating their nationality as well as their status, i.e, whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/representatives.

2.2.2 The amount of commission /remuneration included in the price(s) quoted by the tenderer for himself.

2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by RAILTEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.

2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the

agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.

2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by RAILTEL. Besides this there would be a penalty of banning business dealings with RAILTEL or damage or payment of a named sum.



Annexure-B to the Integrity Pact**GUIDELINES ON BANNING OF BUSINESS DEALINGS**

S. No.	Description
1	Introduction
2	Scope
3	Definitions
4	Initiation of Banning / Suspension
5	Suspension of Business Dealings
6	Ground on which Banning of Business Dealings can be initiated
7	Banning of Business Dealings
8	Removal from List of approved Agencies-Suppliers/ Contractors etc.
9	Procedure for issuing Show-cause Notice
10	Appeal against the Decision of the Competent Authority
11	Review of the Decision by the Competent Authority
12	Circulation of the names of Agencies with whom Business Dealings have been banned

1. Introduction

1.1 RailTel Corporation of India Ltd (RAILTEL), being a Public Sector Enterprise, under the administrative control of the Ministry of Railways and therefore being an authority deemed to be 'the state' within the meaning of Article 12 of Constitution of India, has to ensure preservation of rights enshrined in Chapter III of the Constitution. RAILTEL has also to safeguard its commercial interests. RAILTEL deals with Agencies, who have a very high degree of integrity, commitments and sincerity towards the work undertaken. It is not in the interest of RAILTEL to deal with Agencies who commit deception, fraud or other misconduct in the execution of contracts awarded / orders issued to them. In order to ensure compliance with the constitutional mandate, it is incumbent on RAILTEL to observe principles of natural justice before banning the business dealings with any Agency.

1.2 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity of hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstances of the case.

2. Scope

2.1 The General Conditions of Contract (GCC) of RAILTEL generally provide that RAILTEL reserves its rights to remove from list of approved suppliers/ contractors or to ban business dealings if any Agency has been found to have committed misconduct and also to suspend business dealings pending investigation. If such provision does not exist in any GCC, the same may be incorporated.

2.2 Similarly, in case of sale of material there is a clause to deal with the Agencies/ customers/ buyers, who indulge in lifting of material in unauthorized manner. If such a stipulation does not exist in any Sale Order, the same may be incorporated.

2.3 However, absence of such a clause does not in any way restrict the right of Company (RAILTEL) to take action / decision under these guidelines in appropriate cases.

2.4 The procedure of (i) Removal of Agency from the List of approved suppliers/ contractors; (ii) Suspension and (iii) Banning of Business Dealing with Agencies, has been laid down in these guidelines.

2.5 These guidelines apply to Corporate Office, all Regions and Subsidiaries of RAILTEL.

2.6 It is clarified that these guidelines do not deal with the decision of the Management to avoid entertaining any particular Agency due to its poor / inadequate performance or for any other reason.

2.7 The banning shall be with prospective effect, i.e., future business dealings.

3. Definitions

In these Guidelines, unless the context otherwise requires:

i) 'Party / Contractor / Supplier / Purchaser / Customer' shall mean and include a public limited company or a private limited company, a firm whether registered or not, an individual, a cooperative society or an association or a group of persons engaged in any commerce, trade, industry, etc. 'Party / Contractor / Supplier / Purchaser / Customer' in the context of these guidelines is indicated as 'Agency'.

ii) 'Inter-connected Agency' shall mean two or more companies having any of the following features:

- a) If one is a subsidiary of the other;
- b) If the Director(s), Partner(s), Manager(s) or Representative(s) are common;
- c) If management is common;
- d) If one owns or controls the other in any manner;

iii) 'Competent Authority' and 'Appellate Authority' shall mean the following:

- a) For Company (entire RAILTEL) wide Banning: The Director shall be the 'Competent Authority' for the purpose of these guidelines. CMD, RAILTEL shall be the 'Appellate Authority' in respect of such cases except banning of business dealings with Foreign Suppliers of imported items.
- b) For banning of business dealings with Foreign Suppliers of imported items, RAILTEL Directors Committee (RDC) shall be the 'Competent Authority'. The Appeal against the Order passed by RDC, shall lie with CMD, as First Appellate Authority.

- c) In case the foreign supplier is not satisfied by the decision of the First Appellate Authority, it may approach Railway Board as Second Appellate Authority.
- d) For RailTel Regions only: Any officer not below the rank of General Manager appointed or nominated by the Executive Director of concerned Region shall be the 'Competent Authority' for the purpose of these guidelines. The Executive Director of the concerned Region shall be the 'Appellate Authority' in all such cases.
- e) For Corporate Office only: For procurement of items / award of contracts, to meet the requirement of Corporate Office only, Concerned Group General Manager / General Manager shall be the 'Competent Authority' and concerned Director shall be the 'Appellate Authority'.
- f) CMD, RAILTEL shall have overall power to take suo-moto action on any information available or received by him and pass such order(s) as he may think appropriate, including modifying the order(s) passed by any authority under these guidelines.
- iv) 'Investigating Department' shall mean any Department or Unit investigating into the conduct of the Agency and shall include the Vigilance Department, Central Bureau of Investigation, the State Police or any other department set up by the Central or State Government having powers to investigate.
- v) 'List of approved Agencies - Parties / Contractors / Suppliers/ Purchaser/ Customers' shall mean and include list of approved /registered Agencies - Parties/ Contractors / Suppliers / Purchasers / Customers, etc.

4. Initiation of Banning / Suspension

Action for banning / suspension of business dealings with any Agency should be initiated by the department having business dealings with them after noticing the irregularities or misconduct on their part. Besides the concerned department, Vigilance Department of each Region / Unit/ Corporate Office may also be competent to initiate such action.

5. Suspension of Business Dealings

5.1 If the conduct of any Agency dealing with RAILTEL is under investigation by any department (except Foreign Suppliers of imported items), the Competent Authority may consider whether the allegations under investigation are of a serious nature and whether pending investigation, it would be advisable to continue business dealing with the Agency. If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Department, if any, decides that it would not be in the interest to continue business dealings pending investigation, it may suspend business dealings with the Agency. The order to this effect may indicate a brief of the charges under investigation. If it is decided that inter-connected Agencies would also come within the ambit of the order of suspension, the same should be specifically stated in the order. The order of suspension would operate for a period not more than six months and may be communicated to the Agency as also to Investigating Department. The Investigating Department may ensure that their investigation is completed and whole process of final order is over within such period.

5.2 The order of suspension shall be communicated to all the departmental heads within the unit/ region/ Corporate Office as the case may be. During the period of suspension, no business dealing may be held with the agency.

5.3 As far as possible, the existing contract(s) with the Agency may continue unless the Competent Authority, having regard to the circumstances of the case, decides otherwise.

5.4 If the gravity of the misconduct under investigation is very serious and it would not be in the interest of RAILTEL, as a whole, to deal with such an Agency pending investigation, the Competent Authority may send his recommendation to Chief Vigilance Officer (CVO), RAILTEL Corporate Office along with the material available. If Corporate Office considers that depending upon the gravity of the misconduct, it would not be desirable for all the units/ regions of RAILTEL to have any dealings with the Agency concerned, an order suspending business dealings may be issued to all the units/ Regions / Corporate Office by the Competent Authority of the Corporate Office, copy of which may be endorsed to the Agency and all concerned. Such an order would operate for a period of six months from the date of issue.

5.5 for suspension of business dealings with Foreign Suppliers of imported items, following shall be the procedure:

i) Suspension of the foreign suppliers shall apply throughout the Company/ Regions including Subsidiaries.

ii) Based on the complaint forwarded by ED / GGM / GM or received directly by Corporate Vigilance, if gravity of the misconduct under investigation is found serious and it is felt that it would not be in the interest of RAILTEL to continue to deal with such agency, pending investigation, Corporate Vigilance may send such recommendation on the matter to Executive Director / GGM / GM, to place it before a committee consisting of the following:

1. ED / GGM/ GM (viz. Representative of Corporate Finance).
2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.
3. ED / GGM/ GM (to be nominated on case-to-case basis).
4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The committee shall expeditiously examine the report and give its comments / recommendations within twenty-one days of receipt of the reference by ED/ GGM/ GM.

iii) The comments / recommendations of the Committee shall then be placed by ED/GGM/GM, before RAILTEL Directors' Committee (RDC) constituted for import of items. If RDC opines that it is a fit case for suspension, RDC may pass necessary orders which shall be communicated to the foreign supplier by the ED/GGM/GM.

5.6 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informed that its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.

5.7 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension. However, if investigations are not complete in six months time, the Competent Authority may extend the period of suspension by another three months, during which period the investigations must be completed.

6. Ground on which Banning of Business Dealings can be initiated

- 6.1 If the security consideration, including questions of loyalty of the Agency to the State, so warrants;
- 6.2 If the Director / Owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises or RAILTEL, during the last five years;
- 6.3 If there is strong justification for believing that the Directors, Proprietors, Partners, owner of the Agency have been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolations, etc;
- 6.4 If the Agency continuously refuses to return / refund the dues of RAILTEL without showing adequate reason and this is not due to any reasonable dispute which would attract proceedings in arbitration or Court of Law;
- 6.5 If the Agency employs a public servant dismissed / removed or employs a person convicted for an offence involving corruption or abetment of such offence;
- 6.6 If business dealings with the Agency have been banned by the Govt. or any other public sector enterprise;
- 6.7 If the Agency has resorted to Corrupt, fraudulent practices including misrepresentation of facts;
- 6.8 If the Agency uses intimidation/ threatening or brings undue outside pressure on the Company (RAILTEL) or its official in acceptance/ performances of the job under the contract;
- 6.9 If the Agency indulges in repeated and / or deliberate use of delay tactics in complying with contractual stipulations;
- 6.10 Wilful indulgence by the Agency in supplying sub-standard material irrespective of whether pre-dispatch inspection was carried out by Company (RAILTEL) or not;
- 6.11 Based on the findings of title investigation report of CBI / Police against the Agency for malafide/ unlawful acts or improper conduct on his part in matters relating to the Company (RAILTEL) or even otherwise;
- 6.12 Established litigant nature of the Agency to derive undue benefit;
- 6.13 Continued poor performance of the Agency in several contracts;
- 6.14 If the Agency misuses the premises or facilities of the Company (RAILTEL), forcefully occupies tampers or damages the Company's properties including land, water resources, etc.
- (Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

7. Banning of Business Dealings

- 7.1 Normally, a decision to ban business dealings with any Agency should apply throughout the Company including subsidiaries. However, the Competent Authority of the Region/ Unit except Corporate Office can impose such ban Region-wise only if in the particular case banning of business dealings by respective Region/ Unit will serve the purpose and achieve its objective and banning throughout the Company is not required in view of the local conditions and impact of the misconduct/ default to beyond the Region/ Unit.

Any ban imposed by Corporate Office shall be applicable across all Regions/ Units of the Company including Subsidiaries.

7.2 For Company-wide banning, the proposal should be sent by ED of the Region/ Unit to the CVO/RailTel setting out the facts of the case and the justification of the action proposed alongwith all the relevant papers and documents except for banning of business dealings with Foreign Suppliers of imported items.

The Corporate Vigilance shall process the proposal of the concerned Region/ Unit for a prima-facie view in the matter by the Competent Authority nominated for Company-wide banning.

The CVO shall get feedback about that agency from all other Regions/ Units. Based on this feedback, a prima-facie decision for banning / or otherwise shall be taken by the Competent Authority.

If the prima-facie decision for Company-wide banning has been taken, the Corporate Vigilance shall issue a show-cause notice to the agency conveying why it should not be banned throughout RAILTEL.

After considering the reply of the Agency and other circumstances and facts of the case, a final decision for Company-wide banning shall be taken by the competent Authority.

7.3 There will be a Standing Committee in each Region/ Unit to be appointed by Chief Executive Officer for processing the cases of "Banning of Business Dealings" except for banning of business dealings with foreign suppliers. However, for procurement of items/ award of contracts, to meet the requirement of Corporate Office only, the committee shall be consisting of General Manager/ Dy. General Manager each from Operations, Finance, Law & Project. Member from Project shall be the convener of the committee. The functions of the committee shall, inter-alia include:

- i) To study the report of the investigating Agency and decide if a prima-facie case for Company-wide / Region wise banning exists, if not, send back the case to the Competent Authority.
- ii) To recommend for issue of show-cause notice to the Agency by the concerned department.
- iii) To examine the reply to show-cause notice and call the Agency for personal hearing, if required.
- iv) To submit final recommendation to the Competent Authority for banning or otherwise.

7.4 If the Competent Authority is prima-facie of view that action for banning business dealings with the Agency is called for, a show- cause notice may be issued to the Agency and an enquiry held accordingly.

7.5 Procedure for Banning of Business Dealings with Foreign Suppliers of imported items.

- i) Banning of the agencies, shall apply throughout the Company including subsidiaries.
- ii) Based on the complaint forwarded by Executive Director or received directly by Corporate Vigilance, an investigation shall be carried out by Corporate Vigilance. After investigation, depending upon the gravity of the misconduct, Corporate Vigilance

may send their report to Executive Director/ GGM/ GM, to be placed before a Committee consisting of the following:

1. ED / GGM/ GM (viz. Representative of Corporate Finance).
2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.
3. ED / GGM/ GM (to be nominated on case to case basis).
4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The Committee shall examine the report and give its comments/ recommendations within 21 days of receipt of the reference by ED.

iii) The comments/recommendations of the Committee shall be placed by ED/ GGM/ GM before RAILTEL Directors' Committee (RDC) constituted for import of foreign items. If RDC opines that it is a fit case for initiating banning action, it will direct ED/ GGM/ GM to issue show-cause notice to the agency for replying within a reasonable period.

iv) On receipt of the reply or on expiry of the stipulated period, the case shall be submitted by ED to RDC for consideration & decision.

v) The decision of the RDC shall be communicated to the agency by ED/GGM/GM concerned.

8. Removal from List of Approved Agencies – Suppliers/ Contractors, etc.

8.1 If the Competent Authority decides that the charge against the Agency is of a minor nature, it may issue a show-cause notice as to why the name of the Agency should not be removed from the list of approved Agencies - Suppliers / Contractors, etc.

8.2 The effect of such an order would be that the Agency would not be disqualified from competing in Open Tender Enquiries but LTE (Limited Tender Enquiry) may not be given to the Agency concerned.

8.3 Past performance of the Agency may be taken into account while processing for approval of the Competent Authority for awarding the contract.

9. Show-cause Notice

9.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice has to be issued to the Agency. Statement containing the imputation of misconduct or misbehavior may be appended to the show-cause notice and the Agency should be asked to submit within 15 days a written statement in its defence.

9.2 If the Agency requests for inspection of any relevant document in possession of RAILTEL, necessary facility for inspection of documents may be provided.

9.3 The Competent Authority may consider and pass all appropriate speaking order:

- a) For exonerating the Agency if the charges are not established.

- b) For removing the Agency from the list of approved Suppliers/ Contractors, etc.
- c) For banning the business dealing with the Agency.

9.4 If it decides to ban business dealings, the period for which the ban would be operative may be mentioned. The order may also mention that the ban would extend to the interconnected Agencies of the Agency.

10. Appeal against the Decision of the Competent Authority

10.1 The agency may file an appeal against the order of the Competent Authority banning business dealing, etc. The appeal shall lie to Appellate Authority. Such an appeal shall be preferred within one month from the date of receipt of the order banning business dealing, etc.

10.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the Agency as well as the Competent Authority.

11. Review of the Decision by the Competent Authority

Any petition / application filed by the Agency concerning the review of the banning order passed originally by Chief Executive / Competent Authority under the existing guidelines either before or after filing of appeal before the Appellate Authority or after disposal of appeal by the Appellate Authority, the review petition can be decided by the Chief Executive / Competent Authority upon disclosure of new facts / circumstances or subsequent development necessitating such review. The Competent Authority may refer the same petition to the Standing Committee for examination and recommendation.

12. Circulation of the names of Agencies with whom Business Dealings have been banned

12.1 Depending upon the gravity of misconduct established, the Competent Authority of the Corporate Office may circulate the names of Agency with whom business dealings have been banned, to the Government Departments, other Public Sector Enterprises, etc. for such action as they deem appropriate.

12.2 If Government Departments or a Public Sector Enterprise request for more information about the Agency with whom business dealings have been banned, a copy of the report of the Inquiring authority together with a copy of the order of the Competent Authority / Appellate Authority may be supplied.

12.3 If business dealings with any Agency have been banned by the Central or State Government or any other Public Sector Enterprise, RAILTEL may, without any further enquiry or investigation, issue an order banning business dealing with the Agency and its interconnected Agencies.

12.4 Based on the above, Regions / Units may formulate their own procedure for implementation of the guidelines.

ANNEXURE-16: PROFORMA FOR PERFORMANCE BANK GUARANTEE**PERFORMANCE BANK GUARANTEE BOND**

(On Stamp Paper of Rs. One Hundred)

(To be used by approved Scheduled Banks)

In consideration of the RailTel Corporation of India Limited, Eastern Region, 19th Floor, Aurora Waterfront Building, Plot no. 34/1, Block -GN, Sector - V, Salt Lake City, Kolkata -700091, West Bengal.

(Herein after called RailTel) having agreed to
 exempt..... (Herein after
 called "the said Contractor(s)") from the demand, under the terms and conditions of
 an Agreement No. dated made between
 and

..... for (herein after called "the
 said Agreement") of Performance Guarantee for the due fulfillment by the said Contractor
 (s) of the terms and conditions contained in the said
 Agreement, or production of a Bank Guarantee for Rs.....(Rs only). We,
(indicate the name of the Bank)here in after referred to as " the
 Bank") at the request of Contractor(s) do hereby
 Undertake to pay the RailTel an amount not exceeding Rs..... Against any loss or damage
 caused to or suffered or would be caused to or suffered by the RailTel by reason of any
 breach by the said Contractor(s) of any of the terms or conditions contained in the said
 Agreement.

1. We, Bank **and our local branch at Kolkata (indicate detail address of local Kolkata Branch with code no.)** do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....

2. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.

We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the

performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the (1) We shall be discharged from all liability under this Guarantee thereafter.

We, We, (indicate the name of Bank) Further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).

We, the Bank further agree that this guarantee shall be invocable at our place of business at/Kolkata (indicate detailed address of local Kolkata Branch with code no.) The branch at New Delhi is being advised accordingly.

(indicate the name of Bank) lastly undertaken not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the day of 2025

for..... (Indicate the name of the Bank)

Witness

1. Signature & Name

2. Signature & Name

ANNEXURE-17: PROFORMA FOR CONTRACT AGREEMENT**AGREEMENT**

(CA No. _____ for the work of “_____”

This AGREEMENT is made at Kolkata on this _____ day of _____ two thousand and Twenty four, by and between RailTel Corporation of India Limited (A Govt. of India Undertaking) having its Corporate office at Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi- 110023 and Eastern Regional Office at 19th Floor, Aurora Waterfront Building, Plot No. 34/1, Block GN, Sector-V, Salt Lake City, Kolkata – 700 091 acting in the premises through _____ / Eastern Region (hereinafter referred to as ‘RailTel’, which expression should unless repugnant to the context or meaning thereof include its successors and permitted assigns) of the one part;

And _____ having its registered office at _____ acting in the premises through _____ (hereafter referred to as “Contractor”, which expression should unless repugnant to the context or meaning thereof include its successor and permitted assigns) of the other part.

Whereas in response to a call for Tender by RailTel for the work of “_____” as per tender papers at Annexure ‘A’ read with Corrigendum Issued by RailTel hereto, the Contractor has submitted a Tender as per Annexure ‘B’ hereto

AND WHEREAS the said Tender of the Contractor has been accepted for the work of “_____” as per copy of Letter of Acceptance of Tender No. _____ Dated _____ complete with enclosures at the accepted rates and agreed deviations from tender papers as per Annexure-C hereto at contract value of Rs. _____ (Rupees _____ Only) duly accepted by the contractor.

Now this agreement witnesses that in consideration of the premises and the payment to be made by the Purchaser (RailTel) to the Contractor provided for herein, the Contractor shall supply all equipment and materials and execute and perform all works for which the said Tender of the Contractor has been accepted strictly according to the various provisions in Annexure ‘B’ and ‘C’ hereto and upon such supply, execute and performance to the satisfaction of the purchaser (RailTel) and the purchaser (RailTel) shall pay to the Contractor at the rates accepted as per the said Annexure ‘C’ and in terms of the provisions therein.

IN WITNESS whereof both the parties have hereunto set and subscribed their respective hands and/or seals on the day and year respectively mentioned against their respective signatures.

Signed and delivered by Shri _____ for and on behalf of RailTel Corporation of India Ltd.

The contract within named in the presence of:

- | | | |
|----|------------------------|---|
| 1. | Signature | : |
| | Date | : |
| | Name in Block Capitals | : |
| | Address | : |

2. Signature :
Date :
Name in Block Capitals :
Address :

Signed and delivered by Shri. _____ for and on behalf
of _____, the contractor within
named in the presence of:

1. Signature :
Date :
Name in Block Capitals :
Address :

2. Signature :
Date :
Name in Block Capitals :
Address :

Annexure – A:
Annexure – B:
Annexure – C:
Annexure – D:

Tender Paper No. _____ with corrigendum, if any.
Firm's offer.
Letter of Acceptance No. _____ with all enclosures.
Copy of Contract Performance Guarantee.

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ANNEXURE-18: STANDING INDEMNITY BOND

(For on Account Payments and Stores supplied by RailTel)

(On Non-Judicial Stamp paper of Rs. 100/-)

We, M/s _____ hereby undertake that we hold at our Stores Depot/s at _____ for and on behalf of RailTel Corporation of India Limited in the premises through PED/RGM/RailTel/----- Region or his successor hereinafter referred to as the Purchaser all materials for which On Account payments have been made to us against the Contract _____ for vide letter of Acceptance/PO of Tender No. _____ and the materials handed over to us by the Purchaser for all purpose of execution of the said Contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of said materials against all risk till they are duly delivered as erected equipment to the purchaser or as he may direct otherwise and shall indemnify the Purchaser against any loss, damage or deterioration whatsoever in respect of the said materials while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any engineer authorized by the Regional General Manager (RGM)/Principal Executive Director (PED) Region (whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus materials disposed off and refund becomes due, the purchaser shall be entitled to recover from us the full cost as per prices included in the Contract (as applicable) and also compensation for such loss or damage, if any, along with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

In the event of any loss, damage or deterioration as aforesaid the assessment of such loss or damage and the assessment of such compensation therefore would be made by the RGM/PED/RailTel/----- Region, or his authorized nominee and the said assessments shall be final and binding upon us.

Dated this day of, [year]

for and on behalf of M/s. _____

(Contractor)

Signature of witness

Name and witness in Block letters Address

ANNEXURE-19: LAND BORDER CERTIFICATE**Certificate to be given by the Tenderer:**

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority. I hereby certify that I fulfil all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Dated this day of, [year]

for and on behalf of M/s. _____

(Contractor)

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ANNEXURE-20: SPECIFICATIONS

TECHNICAL SPECIFICATIONS

1. 4 MP IP DOME/Bullet CAMERA (Sr.No.1,2,3)

S No.	Specifications		Compliance (Yes/No)
1	Image sensor	1/2.8", 4MP Low Illumination Progressive Scan CMOS Sensor	
2	Min. Illumination	Color: 0.001Lux @ (F1.2, AGC ON), 0.014 Lux @ (F1.4, AGC ON), 0 Lux with IR	
3	S/N Ratio	≥58dB (AGC OFF)	
4	IR Distance	50Mtr	
5	Shutter Speed	(1/1 sec ~ 1/100,000 sec Adjustable)	
6	WDR	Up to 120 dB	
7	Lens Type	2.7-13.5mm varifocal	
8	Streams	Mainstream: 4MP (2560X1920) @ 25/30fps with H.265 Video Compression	
		Sub Stream: 2MP (1920X1080) @ 25/30fps with H.265 Video Compression	
		Third Stream: VGA (640x480) @ 10fps with H.265 Video Compression	
		Fourth Stream: VGA (640 x 480) 10 fps with H.265 Video Compression	
9	White Balance	Auto, Manual, Warm light, Natural light, Incandescent lamp, fluorescent lamp, Locked WB	
10	Gain Control	Low, MID-Low, MID, MID-High, High	
11	Motion Detection	Yes	
12	Temper Detection	Yes	
13	Compression	G.711U/A	
14	Audio Bit Rate	8 – 64 Kbps	
15	Network Port	RJ45 10M, 100M Network Self Adjustable	
16	Protocol	TCP/IP, IPv4, IPv6, SSL, TLS, HTTP, HTTPS, HTTP-Base64, HTTP-Digest, DHCP, DNS, RTP, RTSP, RTSPS, RTCP, ICMP, NTP, SMTP, IGMP, SNMP (V1, V2, V3), Multicast	
17	System Compatibility	ONVIF Profile S, G, M & T (OEM Should be full member)	
18	Max. User Access	20 Users	
19	General Function	User Authentication, Watermark, IP address filtering	

20	Security Features	Authorized username and password, HTTPS with password, HTTPS digest authentication, Watermark, RTSPS, AES 256 encryption, SHA256 and RSA2048, OTP, Signed Firmware, Firmware Anti-rollback, TEE (Trusted Execution Environment), TRNG, User Authentication, and encrypted firmware, Hardware Secure Boot	
21	SD Card Supported	2TB or Better	
22	Operating Conditions	-40 °C ~ 70 °C Humidity 95%	
23	Ingress Protection	IP67 & IK10	
24	Power Supply	POE & 12VDC	
25	Certification	CE, FCC, BIS, RoHS, STQC ER.	

CCTV OEM should have direct Presence & Manufacturing in India from last 15 years. (not as joint venture, partnership firms or through any association) and R&D unit registered with Department of Scientific and Industrial Research (DSIR) in India. OEM should submit Manufacturing and DSIR certificates.

CCTV OEM should have supplied minimum 10,000 cameras and 500 NVR in any multi location surveillance project in Government/State/PSU having minimum 500 sites. PO and completion certificates from the client should be submitted along with the Bid submission.

2. 24 Port L2 POE Switch (Sr. No.4)

S.No.	Specification		Compliance (Yes/No)
1	Interface	Support 24×10/100/1000Mbps RJ45 Port	
		4 × 10/100/1000 SFP Port	
		1xConsole RJ45 Port	
2	Standards and Protocols	Switch should support these network protocol: IEEE 802.3x, IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ad, IEEE 802.3af / IEEE 802.3at / IEEE 802.3bt, IEEE 802.3q, IEEE 802.3q/p, IEEE 802.1w, IEEE 802.1d, IEEE 802.1s, IEEE 802.3z, 1000BASE-X, 802.3AF	
		STP (Spanning Tree Protocol), RSTP/ MSTP (Rapid Spanning Tree Protocol), EPPS/ EAPS ring network protocol, ERPS, IPv6 management, and ACL support	
3	LED Indicator	PWR: (Power LED)	
		SYS: (System LED)	
		1-24: (Link LED=10/100M Link,1000M=Gigabit Link)	
		25-28: (SFP LED)	
4	Environment	Operating temperature: -30°C ~ + 60°C	
		Operating humidity 5% 95% RH No coagulation	
5	Basic Function	Compatible with PD devices of the IEEE802 standard	
		Power priority mechanism	
		Store and Forward switching	
		MAC automatic learning and aging	
		IEEE802.3X Full-duplex and mode and backpressure for Half-duplex mode	
6	Fan less	The switch should have a fanless	

7	Power Supply	100~240VAC, 50/60Hz	
8	Power Consumption	400W	
11	Bandwidth/Backplane	Switch Should be Support Bandwidth: 128Gbps	
12	Packet Forwarding	Should be 40.32Mpps	
13	MAC Address Table	Should be 8K Mac	
14	Forwarding Mode	Store and forward	
15	CLI	Support CLI administration	
16	TELNET	Should support telnet remote administration	
17	SSH	Support SSHv1/2 remote administration	
18	SNMP	Switch should support v1/2/3	
		Support trap: Cold Start, Warm Start, Link Down, Linkup	
19	WEB	Support L2 configuration and monitoring	
20	RMON	Support RMON	
22	Port Setting	Abled/disabled	
		Speed, duplex, MTU setting	
		Flow-control	
		Port checking	
23	Mirroring	By mirroring port transmission, receiving, and sending and receiving data	
24	Port Rate Limit	Support rate limit, decided by the chipset	
25	Port Isolation	The switch should support the isolation setting	
26	Storm-control	Switch should support unknown multicast, unknown unicast, broadcast storm-control	
27	Link Aggregation	Support static manual aggregation	
		Support LACP dynamic aggregation	
28	VLAN	Access/Trunk/Hybrid	
		Should be Support VLAN Dividing based on Port, Protocol, MAC, with QinQ. Should support GVRP dynamic VLAN registration	
		Voice VLAN (Support Needed)	
29	MAC	Should support static adding, deleting	
		Limit on the number of MAC Address Learning	
		Support dynamic aging time setting	
30	Spanning Tree	Support 802.1d (STP); Support 802.1w (RSTP)	
		Support 802.1s (MSTP)	
31	Multicast	Support static adding, deleting; Support IGMP-Snooping;	
		Support MLD-Snooping; Support v1/2/3 dynamic multicast checking	
32	DDM	Support SFP/SFP+DDM	
33	ACL	Based on source MAC, destination MAC, source IP, destination IP, L4 Port	
34	QOS	Based on 802.1p (COS) sort; Based on DSCP sort;	
		Based on source IP, destination IP, Support SP, WRR scheduling policy;	
		Support rate-limiting CAR	
35	LLDP	Support the LLDP link detection protocol	
36	User setting	Adding/deleting	
37	Log	User login, operation, status, event recording log	

38	Attack prevention	DOS defence	
		Support the protection of CPU, limit the rates of checking the CPU and memory utilization	
		ARP binding (IP, MAC, PORT binding)	
39	Network diagnosis	Support ping, telnet, and trace	
40	Management of the System	Reset, save configuration/recovery, Upgrade, Time setting	
41	Certificate and Standards (Should be submitted at the time of bid)	EMI CISPR 32, FCC Part 15B Class A	
		FCC, CE Compliant, RoHS Compliant (Pb-free), IEC-62368-1, IEC 62443	
		EMC (EN55032/35, EN61000-6-2/6-4), NEMA TS2	
		EMS STANDARDS	
		IEC 61000-4-2	
		IEC 61000-4-3	
		IEC 61000-4-4	
		IEC 61000-4-5	
		IEC 61000-4-6	
		IEC 61000-4-8	
		IEC 61000-4-11	
		IEC 60068-2-27	
		IEC 60068-2-32	
		IEC 60068-2-6	
		VAPT and IEC 61850 are approved with a testing report.	
42	EMS / EMC Standards	IEC 61000-4-2/3/4/5/6/8/11, EN55032/35	

3. 24 Port L3 Switch (Sr.No.5,54,55)

S.No.	Specification		Compliance (Yes/No)
1.	Interface / Ports	16 × 10/100/1000 Mbps SFP Ports	
		8 × 10/100/1000 Mbps RJ45 Combo Ports	
		4 × 10G SFP+ Uplink Ports	
		1 × Console RJ45 Port	
2.	Switching Capacity / Bandwidth	Minimum 512 Gbps	
3.	Packet Forwarding Rate	Minimum 92.32 Mpps	
4.	Forwarding Mode	Store and Forward (Full Wire Speed)	
5.	MAC Address Table	Minimum 32K MAC Addresses	
6.	VLAN Support	Port-Based VLAN	
		802.1Q VLAN (Up to 4096 VLANs)	
		MAC-Based VLAN	
		IP-Based VLAN	
		Protocol-Based VLAN	
		Voice VLAN	

		QinQ (Basic & Flexible)	
7.	Link Aggregation	Static Aggregation	
		LACP Dynamic Aggregation	
8.	Spanning Tree Protocol	STP (802.1d)	
		RSTP (802.1w)	
		MSTP (802.1s)	
9.	Multicast Support	IGMP Snooping v1/v2/v3	
		MLD Snooping	
		Static Multicast MAC	
10	QoS Features	802.1p (CoS)	
		DSCP / ToS	
		SP / WRR / WFQ Scheduling	
11	Security Features	ACL (MAC / IP / L4 Port Based)	
		802.1X Authentication	
		RADIUS Support	
		IP-MAC-Port Binding	
12	DHCP Features	DHCP Snooping	
13	Management	CLI	
		WEB Interface	
		SNMP v1/v2c/v3	
		RMON v1/v2	
14	Jumbo Frame Support	Up to 16KB	
15	Redundancy Features	ERPS / Ring Protection	
16	Flow Control	IEEE 802.3x Flow Control	
17	Storm Control	Broadcast / Multicast / DLF	
18	Power Input	Redundant Dual Power Input	
19	Power Supply	AC 100–240V, 50/60Hz	
20	Power Consumption	Full Load ≤ 240W	
21	Operating Temperature	-30°C to +60°C	
22	Humidity	5% – 95% RH	
23	Ingress Protection	IP30	
24	Lightning Protection	6KV	
25	Installation	Rack Mountable	
26	Certificate and Standards (Should be submit at the time of bid)	EMI CISPR 32, FCC Part 15B Class A FCC, CE Compliant, RoHS Compliant (pb free) EMC (EN55032/35, EN61000-6-2/6-4), NEMA TS2 EMS STANDARDS IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-8 IEC 61000-4-11 IEC 60068-2-27 IEC 60068-2-32 IEC 60068-2-6 VAPT and IEC 61850-3 Approved with testing report. MTCTE Certified	

	The bidder shall submit the test report along with the bid.	
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4. 32 Channel NVR (Sr.No.6)

S No	Specification		Compliance (Yes/No)
1	Network Video Input	32 CH 12MP IP camera input	
2	Processor	Quad-core Embedded processor	
3	Network Access Bandwidth	712Mbps	
4	Video Compression	H.265+/H.265 /H.264	
5	Video Output	1 CH VGA output (1920×1080@60Hz 1280×1024@60Hz)	
		1 CH HDMI output (3840×2160@30Hz, 1920×1080@60Hz, 1280×1024@60Hz)	
6	Video Preview Mode	1x4K, 4x1080P, 9xD1, 25xD1, 36xD1	
7	Video Bit Rate	16Kbps-16Mbps	
8	Video Resolution	12MP/8MP/5MP/3MP/1080P/960P/720P/D1/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
9	Playback Ability	Support 1 CH 4K/5MP/4MP/3MP, 16CH 1080P record sync playback	
10	Image Display	1/4/6/8/9/16/25/36 image display	
11	Privacy Mask	Support 4 zones	
12	Intelligent Detection	Support Smart IPC intelligent function: Motion Detection, Video Loss, Video Covering, Area Intrusion, Staff Absence, Loitering Detection, Object Left/Lost, Electric Fence, Line Crossing, Human Detection, Retrograde Detection (wrong Direction)	
13	Audio input	1 CH	
14	Audio output	1 CH	
15	Record Search	Time, calendar, channel search, event search, (ANR, regular video, motion detection video, alarm video, intelligent detection video)	
16	Video Playback	Start, stop, normal play, back play, forward 30 seconds, backward 30 seconds, fast play (1-16X), slow play(1-1/16X), frame play, display the hidden progress bar, backup, snapshot, full screen, roller amplification time bar, precise playback	
17	Storage Interface	4 SATA	
18	HDD Capacity	Single max.16TB	

19	Video Storage	Min 30 days	
20	Backup Location	USB Device, Local	
21	ANR	Support Smart IPC (with SD card) ANR	
22	Network Protocol	IPv4, TCP/IP, HTTP, HTTPS, RTMP, SMTP(SSL), DHCP, UPnP, NTP, DNS, DDNS	
23	Interoperability	ONVIF Profile S	
24	Protocol port	ONVIF/RTSP/HTTP/HTTPS/RTMP port customized	
25	Digital Zoom	12X	
26	Security Mode	Authorized username and password, HTTPS with password, AES Encryption for password, RTSP Validation	
27	Network Interface	2 X RJ45 10M/100M/1000M adaptive Ethernet port	
28	USB Interface	2 x USB2.0, 1 x USB3.0	
29	Power Consumption	≤30W (Without HDD)	
30	Operation Temperature/ Humidity	-10°C ~ 55°C/10 % -90 %	
31	Certification	CE, FCC, BIS Certified	

5. 64 Channel NVR (Sr.No.7)

S No	Specification		Compliance (Yes/No)
1	Network Video Input	64CH 12MP IP camera input	
2	Processor	Quad-core Embedded processor	
3	Network Access Bandwidth	1312Mbps	
4	Video Compression	H.265+/H.265 /H.264	
5	Video Output	4 CH HDMI output	
6	Video Bit Rate	16Kbps-16Mbps	
7	Video Resolution	12MP/8MP/5MP/3MP/1080P/960P/720P/D1/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
8	Playback Ability	Support 1 CH 12MP/8MP/5MP/4MP/3MP, 4CH 1080P record sync playback	
9	Image Display	1/4/6/8/9/16/25/36/64 image display	
10	Privacy Mask	Support 4 zones	
11	Audio input	1 CH	
12	Audio output	1 CH	

13	Record Search	Time, calendar, channel search, event search, (ANR, regular video, motion detection video, alarm video, intelligent detection video)	
14	Video Playback	Start, stop, normal play, back play, forward 30 seconds, backward 30 seconds, fast play (1-16X), slow play(1-1/16X), frame play, display the hidden progress bar, backup, snapshot, full screen, roller amplification time bar, precise playback	
15	Storage Interface	9 SATA	
16	HDD Capacity	Single max.16TB	
17	Storage days	Min 30 Days	
18	RAID	As per OEM Design	
19	Backup Location	USB Device, Local	
20	ANR	Support Smart IPC (with SD card) ANR	
21	Network Protocol	IPv4, IPv6, TCP/IP, UDP, Multicast, HTTP, HTTPS, RTMP, RTSP, SMTP(SSL), DHCP, UPnP, NTP, P2P, ICMP, DNS, DDNS, FTP	
22	Interoperability	ONVIF Profile S, G & T	
23	Protocol port	ONVIF/RTSP/HTTP/HTTPS/RTMP port customized	
24	Digital Zoom	12X	
25	Security Mode	Authorized username and password, HTTPS with password, AES Encryption for password, RTSP Validation	
26	Network Interface	2 X RJ45 10M/100M/1000M adaptive Ethernet port	
27	USB Interface	2 x USB2.0, 1 x USB3.0	
28	Alarm Input /Output	16 In, 8 Out	
29	Power Consumption	≤30W (Without HDD)	
30	Operation Temperature/ Humidity	-10°C ~ 55°C/10 % -90 %	
31	Certification	CE, FCC, BIS Certified	

6. 96 Channel NVR (sr.No.8)

S No	Specification		Compliance (Yes/No)
1	Network Video Input	96CH 12MP IP camera input	
2	Processor	Quad-core Embedded processor	

3	Network Access Bandwidth	512Mbps	
4	Video Compression	H.265+/H.265 /H.264	
5	Video Output	1 CH VGA output (1920×1080@60Hz 1280×1024@60Hz) 2 CH HDMI output (3840×2160@30Hz, 1920×1080@60Hz, 1280×1024@60Hz)	
6	Video Bit Rate	16Kbps-16Mbps	
7	Video Resolution	12MP/8MP/5MP/3MP/1080P/960P/720P/D1/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
8	Playback Ability	Support 1 CH 12MP/8MP/5MP/4MP/3MP, 4CH 1080P record sync playback	
9	Image Display	1/4/6/8/9/16/25/36/64 image display	
10	Privacy Mask	Support 4 zones	
11	Audio input	1 CH	
12	Audio output	1 CH	
13	Record Search	Time, calendar, channel search, event search, (ANR, regular video, motion detection video, alarm video, intelligent detection video)	
14	Video Playback	Start, stop, normal play, back play, forward 30 seconds, backward 30 seconds, fast play (1-16X), slow play(1-1/16X), frame play, display the hidden progress bar, backup, snapshot, full screen, roller amplification time bar, precise playback	
15	Storage Interface	16 SATA, E-SATA	
16	HDD Capacity	Single max.16TB.	
17	Video Storage	Min 30 days	
18	RAID	As per OEM Design.	
19	Backup Location	USB Device, Local	
20	ANR	Support Smart IPC (with SD card) ANR	
21	Network Protocol	IPv4, IPv6, TCP/IP, UDP, Multicast, HTTP, HTTPS, RTMP, RTSP, SMTP(SSL), DHCP, UPnP, NTP, P2P, ICMP, DNS, DDNS, FTP	
22	Interoperability	ONVIF Profile S, G & T	
23	Protocol port	ONVIF/RTSP/HTTP/HTTPS/RTMP port customized	
24	Digital Zoom	12X	
25	Security Mode	Authorized username and password, HTTPS with password, AES Encryption for password, RTSP Validation	
26	Network Interface	2 X RJ45 10M/100M/1000M adaptive Ethernet port	

27	USB Interface	2 x USB2.0, 1 x USB3.0	
28	Alarm Input /Output	8 In, 2 Out	
29	Power Consumption	≤50W (Without HDD)	
30	Operation Temperature/ Humidity	-10°C ~ 55°C/10 % -90 %	
31	Certification	CE, FCC, BIS Certified	

7. Management Server Technical Specifications for (Type 1) (Sr.No.10)

Sr. No.	Specifications		Compliance (Yes/No)
	General		
	Make & Model	To be specified by the bidder.	
1	Processor		
	Processor Description and number	Intel Xeon / AMD EPYC or better	
	Number of processors	1	
	No of cores per processor	12	
2	Chassis		
	Form factor	Rack	
	Size (RU)	2	
	Motherboard		
	Expansion slot Gen 3 (PCIe x8)	4	
3	Max no of sockets available on the server	2	
	Maximum number of Sockets populated with Processors available on the Server	2	
4	Memory		
	Type of RAM	DDR5 SDRAM with ECC	
	Total No of DIMM slots available	16	
	No of DIMM slots populated with DDR SDRAM	4	
	DDR SDRAM size (GB)	96	
5	SSD Storage		
	Type of Interface for SSD	SATA	
	SATA SSD Hot swappable	Yes	
	Total Number of slots available for SATA SSD	2	
	Number of Slot Populated with SATA SSD	2	

	Capacity offered per SATA SSD (GB)	960	
	Total Capacity Offered with SATA SSD (GB)	1920	
	Total Number of slots Available for NVME SSD	2	
6	HDD Storage		
	Type of interface for a hard disk drive	SAS	
	Total Number of Slots available for SAS drive	6	
	Number of Slots Populated with SAS drive	6	
	Capacity Offered per SAS Drive (GB)	As per the Site Requirement	
	SAS drive Speed (Hot plug or better) (RPM)	10K	
	Total storage Capacity Offered with SAS drive (GB)	As per the Site Requirement	
7	RAID		
	RAID Level	1, 5, 6	
	No of RAID controller ports	8	
	Speed of RAID controller ports (Gbps)	12	
	RAID controller cache (GB)	4	
8	Ports & Interfaces:		
	Network card supported	1G, 10G	
	No of networking interface cards (LAN)	2	
	Total no of Ethernet ports required in the server	4x1G , 2x10G with SFP+ transceivers	
	Video controller (supported VGA or above resolution)	Yes	
	USB ports (Ver 2.0/3.0)	3	
	Other ports	One No. VGA or DP, or HDMI port	
9	Certifications		
	Certifications (OS)/compliance	Windows, Red hat Linux, Suse Linux, Ubuntu	
	Certifications /Compliance (Virtualization/Cloud platform)	VMware, Hyper-V, Red Hat virtualization	
10	Features		
	Management Features	Remote power on/ Shutdown of server, Remote Management of Server over LAN & WAN with SSL encryption through gigabit management port, should have virtual Media	

		support with all required licenses. Remote KVM, Server Health Logging, Out of Band Management, Server OEM's Management software to be provided. Real-time power meter, temperature monitoring, Monitoring of fans, power supply, memory, CPU, RAID, and NIC for failures.	
	Security Features	A) Secure Boot (Firmware and BIOS Level Security), Provision to lock the system on breach, Hardware root of trust/Dual Root of Trust, Server should provide policy-based security, Server should provide server intrusion detection, "Malicious Code Free design" (to be certified by OEM) B) Hardware TPM 2.0	
11	Generic		
	Redundant power supply	Yes	
	Hot Swappable (Redundant Power Supply)	Yes	
	Power supply efficiency	Platinum	
	Redundant Fan	Yes	
	Server Main supply	230+/- 10% V- AC	
12	Miscellaneous		
	Maximum power consumption of the system Watts)	1200/As per OEM	
	BIS registration under CRS of MeitY	Yes	
	BIS registration number and its validity	To be provided by the bidder	
	Operating system (To be provided)	Latest Linux/ Windows or latest Standard Edition licensed for all processor cores and a full physical server. (Perpetual license to be provided)	
	RAID Configuration	OS to be loaded on 2 disks (SSD) configured in a disk mirror. Five disks (SAS) to be configured in RAID -5 with the remaining one disk (SAS) as a hot spare.	
	MII Compliance	The system offered must comply with the DIPP's notification no. P- 45021/2/2017-PP(BE-II) with revisions till date and compliance with P-45021/102/2019-BE-II-Part (1) (E-50310) Office Memorandum issued by GOI. The LC Certificate should be on OEM letterhead.	
	On site OEM Warranty (Years)	5 years	

	Other supplies	a) 2 Nos CAT 6 UTP patch cords (Each cord of 6 feet length) b) 2 Nos OM4 LC-LC cable each of 10-meter length	
	BIS Registration	Valid BIS certification required (to be submitted along with BID documents)	
	Regulatory Compliance	Storage Hardware and software should be "Malicious Code Free design" (to be certified by OEM). The OEM Certificate copy must be with the material supply	

8. Management Server Technical Specifications for (Type 2) (Sr.No.11)

Sr. No.	Specifications		Compliance (Yes/No)
	General		
	Make & model	To be specified by the bidder.	
1	Processor		
	Processor Description and number	Intel Xeon / AMD EPYC or better	
	Min Number of processors	2(i.e., dual processor)	
	No of cores per processor	12	
2	Chassis		
	Form factor	Rack	
	Size(RU)	2	
	Motherboard		
	Expansion slot Gen 3 (PCIe x8)	4	
3	Max no of sockets available on the server	2	
	Maximum number of Sockets populated with Processors available on the Server	2	
4	Memory		
	Type of RAM	DDR5 SDRAM with ECC	
	Total No of DIMM slots available	16	
	No of DIMM slots populated with DDR SDRAM	4	
	DDR SDRAM size (GB)	144	
5	SSD Storage		
	Type of Interface for SSD	SATA	
	SATA SSD Hot swappable	Yes	
	Total Number of slots available for SATA SSD	2	
	Number of Slot Populated with SATA SSD	2	

	Capacity offered per SATA SSD (GB)	960	
	Total Capacity Offered with SATA SSD (GB)	1920	
	Total Number of slots Available for NVME SSD	2	
6	HDD Storage		
	Type of interface for a hard disk drive	SAS	
	Total Number of Slots available for SAS drive	6	
	Number of Slots Populated with SAS drive	6	
	Capacity Offered per SAS Drive (GB)	As per the Site Requirement	
	SAS drive Speed (Hot plug or better) (RPM)	10K	
	Total storage Capacity Offered with SAS drive (GB)	As per the Site Requirement	
7	RAID		
	RAID Level	1, 5, 6	
	No of RAID controller ports	8	
	Speed of RAID controller ports (Gbps)	12	
	RAID controller cache (GB)	4	
8	Ports & Interfaces:		
	Network card supported	1G, 10G	
	No of networking interface cards (LAN)	2	
	Total no of Ethernet ports required in the server	4x1G , 2x10G with SFP+ transceivers	
	Video controller (supported VGA or above resolution)	Yes	
	USB ports (Ver 2.0/3.0)	3	
	Other ports	One No. VGA or DP, or HDMI port	
9	Certifications		
	Certifications(OS)/compliance	Windows, Red hat Linux, Suse Linux, Ubuntu	
	Certifications /Compliance (Virtualization/Cloud platform)	VMware, Hyper-V, Red Hat virtualization	
10	Features		
	Management Features	Remote power on/ Shutdown of server, Remote Management of Server over LAN & WAN with SSL encryption through gigabit management port, should have virtual Media	

		support with all required licenses. Remote KVM, Server Health Logging, Out of Band Management, Server OEM's Management software to be provided. Real-time power meter, temperature monitoring, Monitoring of fans, power supply, memory, CPU, RAID, and NIC for failures.	
	Security Features	A) Secure Boot (Firmware and BIOS Level Security), Provision to lock the system on breach, Hardware root of trust/Dual Root of Trust, Server should provide policy-based security, Server should provide server intrusion detection, "Malicious Code Free design" (to be certified by OEM) B) Hardware TPM 2.0	
11	Generic		
	Redundant power supply	Yes	
	Hot Swappable (Redundant Power Supply)	Yes	
	Power supply efficiency	Platinum	
	Redundant Fan	Yes	
	Server Main supply	230+/- 10% V- AC	
12	Miscellaneous		
	Maximum power consumption of the system Watts)	1200/As per OEM	
	BIS registration under CRS of MeitY	Yes	
	BIS registration number and its validity	To be provided by the bidder	
	Operating system (To be provided)	Latest Linux/ Windows or latest Standard Edition licensed for all processor cores and a full physical server. (Perpetual license to be provided)	
	RAID Configuration	OS to be loaded on 2 disks (SSD) configured in a disk mirror. Five disks (SAS) to be configured in RAID -5 with the remaining one disk (SAS) as a hot spare.	
	MII Compliance	The system offered must comply with the DIPP's notification no. P- 45021/2/2017-PP(BE-II) with revisions till date and compliance with P-45021/102/2019-BE-II-Part (1) (E-50310) Office Memorandum issued by GOI. The LC Certificate should be on OEM letterhead.	
	On site OEM Warranty (Years)	5 years	

	Other supplies	a) 2 Nos CAT 6 UTP patch cords (Each cord of 6 feet length) b) 2 Nos OM4 LC-LC cable each of 10-meter length	
	BIS Registration	Valid BIS certification required (to be submitted along with BID documents)	
	Regulatory Compliance	Storage Hardware and software should be "Malicious Code Free design" (to be certified by OEM). The OEM Certificate copy must be with the material supply	

9. Management Server Technical Specifications (Type 3) (Sr.No.12, 13)

Sr. No.	Specifications		Compliance (Yes/No)
	General		
	Make & Model	To be specified by the bidder.	
1	Processor		
	Processor Description and number	Intel Xeon / AMD EPYC or better	
	Number of processors	2(i.e. Dual processor)	
	No of core per processor	16	
2	Chassis		
	Form factor	Rack	
	Size (RU)	2	
3	Motherboard		
	Expansion slot Gen 3 (PCIe x8)	4	
	Max Number of sockets available on the server.	2	
	Maximum number of Sockets populated with Processors available on the Server	2	
4	Memory		
	Type of RAM	DDR5 SDRAM with ECC	
	Total No of DIMM slots available	16	
	No of DIMM slots populated with DDR SDRAM	4	
	DDR SDRAM size (GB)	176	
5	SSD Storage		
	Type of Interface for SSD	SATA	
	SATA SSD Hot swappable	Yes	
	Total Number of slots available for SATA SSD	2	

	Number of Slots Populated with SATA SSD	2	
	Capacity offered per SATA SSD (GB)	960	
	Total Capacity Offered with SATA SSD (GB)	1920	
	Total Number of slots Available for NVME SSD	2	
6	HDD Storage		
	Type of interface for Hard disk drive	SAS	
	Total Number of Slots available for SAS drive	6	
	Number of Slot Populated with SAS drive	6	
	Capacity Offered per SAS Drive (GB)	As per the Site Requirement	
	SAS drive Speed (Hot plug or better) (RPM)	10K	
	Total storage Capacity Offered with SAS drive (GB)	As per the Site Requirement	
7	RAID		
	RAID Level	1, 5, 6	
	No of RAID controller ports	8	
	Speed of RAID controller ports (Gbps)	12	
	RAID controller cache (GB)	4	
8	Ports & Interfaces:		
	Network card supported	1G, 10G	
	No of networking interface cards (LAN)	2	
	Total no of Ethernet ports required in the server	4x1G, 2x10G with SFP+ transceivers	
	Video controller (supported VGA or above resolution)	Yes	
	USB ports (Ver 2.0/3.0)	3	
	Other ports	One No. VGA or DP, or HDMI port	
9	Certifications		
	Certifications (OS)/compliance	Windows, Red hat Linux, Suse Linux, Ubuntu	
	Certifications /Compliance (Virtualization/Cloud platform)	VMware, Hyper-V, Red Hat virtualization	
10	Features		
	Management Features	Remote power on/ Shutdown of server, Remote Management of Server over LAN	

		&WAN with SSL encryption through gigabit management port, should have virtual Media support with all required licenses. Remote KVM, Server Health Logging, Out of Band Management, Server OEM's Management software to be provided. Real-time power meter, temperature monitoring, Monitoring of fans, power supply, memory, CPU, RAID, and NIC for failures.	
	Security Features	A) Secure Boot (Firmware and BIOS Level Security), Provision to lock the system on breach, Hardware root of trust/Dual Root of Trust, Server should provide policy-based security, Server should provide server intrusion detection, "Malicious Code Free design" (to be certified by OEM) B) Hardware TPM 2.0	
11	Generic		
	Redundant power supply	Yes	
	Hot Swappable (Redundant Power Supply)	Yes	
	Power supply efficiency	Platinum	
	Redundant Fan	Yes	
	Server Main supply	230+/- 10% V- AC	
12	Miscellaneous		
	Maximum power consumption of the system Watts)	1200/As per OEM	
	BIS registration under CRS of MeitY	Yes	
	BIS registration number and its validity	To be provided by the bidder	
	Operating system (To be provided)	Latest Linux/ Windows or latest Standard Edition licensed for all processor cores and a full physical server. (Perpetual license to be provided)	
	RAID Configuration	OS to be loaded on 2 disks (SSD) configured in a disk mirror. Five disks (SAS) to be configured in RAID -5 with the remaining one disk (SAS) as a hot spare.	
	MII Compliance	The system offered must comply with the DIPP's notification no. P- 45021/2/2017-PP(BE-II) with revisions till date and compliance with P-45021/102/2019-BE-II-Part (1) (E-50310) Office Memorandum issued by GOI. The LC Certificate should be on OEM letterhead	

	On-site OEM Warranty (Years)	5 years	
	Other supplies	a) 2 Nos CAT 6 UTP patch cords (Each cord of 6 feet length) b) 2 Nos OM4 LC-LC cable, each of 10-meter length	
	BIS Registration	Valid BIS certification required (to be submitted along with BID documents)	
	Regulatory Compliance	Storage Hardware and software should be "Malicious Code Free design" (to be certified by OEM). OEM Certificate copy must be with the material supply	

10. ICCS Server Technical Specifications (Type 4) (Sr.No.46.47)

S. No.	Parameter	Requirement	Compliance (Yes/No)
1	General		
	Make & model	To be specified by the bidder.	
2	Processor		
	Processor Description and number	Intel Xeon / AMD EPYC or better	
	Number of processors	2(i.e. Dual processor)	
	No of core per processor	12	
3	Chassis		
	Form factor	Rack	
	Size(RU)	2	
4	Motherboard		
	Expansion slot Gen 3 (PCIe x8)	4	
	Max no of sockets available on server	2	
	Maximum number of Sockets populated with Processors available on Server	2	
5	Memory		
	Type of RAM	DDR5 SDRAM with ECC	
	Total No of DIMM slots available	16	
	No of DIMM slots populated with DDR SDRAM	4	
	DDR SDRAM size (GB)	128	
6	SSD Storage		
	Type of Interface for SSD	SATA	
	SATA SSD Hot swappable	Yes	
	Total Number of slots available for SATA SSD	2	
	Number of Slot Populated with SATA SSD	2	
	Capacity offered per SATA SSD (GB)	960	

	Total Capacity Offered with SATA SSD (GB)	1920	
	Total Number of slots Available for NVME SSD	2	
7	HDD Storage		
	Type of interface for Hard disk drive	SAS	
	Total Number of Slots available for SAS drive	6	
	Number of Slot Populated with SAS drive	6	
	Capacity Offered per SAS Drive (GB)	As per the Site Requirement	
	SAS drive Speed (Hot plug or better) (RPM)	10K	
	Total storage Capacity Offered with SAS drive (GB)	As per the Site Requirement	
8	RAID		
	RAID Level	1, 5, 6	
	No of RAID controller ports	8	
	Speed of RAID controller ports (Gbps)	12	
	RAID controller cache (GB)	4	
	Ports & Interfaces:		
	Network card supported	1G, 10G	
	No of networking interface cards (LAN)	2	
	Total no of Ethernet ports required in server	4x1G , 2x10G with SFP+ transceivers	
	Video controller (supported VGA or above resolution)	Yes	
	USB ports (Ver 2.0/3.0)	3	
	Other ports	One No. VGA or DP or HDMI port	
9	Certifications		
	Certifications (OS)/compliance	Windows, Red hat Linux, Suse Linux, Ubuntu	
	Certifications /Compliance (Virtualization/Cloud platform)	VMware, Hyper-V, Red Hat virtualization	
10	Features		

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	Management Features	Remote power on/ Shutdown of server, Remote Management of Server over LAN & WAN with SSL encryption through gigabit management port, should have virtual Media support with all required licenses. Remote KVM, Server Health Logging, Out of Band Management, Server OEM's Management software to be provided. Real-time power meter, temperature monitoring, Monitoring of fans, power supply, memory, CPU, RAID, and NIC for failures.	
	Security Features	A) Secure Boot (Firmware and BIOS Level Security), Provision to lock the system on breach, Hardware root of trust/Dual Root of Trust, Server should provide policy-based security, Server should provide server intrusion detection, "Malicious Code Free design" (to be certified by OEM) B) Hardware TPM 2.0	
11	Generic		
	Redundant power supply	Yes	
	Hot Swappable (Redundant Power Supply)	Yes	
	Power supply efficiency	Platinum	
	Redundant Fan	Yes	
	Server Main supply	230+/- 10% V- AC	
12	Miscellaneous		
	Maximum power consumption of the system Watts)	1200/As per OEM	
	BIS registration under CRS of MeitY	Yes	
	BIS registration number and its validity	To be provided by the bidder	
	Operating system (To be provided)	Latest Linux/ Windows or latest Standard Edition licensed for all processors cores and full physical server. (Perpetual license to be provided)	

	RAID Configuration	OS to be loaded on 2 disks (SSD) configured disk mirror. Five disks (SAS) to be configured in RAID -5 with remaining one disk (SAS) as Hot spare.	
	MII Compliance	The system offered must comply with DIPPs notification no. P-45021/2/2017-PP(BE-II) with revisions till date and compliance with P-45021/102/2019-BE-II-Part (1) (E-50310) Office Memorandum issued by GoI. LC Certificate should be on OEM letterhead	
	On site OEM Warranty (Years)	5 years	
	Other supplies	a) 2 Nos CAT 6 UTP patch cords (Each cord of 6 feet length) b) 2 Nos OM4 LC-LC cable, each of 10 meters length	
	BIS Registration	Valid BIS certification required (to be submitted along with BID documents)	
	Regulatory Compliance	Storage Hardware and software should be "Malicious Code Free design" (to be certified by OEM). OEM Certificate copy must be with the material supply	

11. Workstation Specifications (Sr.No 9,45)

S.No	General	Requirement	Compliance (Yes/No)
1	Processor	Intel Core Ultra 9 285 (36 MB cache, 24 cores, 24 threads, 1.9 GHz to 5.6 GHz, 65W)	
2	Operating System Language Pack	No Factory Install Language Software	
3	Thermal Cooling	Thermal Pad + Heatsink for dual SSDs	
4	Systems Management	Intel vPro Disabled	
5	Intel Responsiveness Technologies	iRST not selected	

6	Memory	32GB: 1 x 32 GB, DDR5, 5600 MT/s, non-ECC	
7	Graphics	Min NVIDIA RTX1000 GPU	
8	Riser Card	No Riser	
9	Operating System	As per OEM Design	
10	Storage	2TB SSD TLC with DRAM M.2 2280 PCIe Gen4 SED Ready	
11	Additional Hard Drive	Additional 2TB SSD TLC with DRAM M.2 2280 PCIe Gen4 SED Ready	
12	Raid Connectivity	NO RAID	
13	Power Supply	180W A/C Adapter, EPEAT4, 7.4MM Barrel, TCO10	
14	Power Cord	Power Cord (India)	
15	Network Card	No Additional Network Card Selected (Integrated NIC included)	
16	Wireless	No Wireless LAN Card	

12. LPU Type1 (Sr.No.14)

S.No.	Specification		Compliance (Yes/No)
1	AI Performance	21 TOPS	
2	GPU	384-core NVIDIA Volta™ architecture GPU with 48 Tensor Cores	
3	GPU Max Frequency	1100 MHz	
4	CPU	6-core NVIDIA Carmel Arm®v8.2 64-bit CPU	
		6MB L2 + 4MB L3	
5	CPU Max Frequency	1.9 GHz	
6	DL Accelerator	2x NVDLA	
7	DLA Max Frequency	1.1 GHz	
8	Vision Accelerator	2x PVA	
9	Memory	16GB 128-bit LPDDR4x	
		59.7GB/s	
10	Storage	16GB eMMC 5.1	
11	Video Encode	2x 4K60 (H.265)	
		10x 1080p60 (H.265)	
		22x 1080p30 (H.265)	
12	PCIe*	1 x4 (PCIe Gen4) + 1 x1 (PCIe Gen3)	
13	USB*	4xUSB 3.0 Type A	
		1x USB 3.0 Type C	

14	Networking*	1x GbE	
15	Power	60W	
16	Certification	CE, FCC, RoHS	

13. LPU Type2 (Sr.No.15)

S.No.	Specification		Compliance (Yes/No)
1	AI Performance	21 TOPS	
2	GPU	384-core NVIDIA Volta™ architecture GPU with 48 Tensor Cores	
3	GPU Max Frequency	1100 MHz	
4	CPU	6-core NVIDIA Carmel Arm®v8.2 64-bit CPU 6MB L2 + 4MB L3	
5	CPU Max Frequency	1.9 GHz	
6	DL Accelerator	2x NVDLA	
7	DLA Max Frequency	1.1 GHz	
8	Vision Accelerator	2x PVA	
9	Memory	8GB 128-bit LPDDR4x 59.7GB/s	
10	Storage	16GB eMMC 5.1	
11	Video Encode	2x 4K60 (H.265) 10x 1080p60 (H.265) 22x 1080p30 (H.265)	
12	PCIe*	1 x4 (PCIe Gen4) + 1 x1 (PCIe Gen3)	
13	USB*	4xUSB 3.0 Type A 1x USB 3.0 Type C	
14	Networking*	1x GbE	
15	Power	60W	
16	Certification	CE, FCC, RoHS	

14. END POINT SOLUTION SPECIFICATIONS (Sr.No 20,21)

Sr. No.	Specification	Compliance (Yes/No)
System requirements		
	The proposed solution must support the operating systems below:	
	• Windows 7 Home / Professional / Ultimate / Enterprise Service Pack 1 or later, Windows 8, 8.1, Windows 10, and Windows 11 Home/Pro/Education	
	• Windows Small Business Server 2011 Essentials / Standard (64-bit) and MultiPoint Server 2011 (64-bit), Microsoft Remote Desktop Services based on Windows Server 2008 R2 SP1, 2012, 2012 R2, 2019, and 2022	

	- CentOS 6.7 and later, Debian GNU / Linux 11.0 and later, Mageia 4, RHEL 6.7 and later, ALT 8 SP Server and Workstation, Amazon Linux 2, AlmaLinux OS 8 and later, Astra Linux, CentOS Stream 8, EMIAS 1.0, Kylin 10, AlterOS, EulerOS, openSUSE, Linux, Leap 15.0 and later, GosLinux, ROSA Cobalt 7.9, Ubuntu, Red OS - macOS 12 – 14	
Functional requirements		
1.	The proposed solution must include signatureless components to detect threats even without frequent updates. Protection must be powered by Static ML for pre-execution and Dynamic ML for post-execution stages of the kill-chain on endpoints and in the cloud for Windows servers and workstations. A dedicated component to protect against remote encryption attacks, support Anti-malware Scan Interface (AMSI),	
2.	The proposed solution must include the following components in a single agent installed on the endpoint:	
	Application, Web, and Device Controls for Windows and Workstation & Servers	
	Anomaly Detection	
	HIPS and Firewall	
	Patch Management	
	Encryption- Native Full Disk Encryption with SSO, File Folder Encryption, and removable drive encryption	
3.	The proposed solution must prevent the Bad-USB connection of reprogrammed USB devices emulating keyboards and enable control of the use of onscreen keyboards for authorization.	
4.	The proposed solution must provide Anti-Bridging functionality for Windows workstations to prevent unauthorized bridges to the internal network that bypass perimeter protection tools. Administrators should be able to ban the establishment of simultaneous wired, Wi-Fi, and modem connections, a dedicated component for scanning encrypted connections, and decrypt and scan network traffic transmitted over encrypted connections.	
5.	The proposed solution must have the following remote data wipe functionalities on the endpoint workstations:	
	Immediate data deletion	
	Delete by using the operating resources - files are deleted but are not sent to the recycle bin	
	Delete completely, without recovery - making data practically impossible to restore after deletion	
	Automatically delete the data if there is no connection to the endpoint management server	
6.	The proposed solution must have ability to block the execution of any executable from the USB storage device, specific detection category to block website banners, Cryptocurrencies and Mining category, ability to configure Wi-Fi networks based on Network Name, Authentication Type, Encryption Type, so these can later be used to block or allow the Wi-Fi connections, support user-based policies for Device, Web and Application Control, Allow administrator to monitor the application's use of	

	custom/random ports after it has launched, allow applications based on their digital signature certificates, MD5, SHA256, META Data, File Path, allow to control of DLL and Drivers, support Test Mode with report generation on the launch of blocked applications, control system/user application access to audio and video recording devices, automatically delete Application Control rules if an application is not launched during a specified interval, must include IPv6 protocol support.	
7.	The proposed solution must allow for monitoring the use of cloud services on managed devices running Windows and block access to unwanted cloud services.	
8.	The proposed solution must allow for protecting Exchange Online mailboxes, OneDrive users, and SharePoint Online sites that are managed through Office 365, perimeter security not limited to endpoints. It should be included in the same license	
9.	The proposed solution must include in-app cybersecurity training.	
Encryption		
1.	The proposed solution must support encryption on multiple levels:	
	• Native Full disk encryption with SSO – including system disk	
	• Integrated File Level Encryption (FLE)	
	• Removable media encryption	
	• BitLocker and MacOS Filevault2 Encryption Management	
	• The creation of encryption lists of files by extension or group of extensions	
	• The encryption of all files stored on removable drives	
	• The encryption of new files only as they are saved or created on removable drives.	
	• Removable drives should be encrypted in portable mode. It must allow access to encrypted files on removable drives that are connected to computers without encryption functionality	
	• Allows the encryption of all files that specific applications can create or modify, on both hard drives and removable drives.	
	Blocking access to encrypted files or allowing access to encrypted files as ciphertext only.	
2.	The proposed solution must offer Integrated Full Disk Encryption (FDE) functionality for hard drives and removable drives. As with FLE, there must be the capability to specify a default encryption rule by which the application applies the same action to all removable drives, or to configure encryption rules for individual removable drives.	
Systems Management, vulnerability, and patch management.		
1.	The proposed solution should include features to manage computers remotely, including:	
	• Remote installation of third-party software	
	• Patch management capabilities for Windows operating systems and for installed third-party applications	
	• Reporting must contain CVE information.	
2.	The proposed solution must be able to track third-party application licenses and raise notifications of any potential violations.	
Centralized administration, monitoring, and updating software requirements		

	The proposed solution must support the installation of the following Operating Systems for the Management Server:	
1.	Debian, Ubuntu, CentOS, RHEL, SUSE Linux Enterprise Server, Astra Linux Special Edition RUSB.10015-01 (operational update 1.6) 64-bit, ALT Server 9.2, 10, Oracle Linux, ROSA COBALT 7.9 64-bit	
2	Microsoft SQL Server 2012 Express 64-bit, Azure SQL Database, Amazon RDS, MySQL, MariaDB, PostgreSQL	
3.	The proposed solution must provide the creation of an administration system backup copy with the help of integrated administration system tools and support Windows Failover Cluster, and must have a built-in clustering feature, must include pre-defined security roles for the Auditor, Supervisor, and Security Officer.	
4.	The proposed solution's management server must maintain a revision history of each policy, task, package, and management group created, so that modifications to a particular policy/task can be reviewed.	
5.	The proposed solution must support the following notification delivery channels: Email, SIEM, SMS, and SIEM	
6.	The proposed solution must have the ability to define an IP address range, to limit client traffic towards the management server based on time and speed, and must allow the administrator to add custom/3rd party endpoint management tools into the management server	
7.	The proposed solution must have a built-in feature/module to remotely collect the data needed for troubleshooting from the endpoints, without requiring physical access.	
8.	The proposed solution must allow the administrator to create a Connection Tunnel between a remote client device and the management server if the port used for connection to the management server is not available on the device.	
9.	Suggest solution must have built-in functionality to remotely connect to the endpoint using Windows Desktop Sharing Technology. In addition, the solution must be able to maintain the auditing of administrator actions during the session.	
11.	The proposed solution must include a built-in tool to perform remote diagnostics and collect troubleshooting logs without requiring physical access to the computer.	
12.	The proposed solution must include the option for the customer to either deploy an on-premises management console or use the vendor-provided cloud-based management console and must be able to integrate with the vendor's cloud-based management console for endpoint management at no additional cost.	
14.	The proposed solution must support the installation of 3 rd party applications	
15	The suggested solution must support the import of third-party IOC in Open IOC format for its use in network scanning and support an external (third-party) set of IOCs to detect earlier undetected threats.	
16	The suggested solution must support at least the following response actions that an administrator can perform when threats are detected:	
	Host isolation	
	Start IoC scan for a group of hosts.	

15. UNIFIED AI-BASED FACIAL RECOGNITION SYSTEM ALONG WITH ATTENDANCE MANAGEMENT
 (SrNo. 16,17,18)

S.No.	Specification		Compliance (Yes/No)
	Unified Platform For Facial Recognition System and other Video AI		
1	Support for Various Use Cases	The platform shall support various applications, video analytics use-cases of surveillance and other use-cases, and algorithms for diverse use cases on a unified analytics application platform. It must allow the addition of new applications, video analytics, or algorithms without requiring changes to the unified platform.	
2	Hardware Provisioning	The inferencing hardware provisioned to run the video analytics application should be common to all the video analytics applications, irrespective of the type of architecture of deployment. Any application, including but not limited surveillance uses cases like FRS, person attribute, etc., should be capable of running on any device, be it a central server or an edge-based device, or an LPU, or in a hybrid mode.	
3	Real-Time Analytics Capabilities	The platform shall include a real-time video analytics engine that utilizes advanced image processing algorithms to transform video into actionable intelligence. The system should also provide evidence for any incidents detected.	
4	Integration with other systems	The unified video intelligence platform should have the capability to integrate with other video management systems and command and control applications.	
6	Multi-Site/Multi-Cloud/Multi-Datcenter	A flexible and scalable architecture designed to operate across multiple sites, clouds (public, private), and data centers, enabling a truly distributed and resilient setup.	
7		Support for geo-redundancy and disaster recovery strategies, ensuring data integrity and platform availability under all circumstances.	
8		Centralized management and monitoring capabilities provide a unified view of the system's health and performance across all locations.	
9	On-Prem/On-Cloud/Hybrid Architecture	Support for various deployment models, including on-premises for full control and data sovereignty, cloud-based for scalability and flexibility, and hybrid configurations that combine the best of both worlds.	
10		Easy migration pathways between deployment models to accommodate changing business needs and technology landscapes.	
11		Comprehensive security measures tailored to each deployment model to protect against threats and ensure data privacy.	

12		A fully distributed system architecture that leverages multiple nodes across different locations to enhance scalability, fault tolerance, and performance.	
13	Distributed Architecture	Decentralized processing capabilities that allow for workload distribution, minimizing bottlenecks and improving response times.	
14		Built-in mechanisms for automatic failover and load balancing to maintain system availability and performance under varying load conditions.	
15		Implementation of distributed storage solutions for the control plane and management server data, ensuring high availability and scalability.	
16	Distributed Storage Across Control Plane/Management Server	Support for storage federation, allowing data to be seamlessly accessed and managed across multiple storage systems and locations.	
17		Enhanced data protection and disaster recovery capabilities using replication and snapshot technologies.	
18	Encrypted Communication Between Servers	All communications between servers, including data transfers and control messages, are encrypted using industry-standard protocols to safeguard against eavesdropping and data tampering.	
19		Support for configurable encryption settings, allowing organizations to balance security requirements and performance impacts.	
20		Regular updates and patches to encryption algorithms and protocols to address emerging security threats and vulnerabilities.	
21	Local Node Level Backup in Case of Network Interruption	Local caching and backup mechanisms at the node level to ensure data continuity and application functionality in the event of network interruptions or failures between different locations or networks.	
22		Automated data synchronization processes to reconcile any differences once the network connectivity is restored, ensuring data consistency across the platform.	
23	High Availability of Support -	The Platform should support High Availability from Day One.	
24	Deployment, Configuration, and Calibration - Computer Vision Models / Video Analytics Algorithms		
25	Containerized Deployment	Each model/algorithm shall be packaged and run as individual applications inside containers to ensure consistent operation across centralized servers, server clusters, edge devices, and cloud environments.	
26	Use Case Structuring	Each video analytics use case shall be structured as an independent module deployable on any camera stream via a	

		simple user interface utility, providing visibility into use case assignments, configurations, and status across associated cameras.	
27	Advanced AI compatible	The Video Analytics system shall be compatible with the latest technological advancements in the domain of computer vision and AI. Hence, it shall be able to quickly adapt to newer libraries and AI advancements. All the analytics and use cases shall be based on advanced AI technology and shall not depend on traditional algorithms.	
28	Central Dashboard and Web-Based Interface		
29	Web-Based Interface	The platform shall provide a web-based interface accessible from any laptop/desktop within the local area network (LAN) or wide area network (WAN) using ADS login credentials. The interface shall support multiple simultaneous users, real-time alerts and notifications, and role-based access control.	
30	Common UI for all the use-cases	The user interface shall be a unified dashboard that shows events from all the Video Analytics use-cases and all the cameras in a common UI, and which gets populated in real time from event notifications	
31	Integrated Dashboard Access	The platform shall provide an integrated dashboard accessible from all device types, viewable by multiple users simultaneously, without login caps. The dashboard should provide comprehensive visibility of alerts and the status of all cameras and applications.	
32	User Types and Role-based Access Control	Dashboards should be provided for different user profiles and types, ensuring role-based access.	
33		The alerts and notifications should be based on the user profile.	
34		The user can log in from any device and yet should be able to access the system according to his/her profile privileges.	
35	Login Integration	The platform shall provide login credentials or integrate with the existing Active Directory for single sign-on (SSO).	
36	Location Analysis	The platform shall enable comprehensive analysis of any location, displaying a summary of events for selected locations and periods.	
37	Data Correlation	The platform should provide analytics to correlate various data points for comprehensive, actionable insights.	
38	Drill-Down Functionality	The dashboard shall include drill-down functionality to navigate from summarized views to specific location/event views with trend analysis.	
39	Report Generation	The platform shall support custom report generation by users.	
40	Event Review	The platform shall support reviewing and displaying each alert/event, including video footage and violation evidence.	
41	Reporting tool	The platform shall include a report generation tool for on-demand report generation.	

42	Event Notification Grid	The platform shall present a grid view of detected events, showing event metadata and associated video feeds.	
43	Use Case Deployment Window	The platform should provide an intuitive interface to manage and deploy use cases on cameras, showing the status of use cases and associated cameras.	
44	Event Filter	The platform should offer filters to retrieve events based on various parameters (e.g., date, time, event type, location).	
45		a) Time of the event	
46		b) Objects in the event	
47		c) Type of the use-case	
48		d) Camera Location	
49		e) Confidence Score	
50		f) Faces	
53		g) Person Attributes	
54		H) Virtual Lines and Regions	
55	Resource Status Management	The platform should display the status of all devices (e.g., computing servers, cameras) within the application for monitoring and management.	
56	Configuration and Calibration of use-cases		
57	Use Case Configuration	The platform shall provide an interface to configure detection parameters, application parameters, and recognition parameters for each use case/application/algorithm. It should also allow additional parameters to enhance accuracy.	
58	Scheduling Utility	The platform shall include a utility for time scheduling (start and stop) each use case on individual cameras, enabling easy selection by tag, group, or location, and allowing central application deployment with a minimum of hourly granularity.	
59		Advanced scheduling capabilities for analytics tasks, allowing for the efficient allocation of resources based on priority, data availability, and computational requirements.	
60		Support for both real-time and batch processing modes, enabling the platform to handle a wide range of analytics scenarios from live monitoring to historical analysis.	
61		User-friendly interface for creating, managing, and monitoring scheduled tasks, with support for notifications and alerts to keep users informed about task status and results.	
62	Configuration per-use-case per-camera level	The system allows each use-case to be uniquely configured for every individual camera stream, with parameters for camera calibration,	
63		Each use-case shall be able to run on different cameras with different settings (e.g., different Zones for Intrusion, different lines for line crossing detection, etc.) at different hours of the day.	

64	Flexible Deployment	The platform shall allow flexible deployment of each use case on individual cameras, without dependency on MAC or IP addresses, enabling dynamic configuration changes.	
65	Key configuration parameters	The use case on each camera shall allow setting up the configuration of multiple detection zones, such as lines and regions that can be used to define perimeters and regions of interest.	
66		The configuration user interface shall allow adjusting various sensitivity and confidence parameters to adjust each video-analytics use-case's performance with respect to the physical deployment of the camera.	
67	Search Functionality of Platform		
68	Dynamic and Static Search Functionality	The platform shall support static and dynamic search functionality for alerts, ensuring efficient and accurate retrieval of information.	
69		Static search will be for filtering based on camera location, alert type, and camera groups, etc.	
70		Dynamic search enabled on the platform should help with searching across the entire metadata with a single search bar.	
71	No. of days of search availability	The design of the platform at deployment should have provisioning for below functionality:	
72		The maximum number of days the events will be kept on, and the maximum number of days the search should be applicable for.	
73	Partial Search Functionality	The platform shall support partial search functionality of alert labels, such as part of a number plate, to facilitate quick and precise searches.	
74	Real-Time Search Updates	Search results shall update automatically for every change made in the search bar, ensuring up-to-date information display.	
75	Clickable and Searchable Metadata	Every part of the metadata of alerts shall be clickable and searchable, enabling comprehensive drill-down functionality for in-depth analysis.	
76	NLP Support	The Platform must support advanced natural language processing (NLP) to enable users to search for objects using simple, conversational queries.	
77		(Example: The system should understand and accurately process queries such as "find me all the black sedans that have crossed the entry camera in the past 2 days")	
78	Accuracy	The NLP engine should achieve at least 90% accuracy in understanding and processing queries.	
79	Response Time	Search results should be delivered within 5 seconds for typical queries.	

80	Resource Allocation	The system must efficiently utilize available computational resources to handle natural language queries without significant delays.	
81	Scalability	The NLP functionality should be scalable and adaptable to support increasing data volumes and concurrent user searches in case additional hardware is provisioned in the future.	
82	Watchlist and Real-Time Alerting		
83	Create and Manage	The Platform must provide the capability to create and manage watchlists based on search queries.	
84	Watchlist	These watchlists should automatically generate real-time alerts for new events that match the predefined criteria.	
85	Watchlist Creation	Users should be able to save search queries directly to a watchlist.	
86	Alert Generation	The system must generate real-time alerts via configurable channels when new data matches the watchlist criteria.	
87	Historical Data Monitoring:	Watchlist functionality should also allow retrospective analysis of historical data.	
88	Object Correlations -Grouping of Persons		
89		The Platform should be capable of grouping multiple occurrences of unique persons by leveraging advanced recognition technologies.	
90		This includes the use of facial recognition.	
91		The system should be able to aggregate all the alerts of a uniquely identifiable object, irrespective of its registration status, i.e., unregistered, registered, or registered across different databases at different points of time, and if these objects are seen together across multiple cameras, it should be proactively highlighted	
92		The system should also be able to consume relationship information between uniquely identifiable objects, either manually or through integration with third-party databases; the architecture and format of any such integration should be entirely driven by the analytics vendor and not the database provider.	
93	Central Unified Monitoring and Orchestration		
94	Central Dashboard Functionality	The platform should provide a central dashboard to monitor, manage, and orchestrate edge devices, offering real-time insights and management tools.	
95	Encryption & Data Integrity	The platform shall ensure data encryption in transit and at rest, safeguarding data integrity and confidentiality.	
96	Geographic Data Restrictions	The platform shall ensure that data remains within the country and is stored in secure, compliant facilities.	
97	Highly parallel and distributed	The algorithms powering the video intelligence system shall possess the capability to operate in a parallel and distributed	

		manner across multiple clusters of machines, irrespective of network, data centre, or cloud provider	
98	Flexible Technology Stack	The technology stack should be modular and scalable based on containerized micro services. Each use-case shall be orchestrated as a stand-alone microservice, which communicates with a central server for exchanging data.	
99	Portability	The analytics use cases shall seamlessly integrate with other components and shall be portable/ replicable easily across the machines automatically, irrespective of the hardware of the machine, be it CPU or GPU.	
100	Model Encryption	The system should be able to use the encrypted models for VA applications that are fine-tuned on the client dataset only.	
101	General Platform specifications		
102		The Video Analytics system shall be based on a Machine Learning and Deep Learning framework.	
103		The system should report evidence. Evidence of any incident should contain any relevant info such as the type & attribute of the incident in the metadata, along with a wider Field of View Image with a highlight of the incident itself.	
104		It shall be possible to run the analytics as per an hourly/daily/weekly schedule. There should be a provision to define multiple such schedules. It should be possible to set the schedule for any analytical use case. It should be possible to assign multiple analytics to the same camera.	
105		It shall enable common configuration settings in a batch mode on multiple cameras.	
106		The application shall allow searching the analytics events based on priority, date, and time (from and to), and camera. It should be possible to generate a statistical analysis of various use cases across the time of the day.	
107		The analytics should enable the operator to define an unlimited number of detection regions per camera. The system shall allow setting each region independently to be 'Active for Analytics for any given period of the day.	
108		The analytics events shall be stored in the database for up to a defined period. Defined period should support Server storage capacity.	
109		The system should have a single platform for setting analytics and the administrator functions.	
110		The System shall be a real-time video analytics engine that utilizes advanced image processing algorithms to turn video into actionable intelligence. The AI-based Video Analytics system shall consist of a video-processing & analytics engine that works seamlessly both on saved videos or camera streams in	

		real-time and provides events to the user based on the use-case basis. The system will be compatible with all ONVIF-compliant IP cameras with H.264/H.265 video decoding.	
111	CV/AI/ML Models		
112	Edge-Optimized Models	The platform should use edge-optimized deployable ML inference models.	
113	Reduced Inference Latency	The models shall have reduced inference latency.	
114	Special Purpose Hardware	The models shall be optimized for special-purpose hardware accelerators like GPUs	
115	Model Compression	The platform shall apply model compression techniques like quantization and pruning to reduce model size.	
116	Hardware Optimization	The platform should have capabilities to optimize the model according to the accelerator provided (CPU/GPU). Accordingly, memory and power consumption should be optimized.	
117	Accuracy Metrics	The models shall maintain an accuracy of over 90%, with an F-score over 0.9 for imbalanced or rare event detection/classification tasks.	
118	Responsible AI Guidelines	The platform shall adhere to Niti Aayog's Responsible AI guidelines for facial or PII use cases.	
119	NIST AI Framework Compliance	The platform shall comply with NIST's AI Risk Management Framework 1.0 for AI system design, development, deployment, and use.	
B	Facial Recognition System		
120	Detection	The Face Recognition System (FRS) shall seamlessly operate in real-time and offline mode, identifying and recognizing faces from digital image files, live video streams, or archived footage. The system should be compatible with various input sources, including IP cameras, body-worn cameras, mobile handset cameras, Tablet cameras, UAVs, and drones.	
121	Deep Learning Technology	The FRS shall leverage cutting-edge and latest AI technology, enabling real-time 1:1 (one-to-one), 1: N (one-to-many), and N: N (many-to-many) matching applications.	
122		The system shall guarantee high accuracy in non-voluntary face detection and recognition, even in open and crowded scenarios.	
123	Live Face Database Update	The FRS system should support real-time updates to its database, enabling the immediate addition or modification of entries without requiring reconfiguration or application/system restarts.	
124		It should also allow for the seamless integration of faces detected in live feeds from various sources, thereby constantly improving the accuracy and completeness of the database.	

125		The FRS system should support Advanced deduplication and quality control mechanisms to maintain a high-integrity database suitable for security and surveillance applications.	
126	Severity of the database	The system shall possess the capability to establish distinct categories for individuals, with the flexibility to tailor severity levels according to the specific needs of each category.	
127	Enrolment of faces	The system shall offer the capability to automatically enrol multiple facial images of an individual from CCTV cameras/video sources or local systems while maintaining a consistent identification number of the face as allocated in the first instance. This feature should be seamlessly available on both the Facial Recognition System (FRS) application and the Video Intelligence platform.	
128		Furthermore, the system should provide an option for Bulk Enrolment, allowing for the efficient addition of facial data either from the file system or from external databases such as UID, SAARTHI, IT, NCRB, EPIC, etc	
129	Ability to add reference Images	The system shall be able to add photographs obtained from law enforcement agencies to the criminals' repositories tagged for gender, age, scars, tattoos, etc., for future searches.	
130	Performance	The system shall support performing a full 1: N search of the probe image in under 5 seconds against a database of up to 50 million face records, given sufficient hardware.	
131	Deduplication	The Facial Recognition System (FRS) should possess the capability to verify whether a newly enrolled face already exists within the database prior to proceeding with the registration of the new face into the system.	
132		In addition, the system must have the capability to swiftly locate any prior detection of a Person of Interest (POI) when enrolled into the watch list, achieving a retrospective search in under 2 seconds.	
133		It should incorporate advanced deduplication and quality control mechanisms to uphold a high-integrity database, ensuring suitability for security and surveillance purposes	
134	Environment	FRS should run in constrained and unconstrained environments both with optimised compute power and minimum hardware sizing provided below.	
135		FRS system shall be able to recognize a minimum 70 x 70 Pixel face size in video or live feed.	
136	Adaptable to the Indian condition	The FRS System shall demonstrate exceptional accuracy in detecting and recognizing faces across a wide spectrum of Indian facial characteristics, functioning seamlessly in various environmental conditions.	

137		It shall provide the capability to be fine-tuned or sustained using Indian-centric datasets, ensuring consistent and adaptable performance to meet local needs.	
138	Live and Offline Mode	FRS shall be able to capture face images from live & pre-recorded CCTV / archived feeds and generate alerts if a watch-listed/blacklisted (pre-registered face from suspect list) match is found.	
139	Detections in the crowd	The system shall be able to detect more than 20 faces simultaneously in a crowd on moderate face rotation, either horizontal or vertical. It should support a yaw angle of -40 to +40 degrees, a pitch angle of -30 to +30 degrees, and a roll angle of -30 to +30 degrees relative to the camera.	
140	Detection of partial faces	The FRS shall provide support to recognize partial faces with varying angles from multiple videos simultaneously from Video clips and VMS Playback directly from the FRS Client Interface. FRS shall be able to process uploaded pre-recorded video feeds, depending on the proposed hosting hardware and the video quality.	
141		The FRS system shall provide a detection output indicating the orientation of the detected face, distinguishing between front and side faces with a score.	
142	Algorithm Benchmarking	The Vendor should have a performance benchmarking certificate. NIST FRVT listing will be preferred.	
143	Recognition score & Filter	The FRS system shall include a user-friendly feature that presents a straightforward percentage score to visualise the degree of matching. Additionally, it should offer the capability to filter matching scores for enhanced usability.	
144	Support for cameras/video formats	The system shall support diverse graphic & video formats as well as live cameras. FRS shall support day/night operation with the ability to detect faces both in colour and in black/white mode by using any H.264, H.265 Fixed IP and PTZ Cameras with IR Illuminators without any special configurations required.	
145	Image Enhancement Capabilities	The FRS system must have the capability to enrol whatever images are fed into the system, with image enhancement and the ability to verify the quality of the enrolled images with different colour indicators for low-quality images enrolled in the watch list/database.	
146	User Management	FRS must support a user management module that enables different user-level groups to support various permission levels. FRS clients shall have the ability to share recognition data like images & videos with multiple users and operators for better reference, alarm & incident management.	

147	Image Format support	The system shall be able to utilise any of the file formats, such as JPEG, PNG, BMP, TIFF, etc. format for enrolment/registration of faces.	
148	Full HD Support	The system shall be able to work on full HD Camera video with maximum performance.	
149	Implementation	The system shall be able to be implemented on IT hardware like a server or Workstation.	
150	OS Support	The FRS algorithm should be able to use proven open-source tools and technologies like Linux to bring down the total cost of ownership of the solution.	
151	Mobile Application Support	The FRS system should have open API endpoints to facilitate third-party mobile app integration.	
152	Detection robustness	System shall be able to detect the faces across multiple CCTV video sources for online (real-time) and offline modes, regardless of the following conditions:	
153		a. Changes in Facial expression	
154		b. Changes in facial hair or hairstyle	
155		c. Changes by moderate ageing (up to 15 years)	
156		d. Partially hidden faces or occluded faces, like wearing dark glasses, a mask, etc	
157		e. Changes in lighting conditions	
158	Search Capabilities	Simple Search UI that facilitates quick and easy access to the collection of events recorded by the system without the constant monitoring by operators and must perform a full 1: N search of the probe image. It shall support the following-	
159		a. Search previous events by images from previous detections	
160		b. Search previous events by images uploaded by the operator	
161		c. Search previous events by enrolled names	
162		d. Search previous events by date and time	
163		e. Search previous events by camera group	
164	Retrospective Search	FRS shall have the capability of searching backwards for previous detections and/or recognitions (events) of the detected person without enrolment from live CCTV & other forensic videos / offline videos.	
165	Up to 5 nearest matches support	FRS shall have ranking features to show the next 5 closest & similar subjects in the Watch list with the nearest score to the detection. This option enables you to review POIs that are potential matches for this detection for efficient system performance.	
166	OEM-owned algorithm	The FRS OEM should have ownership of the Face Recognition Engine/Algorithm for any custom-specific development as required by the client.	

167	Map feature	FRS must allow tracking of faces on maps to be uploaded in the system for cameras connected to FRS and shall highlight the camera location on the map for each detection/alert.	
168	SDK/API for integration	FRS shall provide an API for integration with any third-party software like C4I (Command, Control, Communication & Compute Centre). API must be available with a full set of documentation for each method, with accompanying sample code. All FRS functions shall be fully accessible via API.	
169	Email Integration	FRS shall support email Alerts via Gmail, Outlook, or via an Exchange SMTP service. Different recipients can be defined for different Camera Groups. Users shall be able to define how frequently recognition/detection emails are sent, the email subject, and the email sender (among other things).	
170		The email itself includes the timestamp of the detection, the score, the description, the reference image (defined in the Watch list), and the detected image.	
171	Minimum hardware support-	Data Centre Environment- FRS Application Engine must be able to run a minimum of 40 FRS Camera Channels per Server. (Server with 40 CPU Cores, 256 GB RAM, minimum 3 NVIDIA L4 cards populated or equivalent) Other optimised and better sizing shall be accepted.	
172	Use of AI accelerator hardware	FRS shall use extensive AI Technology and perform video processing on GPUs like NVIDIA, INTEL, or similar as per design & sizing vetted by the AI FRS Algorithm OEM. The number of servers to be supplied shall be based on the number of camera channels on which the FRS needs to be performed.	
173	NIST	a) The Face Recognition Algorithm should have participated and have been established in the Face Recognition Algorithm Evaluation conducted by NIST (National Institute of Standards and Technology, U.S. Department of Commerce) for both 1: N and 1:1 FRVT Tests.	
174		b) The NIST benchmark/ latest performance FRVT test results should not be more than 12 months old as on the date of bid submission.	
175		c) The OEM must be NIST-certified and registered in India. No foreign OEMs will be accepted.	
176	For NIST 1:1	FNMR at FMR = 10-6 on Mugshot-Mugshot should be less than 0.0024 &	
177		FNMR at FMR = 10-6 on VISA-Border should be less than 0.0029	
178	For NIST 1: N	FNIR (N=12M, R=1, T=0) Mugshot-Mugshot should be less than 0.001 or	
179		Developer rank should be in the top 25 ranks in FNIR (N=12M, R=1, T=0).	

C	Facial Recognition-based Attendance Management System	
180	Application Type	Enterprise-class, IP-enabled facial recognition software fully integrated with existing institutional databases and systems.
181	AI Technology	Leverages state-of-the-art deep learning models such as CNNs, Vision Transformers, and diffusion models for facial recognition and context-based image processing.
182	Algorithm Adaptation	Supports adaptive learning to improve accuracy over time by integrating new facial data and user corrections.
183	Real-Time Monitoring	Provides real-time facial recognition and attendance status updates via IP-enabled cameras.
184	Performance Optimization	Utilizes parallel processing and edge computing for optimized resource utilization and low-latency recognition.
185	Data Encryption	Encrypts all facial data and personal information in transit.
186	Access Control	Implements role-based access control (RBAC) to restrict access to sensitive data based on user roles and permissions.
187	Data Retention	Configurable data retention policies aligned with institutional and regulatory requirements (e.g., GDPR, CCPA).
User Enrolment, Attendance Marking, Reporting		
188	Facial Data Collection	Captures and stores high-quality facial images during user enrolment via connected IP cameras.
189	Database Integration	Integrates with institutional databases to automatically retrieve and update user records.
190	Bulk Upload	Supports bulk user data uploads in CSV format for efficient onboarding.
191	Automated Attendance	Automatically marks attendance based on facial recognition results in predefined zones (e.g., classrooms, offices).
192	Custom Attendance Workflows	Allows administrators to define custom attendance workflows based on time, location, and organizational requirements.
193	Error Handling	Provides users with the ability to raise attendance correction requests in case of errors via their dashboards.
194	Real-Time Monitoring	Displays real-time attendance status and camera feeds on the admin dashboard.
195	Attendance Reports	Generates detailed daily, weekly, and monthly attendance reports, including summaries and exception reports.
196	Exception Reporting	Identifies and reports missed attendances, late arrivals, and anomalies.
Management		
197	Role-Based Access Control	Provides different access levels for administrators, supervisors, and attendees.
198	User Profile Management	Allows users to view and update their profiles, including facial data and personal information.
199	User Roles	- Admin: Manages system settings, workflows, and user access.
200		- Primary Attendees: Check and download their attendance reports, raise correction requests.

201		- Secondary Attendees: Manage attendance of assigned users and rectify attendance errors.	
202	Attendance Alerts	Sends automated alerts to users regarding attendance status, missed attendances, or late arrivals.	
203	System Alerts	Notifies administrators of system errors, recognition failures, or performance issues.	
204	Database Integration	Synchronizes user records and attendance data with institutional databases.	
205	API Access	Provides REST APIs for integration with third-party systems like ERP, HRMS, and educational management software.	
Security and Privacy			
206	Data Encryption	Utilizes encryption for all metadata	
207	Access Control	Enforces access restrictions based on user roles and permissions.	
208	Compliance	Complies with global data protection regulations like GDPR, CCPA, and local privacy laws.	
User Interface			
209	Admin Dashboard	Provides a centralized dashboard for managing users, monitoring attendance, and generating reports.	
210	User Portal	Allows primary and secondary users to access attendance records, request corrections, and download reports.	
211	Mobile Access	Supports mobile-friendly access for real-time monitoring and management.	
Performance and Scalability			
212	Scalability	Designed to support thousands of users and high volumes of facial recognition data.	
213	Performance Optimization	Optimized for high-speed recognition and low latency, ensuring accurate results even under heavy load.	
Teacher Performance Monitoring			
214	Teacher Presence Detection	The system shall detect teacher presence inside classroom automatically	
215	Teacher Attendance Monitoring	AI shall generate teacher attendance based on the presence duration	
216	Teaching Activity Detection	System shall identify teaching activities such as explaining, writing on the board, and interacting with students	
217	Board Usage Monitoring	AI shall detect when the teacher uses the whiteboard/blackboard and generate the board utilization score	
218	Multiple Person Detection	AI shall differentiate teachers from students using role-based detection	
219	Event Alerts	Alerts shall be generated for teacher absence or inactive teaching	
220	Video Recording	All analytics events shall be linked with recorded video evidence	

221	Metadata Generation	System shall generate AI metadata for search and reporting	
222	Dashboard & Reports	The central dashboard shall provide daily/weekly teacher performance reports	
Student Behaviour Monitoring System			
223	Student Presence Detection	The system shall automatically detect and count students present in the classroom using AI-based person detection.	
224	Student Attention Detection	The system shall analyse student posture and head orientation to determine whether students are attentive toward the teacher/board.	
225	Student Engagement Monitoring	AI shall provide an engagement score based on active participation, posture, and interaction.	
226	Standing / Roaming Detection	The system shall detect if students are unnecessarily standing or roaming inside the classroom during the lecture.	
227	Fall Detection	AI shall detect if a student falls or collapses and generate an alert for safety response.	
228	Group Formation Detection	AI shall detect abnormal group formation or crowding, which may indicate disturbance.	
229	Central Monitoring Dashboard	Dashboard shall display behaviour analytics of multiple classrooms in real time.	
230	Engagement Heatmap	The system shall generate classroom heatmaps showing active and inactive student zones.	
231	Automated Reports	The system shall generate daily, weekly, and monthly reports of student behaviour.	
232	Incident Playback	The operator shall be able to search and playback events using AI metadata.	

16. CENTRAL VIEWING APPLICATION (Sr.No.19)

S.No.	Specification	Compliance (Yes/No)
1	Overview	
1	The CVA (Central viewing Application) shall support real-time live streaming of any IP camera onboarded via integrated NVR systems.	
2	The application shall enable operators in the Central Command & Control Center (CCC) to monitor multiple camera feeds, receive alerts from AI analytics modules, and perform investigations using recorded video and metadata.	
2	General Requirements	
1	The Central Viewing Application shall be a web-based or thick client application accessible from authorized operator workstations.	
2	The application shall support live viewing, playback, alarm management, and event monitoring.	

3	The system shall support integration with Video Management Systems (VMS), NVRs, and AI Video Analytics platforms.	
4	The application shall support role-based access control (RBAC) for different user roles such as administrator, operator, and supervisor.	
5	The system shall support simultaneous viewing of multiple camera streams.	
6	The application shall be scalable and capable of supporting thousands of cameras across multiple sites.	
7	The application shall support secure communication using HTTPS/SSL encryption.	
3	Live Video Monitoring	
1	The CVA shall support real-time live streaming from VMS, which is integrated with NVR and Analytics Server	
2	The system should support multiple viewing layouts (1x1, 2x2, 3x3, 4x4, 5x5, etc.).	
3	Operators shall be able to drag and drop cameras into viewing panels.	
4	The system should support camera grouping based on location, department, or function.	
5	The application shall support PTZ camera control, including pan, tilt, zoom, presets, and patrol modes.	
6	The system should support full-screen viewing and digital zoom functionality.	
7	The application shall support low-latency streaming for real-time monitoring.	
4	On-Demand Video Playback and Investigation	
1	The system shall support playback of recorded videos from VMS storage.	
2	Playback shall support timeline-based navigation.	
3	The system shall allow search based on date, time, camera, and event type.	
4	Operators shall be able to playback multiple cameras simultaneously.	
5	Playback shall support pause, forward, rewind, frame-by-frame viewing, and speed control.	
6	The system shall allow video clip export for evidence purposes.	
5	AI Analytics Event Monitoring	
1	The application shall support real-time display of AI-based alerts and events.	
2	Events generated by AI analytics engines shall be displayed in the alert dashboard.	
3	Each alert shall include camera ID, location, timestamp, event type, and snapshot.	
4	Operators shall be able to view the video associated with the alert.	
5	The system shall support event acknowledgment and closure by operators.	
6	The application shall support event filtering and searching based on event type and time.	
6	User Management and Security	
1	The system shall support multi-user login with authentication mechanisms.	
2	Role-based permissions should control access to cameras and features.	
3	The system should maintain user activity logs.	
4	The system shall support integration with LDAP/Active Directory (optional).	
5	The application shall support secure password policies.	
7	Dashboard and Reporting	
1	The CVA should provide customizable dashboards for operators and supervisors.	
2	The dashboard shall display camera status, system health, and alerts.	

3	The system should support report generation for alerts and events.	
4	Reports shall be exportable in PDF/Excel format.	
5	The system should provide analytics statistics such as event count and camera activity.	
8	Audit and Logging	
1	The system should maintain complete audit logs for user actions.	
2	Logs shall include login, logout, camera access, playback usage, and alert handling.	
3	Logs shall be searchable and exportable.	
4	The system shall support a configurable log retention policy.	

17. NETWORK MONITORING SYSTEM (Sr.NO.57)

S.No.	Specification	Compliance (Yes/No)
1	1. Complete end-to-end fault & Performance monitoring from a single OEM	
	2. Fault & Performance Monitoring (Network, Server, Cloud, VMs, CCTV, Wi-Fi, all IP networks)	
	3. Traffic analysis	
	4. Reporting & Dashboard integration	
	5. Helpdesk ITSM Tool	
	General	
2	The proposed EMS OEM must have at least 2 deployments (in state/central Government/PSU/BFSI) in India with 10,000 core network devices, such as routers, switches, and firewalls, being monitored, and their configuration has also been managed in these deployments over the last five years. Reference PO copy and completion/signoff document need to be submitted.	
3	The solution should be capable of running on a Linux platform with a time series database (not RDBMS) as a backend and should be a 64-bit application to fully utilize the server resources on which it is installed.	
4	The organization should have ISO 45001, ISO 55000, ISO 27001, ISO 27034, SOC3, ITIL V4, and CMMI Level 3 certification for its internal processes, and the certificates must be provided.	
5	The proposed solution should be TEC, OWASP & SANS certified.	
6	The solution should have dual-stack IP support (support both IPv4 and IPv6) and should be completely vendor-agnostic in nature to be able to monitor a multi-vendor environment.	
7	The solution should be a unified system that can monitor networks, servers, apps, and any IT device.	
8	Search & Views: possible to search for events/alerts based on a set of attributes, support creating views to quickly extract the necessary info about events based on different predefined filters or search conditions.	
9	The system should be capable of retrieving and showing faults, performance, inventory, and SLA data in a single dynamic view with the option to export the views into PDF,	

	Word, Excel, HTML, etc. formats, depending on the need. The system should have the capability to add any additional information about the nodes via custom fields.	
10	The system should have Node Tags for device grouping and resource/interface tagging for element grouping. Apart from Node Tags, the system should have options to do device grouping based on default fields and customer fields.	
	Network Monitoring	
11	The system should have multiple options for discovery, including IP address-based discovery, IP address range discovery, CSV-based discovery for bulk discovery, and it should allow options to add custom fields to support customer-specific data to upload during discovery.	
12	The system should fetch topology via SNMP for ARP tables from routers, MAC tables from layer 2 switches, Cisco Discovery Protocol, Link Layer Discovery Protocol, Foundry Discovery Protocol, or Synoptics Network Management Protocol. The discovery should be automated and continuous.	
13	Discovery has to work intelligently by identifying the device in the network by the given IP range and categorizing it into network devices and servers with vendor and model details.	
14	Automatically learn devices that support SNMP, HTTP, Ping, SMTP, POP3, WMI, JMX, SOAP, REST API, IPDC, SSH, and Telnet, along with any required protocol to communicate with the devices.	
15	The system should support a global threshold, and it should have an option to define individual resource/interface statistics level thresholds.	
16	Threshold & Alerts: define and store static & dynamic resource utilization thresholds, define and maintain availability thresholds for individual components, services, or applications, individual service actions / automated operations (performing a transaction, running an automated procedure, etc.), support comparison of actual availability, actual performance with agreed levels, and alerting on breaches.	
17	Configurable parameters like frequency, data duration, resolution duration, sigma-based polarity value, and reset points should be available.	
18	All thresholds should have a set point, reset point, polarity, set point message, and reset point message for ease of use.	
19	Detect & highlight faults (abnormal situations) in near real-time occurring anywhere within the monitored IT infrastructure.	
20	Provides filtering, deduplication, holding, suppression, and Correlation capability to let users focus on the critical event that affects the business and business processes.	
21	Provides multi-level (preferably six-level) Severity definition, will handle events automatically, and inform the designated person as per operational requirements.	
22	The system should support separate Rule Engine-based alarms apart from the generic threshold.	
	a. Should have the capability to configure Device Group based, Node Based, Resources/Interface based, and Aggregation link based.	
	b. On Selection of Nodes/Resources/Aggregation links, it has the flexibility to filter based on the fields available in the node information	

	c. Rules should have an option to apply configuration on top of performance value or based on configured threshold alarms	
	d. Rules should have an option to configure the breach based on minimum, maximum, and average values	
	e. Should have the option to configure rules in repeat counters	
	f. Should have options to select custom alarm and clear alarm messages for individual configured rules	
	g. Should have the option to send severity levels like error, warning, and information	
	h. Notifications support based on configured rules	
23	Provides alarm suppression, withholds time, and aids in the prevention of flooding.	
24	Send alert via E-mail, SMS, Execute Batch file, SNMP Trap, XML notification, Pop-up window, and Audio alert.	
25	Monitors all traffic from all the interfaces of the network device. Provides traffic Utilization based on individual interface level, node level, or based on the group by location, branch, departments, etc., as an Avg, minimum, and Max bandwidth, utilization, throughput, or any custom monitoring parameters.	
26	Provision to change the polling interval to any frequency depending on the priority till the individual component/resource level, like each interface might have a different polling interval in the same device, based on the criticality and importance of the service customer.	
27	The system should have the capability to configure business, non-business hours or custom time pooling. These configurations should be available for every device as well as every component in the device.	
28	Provision to disable and enable the polling of a specific type of device.	
29	The system should have the capability to configure the maintenance period for any device. When the device is in maintenance period, there is no polling done, and the SLA clock on the device is stopped.	
30	SLA calculation / Isolation report should be made with the consideration of both the Primary and Secondary link together, instead of an individual link-based. The downtime calculation will be measured when both the links are down for internal reporting and link-based for ISP reporting. The system should provide a flexible configuration in the UI itself based on user needs.	
31	Provide a notification mechanism that allows administrators to define which notification channel to use at different times of the day, and be able to trigger multiple notifications to alert multiple people and act.	
32	Provide standard reports that display the status of nodes and interfaces. Reports could be viewed on a daily graph (5-minute average), weekly graph (1 hour average minute average), monthly graph (1-hour average), and yearly graph (1-day average).	
33	Reports & Dashboard: Pre-defined Availability, Performance, Capacity Dashboards & Reports. Should have option to drag and drop dashboard configuration option Should have option to add multiple type of widgets along with (Tabular, Summary, Multiple Graph options), Filter (predefined & Dynamic), Sort, Search, Group by, multi threshold, Export option to PDF, XLS etc., Generate automatically and send over Email or to a predefined folder, possible to define custom KPIs, A KPI definition must include the	

	period-bound target value and the threshold value (to distinguish between the Green, Amber and Red zones.).	
34	Automatically generate daily reports that provide a summary of the IT infrastructure, as well as custom Reports and that are automatically sent by email at a pre-defined schedule to any recipient or saved into any specific folder or drive.	
35	Supports instant diagnosis of the node status through Ping, Telnet, and SNMP walk.	
36	Support Real-Time report generation for checking the continuous reachability of the target device.	
37	The system should provide many different types of topology representations. To perform the following:	
	1. Display physical connections of the different devices being monitored in the system	
	2. Display flat maps of the entire network or networks in a single view	
	3. Display customer maps based on user configurations	
	4. Display maps based on geo locations	
	Network Traffic Analysis	
38	The proposed monitoring solution should be able to monitor network traffic by capturing flow data from network devices, including Cisco NetFlow v5 or v9, Juniper J-Flow, IPFIX, sFlow, Net Stream data, and also sampled NetFlow data. Solution must be able to store ALL flows without any rollups or loss for retention period - for security and audit purposes.	
39	The system should identify which users, applications, protocols, countries, AS numbers, top routers, and top interfaces are consuming the most bandwidth	
40	Proposed solutions should be sized for unlimited flow data.	
41	Should be able to associate traffic coming from different sources with application names	
42	Should be able to receive flows from non-SNMP-enabled devices, like VMware v-Switch	
43	Should monitor Type of Service (TOS), Differentiated Services Codepoint (DSCP), and Per-Hop Behavior (PHB), BGP AS, and NEXT HOP	
44	Should provide flow analysis with 1-minute granularity, and the solution should be able to monitor up to 5 million flows per second and should employ advanced optimization methods.	
45	Solution should support advanced SSL/TLS analysis like detecting false certificates, expired, and self-signed.	
46	Solution should also feature signature-based detection techniques and allow drilldown to packets from alerts.	
47	Solution should provide DDoS reports in real time within 1 minute after detection of an attack with details of IP, Ports, ASN numbers, Router Interfaces, and customers facing the attacks.	
	Service Management	
48	Low Code /No Code Platform for Integration:	
49	The tool should provide REST APIs to integrate with IT Infrastructure Management, Configuration Management, Network Management, CRM, and SIEM tools to automate Events to Ticket.	

50	The proposed tool must provide Dynamic REST/WEB API integration without writing any code, just by configuration on the GUI with various inbuilt authentication methods.	
51	Should be able to do 2 Way Integration with 3rd party and should be able to exchange the data at any stage of the lifecycle of the Event, Incident, Problem, Change, Request, Task, Release, etc.	
52	The tool should provide drag-and-drop-based workflow process design and no-code input forms design using the drag-and-drop method for different processes, services, and workflows.	
53	No code automation platform to support Rule executions (value-based, time-based rule executions)	
54	Team/Individual Pressure/Load Score, Efficiency Score, and Expertise Score should be present on the Dashboard	
55	The tool must provide an intelligent email-to-Incident feature in which the tool admin has the option to allow certain domains for automatic conversion of emails to tickets. The tool should merge all subsequent email communication for a particular email-to-incident ticket into the same ticket in the form of a message thread. The tool should be intelligent enough to understand email conversation chains for merging emails to a particular incident. Merging logic should not only be based on Ticket ID, but also on email sender, cc responses to that email chain	
56	The tool should be able to provide real-time email and SMS Notification alerts to notify respective users about any changes in ticket state and status. The tool should provide an Email Communication Interface to allow technicians to send replies to customers / end users from the tool GUI, and Record all the Email Communication in Chronological Order	
57	The integrated ITSM module should have its own Android & IOS app	
58	The proposed tool must provide a GUI interface for users, requesters, customers, support staff, 3rd party vendors, Area Managers, Field Engineers, Site Engineers, Supervisors, Managers, (Helpdesk available 24x7 at customer site), etc., with options to restrict the amount of information that can be accessed by each role	
59	The proposed tool should have the capability to be able to define and access the Business and Technical catalogue separately	
60	The tool should allow the administrator to create categories and multiple sub-categories (under each category) in hierarchical order for services being offered to the end users.	
61	The tool should have an option to define the workflow for each service created in the Service Catalog for each process (Incident, Problem, Change, Request)	
62	The tool should provide a self-service portal where End-users / requesters can log in and raise incidents	
63	End users should also be able to browse the service catalogue and should be able to raise a request by providing the input to a particular service request, address, etc.	
64	The proposed tool must provide an option for users to track their incident status, check knowledge articles, and chat with technicians on incidents	
65	Users must have an option to Log, Classify, Categorize & Prioritize Requests	

66	The proposed tool must provide an option to design the request management input parameter template for each service in the service catalogue	
67	The proposed tool must provide an option to design dynamic workflows, lifecycle, Tasks, and notification actions for each service, which can be requested	
68	The proposed tool must record Problem Record Date and Time, Problem Source, Contact Detail, Symptoms, and Status	
69	The tool should allow problem records to be classified according to priority and category	
70	The tool should allow a problem record to be escalated based on pre-established rules, with the option to manually override conditions	
71	The tool should allow users to create, edit & delete Change Requests through the web interface. Each CR should be unique, and any authorized user should be able to raise an RFC	
72	The proposed tool must provide Change records Categorization, classification according to Change Class (Permanent, temporary, Recurring), Change Type (Normal, Standard, Expedited, Latent, Emergency), Change Category, service category, Impacted Service, Impact, Urgency, Priority	
73	The Change records in the proposed tool must contain State & Status information, along with a Dynamic Workflow definition with color coding for each status	
74	There should be records for Benefits, Effects, and Required resources & Cost required to perform the change	
75	The proposed tool must have a powerful knowledge management functionality	
76	Knowledgebase Management should be integrated with the NMS/EMS system	
77	The proposed tool must provide role-based, team-based, and user-based access control on KB articles/FAQ/Information/KE/Solutions, etc.	
78	In the FAQ/Solutions type of knowledge, the system should allow adding multiple questions/multiple solutions within a single knowledge article	
79	The tool should have an option to promote knowledge to analysts (Service Desk) and end users (Service Portal)	

18. 1 KVA UPS (Sr.No. 37)

S. No.	Parameters	Specification	Compliance (Yes/No)
1	Parameter	Minimum Specifications	
	Capacity	1 KVA, 800 Watt (1Øinput/ 1Ø output)	
	Topology	True Online Double Conversion UPS Standalone UPS	
	Technology	Microprocessor-based, PWM with IGBT-based rectifier and inverter, DSP Technology	
2		INPUT	
	Input Facility	1Ph + N+PE, 3 wires	

	Input Voltage Range	110~ 300 VAC @50% Load, 140V ~ 295 VAC @100% Load	
	Input Frequency Range	45 ~ 55Hz	
	Input Power Factor	≥0.99	
3	OUTPUT		
	Power Factor	0.8	
	Nominal Output Voltage	220/230/240 VAC	
	Voltage regulation	± 1% static, ± 5% for Dynamic Load	
	Nominal Frequency	50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode	
	Waveform	Sine wave	
	Crest factor	03:01	
	Total harmonic distortion (THDv)	≤ 3% (linear load); ≤5% (nonlinear load)	
	Output Short Circuit Protection	Electronic, trip	
	Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <5 ms	
	Maintenance/Manual Bypass	Automatic & Manual	
	Efficiency	Overall (AC to AC) : ≥ 88%	
	Inverter overload capability	upto 100% infinite	
		>100% ~ 110%: for 10 mins;	
		>110% ~ 130%: for 1 minute;	
		> 130%-150%: for 3 seconds	
	Indications (LED)	Normal, abnormal, fault, bypass, Battery Mode	
	Indications (LCD)	Input Voltage/frequency, Output Voltage, Output frequency, Battery Voltage & Load VA and Percentage, Inverter Temperature, Online, ON Battery or on bypass, Fault Codes, Load & Battery Bar graph, Input Current, Output Current, Battery current.	
	Alarms	Inverter under/over voltage, UPS overload, Battery low, DC high, short circuit, UPS fault, Fan Fault, Transient Surge, input and output fuse.	
	Special Protection Device		
	IP Rating	IP 20	

	Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available	
	Self-Diagnosis	UPS should be capable of carrying out a self-test of the Rectifier/Charger & Inverter Module during start-up	
4	BATTERY BANK		
	BATTERY BACK UP & BATTERY BANK CHARGER	30 mins on System Load	
	Batteries Configuration (VAH)	936 VAH	
	DC BUS voltage	36 V	
	Batteries Type	SMF VRLA	
	Battery Make	Exide/Quanta/HBL	
	PHYSICAL		
	Operating Temperature	0-40 degree C	
	Operating Humidity/Altitude	0-95% RH (non-condensing)/<1500 m.a.s.l	
	Type of Cooling	Forced Air	
	Noise Level	<55 dB dBA at 1 meter distance	
	Remote Monitoring (SNMP): Optional	UPS Network Management Card with suitable software with auto shutdown facility compatible in Linux /Windows Server OS 2003/2008/2012, Windows 7/ Windows 8.1 to monitor all parameters of UPS like Output voltage, Battery Voltages, UPS load, Mains frequency, Dynamic Battery Backup time, UPS Temp, etc.	
5	CERTIFICATIONS OF UPS REQUIRED		
	BIS	Valid BIS Certificate to be enclosed for the quoted Model	
	ISO Certification	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS	
	EMC and IEC Test Certificate conducted from. reputed NABL accredited Laboratory in India of Model quoted to be submitted along with the Bid (Acceptance of Test Report	IEC61000-3-12:2011, IEC61000-4-2:2008, IEC61000-4-3:2006+A1:2007+A2:2010, IEC61000-4-4:2012, IEC61000-4-5:2014, IEC61000-4-6:2013, IEC61000-4-8:2009, IEC61000-4-11:2004, IEC61000-2-2:2002, IEC- 62040-3 (Second Edition):2011, EN62040-2:2018, EN61000-3-12:2011, EN61000-3-3:2013	

	is under jurisdiction of Authority)	
	SUPPORT	
	Web/Windows-based Support	It is mandatory to provide an online centralized call tracking system, like OVSD (Open View Service Desk), for monitoring of logged calls and viewing through web / Windows-based access for at least 2 officials.

19. 2 KVA UPS (Sr.No.38)

S. No.	Parameters	Specification	Compliance (Yes/No)
1	Parameter	Minimum Specifications	
	Capacity	2 KVA, 1600 Watt (1Øinput/ 1Ø output)	
	Topology	True Online Double Conversion UPS Standalone UPS	
	Technology	Microprocessor-based, PWM with IGBT-based rectifier and inverter, DSP Technology	
2		INPUT	
	Input Facility	1Ph + N+PE, 3 wires	
	Input Voltage Range	110~ 300 VAC @50% Load, 140V ~ 295 VAC @100% Load	
	Input Frequency Range	45 ~ 55Hz	
	Input Power Factor	≥0.99	
3		OUTPUT	
	Power Factor	0.8	
	Nominal Output Voltage	220/230/240 VAC	
	Voltage regulation	± 1% static, ± 5% for Dynamic Load	
	Nominal Frequency	50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode	
	Waveform	Sine wave	
	Crest factor	03:01	
	Total harmonic distortion (THDv)	≤ 3% (linear load); ≤5% (nonlinear load)	
	Output Short Circuit Protection	Electronic, trip	

	Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <5 ms	
	Maintenance/Manual Bypass	Automatic & Manual	
	Efficiency	Overall (AC to AC) : $\geq 88\%$	
	Inverter overload capability	upto 100% infinite	
		>100% ~ 110%: for 10 mins;	
		>110% ~ 130%: for 1 minute;	
		> 130%-150%: for 3 seconds	
	Indications (LED)	Normal, abnormal, fault, bypass, Battery Mode	
	Indications (LCD)	Input Voltage/frequency, Output Voltage, Output frequency, Battery Voltage & Load VA and Percentage, Inverter Temperature, Online, ON Battery or on bypass, Fault Codes, Load & Battery Bar graph, Input Current, Output Current, Battery current.	
	Alarms	Inverter under/over voltage, UPS overload, Battery low, DC high, short circuit, UPS fault, Fan Fault, Transient Surge, input and output fuse.	
	Special Protection Device		
	IP Rating	IP 20	
	Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available	
	Self-Diagnosis	UPS should be capable of carrying out a self-test of the Rectifier/Charger & Inverter Module during start-up	
4	BATTERY BANK		
	BATTERY BACK UP & BATTERY BANK CHARGER	30 mins on System Load	
	Batteries Configuration (VAH)	1872 VAH	
	DC BUS voltage	72 V-96 V	
	Batteries Type	SMF VRLA	
	Battery Make	Exide/Quanta/HBL	
	PHYSICAL		
	Operating Temperature	0-40 degree C	

	Operating Humidity/ Altitude	0-95% RH (non-condensing)/<1500 m.a.s.l	
	Type of Cooling	Forced Air	
	Noise Level	<55 dB dBA at 1 meter distance	
	Remote Monitoring (SNMP): Optional	UPS Network Management Card with suitable software with auto shutdown facility compatible in Linux /Windows Server OS 2003/2008/2012, Windows 7/ Windows 8.1 to monitor all parameters of UPS like Output voltage, Battery Voltages, UPS load, Mains frequency, Dynamic Battery Backup time, UPS Temp, etc.	
5	CERTIFICATIONS OF UPS REQUIRED		
	BIS	Valid BIS Certificate to be enclosed for the quoted Model	
	ISO Certification	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS	
	EMC and IEC Test Certificate conducted from. reputed NABL accredited Laboratory in India of Model quoted to be submitted along with the Bid (Acceptance of Test Report is under jurisdiction of Authority)	IEC61000-3-12:2011, IEC61000-4-2:2008, IEC61000-4-3:2006+A1:2007+A2:2010, IEC61000-4-4:2012, IEC61000-4-5:2014, IEC61000-4-6:2013, IEC61000-4-8:2009, IEC61000-4-11:2004, IEC61000-2-2:2002, IEC- 62040-3 (Second Edition):2011,EN62040-2:2018, EN61000-3-12:2011, EN61000-3-3:2013	
	SUPPORT		
	Web/Windows-based Support	It is mandatory to provide an online centralized call tracking system, like OVSD (Open View Service Desk), for monitoring of logged calls and viewing through web / Windows-based access for at least 2 officials.	

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20. 3 KVA UPS (Sr.No.39)

S. No.	Category	Specification	Compliance (Yes/No)
1	Parameter	Minimum Specifications	
	Capacity	3 KVA, 2400 Watt (1Øinput/ 1Ø output)	
	Topology	True Online Double Conversion UPS Standalone UPS	
	Technology	Microprocessor-based, PWM with IGBT-based rectifier and inverter, DSP Technology	
2		INPUT	
	Input Facility	1Ph + N+PE, 3 wire	
	Input Voltage Range	110~ 300 VAC @50% Load, 140V ~ 295 VAC @100% Load	
	Input Frequency Range	45 ~ 55Hz	
	Input Power Factor	≥0.99	
3		OUTPUT	
	Power Factor	0.8	
	Nominal Output Voltage	220/230/240 VAC	
	Voltage regulation	± 1% static, ± 5% for Dynamic Load	
	Nominal Frequency	50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode	
	Waveform	Sine wave	
	Crest factor	03:01	
	Total harmonic distortion (THDv)	≤ 3% (linear load); ≤5% (nonlinear load)	
	Output Short Circuit Protection	Electronic, trip	
	Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <5 ms	
	Maintenance/Manual Bypass	Automatic & Manual	
	Efficiency	Overall (AC to AC) : ≥ 88%	
	Inverter overload capability	upto 100% infinite	
		>100% ~ 110%: for 10 mins;	
		>110% ~ 130%: for 1 minute;	
		> 130%-150%: for 3 seconds	
	Indications (LED)	Normal, abnormal, fault, bypass, Battery Mode	
	Indications (LCD)	Input Voltage/frequency, Output Voltage, Output frequency, Battery Voltage & Load VA and Percentage, Inverter Temperature, Online, ON Battery or on bypass, Fault Codes, Load & Battery Bar graph, Input Current, Output Current, Battery current.	
	Alarms	Inverter under/over voltage, UPS overload, Battery low, DC high, short circuit, UPS fault, Fan Fault, Transient Surge, input and output fuse.	
	Special Protection Device		

	IP Rating	IP 20	
	Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available	
	Self-Diagnosis	UPS should be capable of carrying out a self-test of the Rectifier/Charger & Inverter Module during start-up	
4	BATTERY BANK		
	BATTERY BACK UP & BATTERY BANK CHARGER	30 mins on System Load	
	Batteries Configuration (VAH)	3024 VAH	
	DC BUS voltage	72 V-96 V	
	Batteries Type	SMF VRLA	
	Battery Make	Exide/Quanta/HBL	
5	PHYSICAL		
	Operating Temperature	0-40 degree C	
	Operating Humidity/Altitude	0-95% RH (non-condensing)/<1500 m.a.s.l	
	Type of Cooling	Forced Air	
	Noise Level	<55 dB dBA at 1 meter distance	
	Remote Monitoring (SNMP): Optional	UPS Network Management Card with suitable software with auto shutdown facility compatible in Linux /Windows Server OS 2003/2008/2012, Windows 7/ Windows 8.1 to monitor all parameters of UPS like Output voltage, Battery Voltages, UPS load, Mains frequency, Dynamic Battery Backup time, UPS Temp, etc.	
6	CERTIFICATIONS OF UPS REQUIRED		
	BIS	Valid BIS Certificate to be enclosed for the quoted Model	
	ISO Certification	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS	
	EMC and IEC Test Certificate conducted from. reputed NABL accredited Laboratory in India of Model quoted to be submitted along with the Bid (Acceptance of Test Report is under jurisdiction of Authority)	IEC61000-3-12:2011, IEC61000-4-2:2008, IEC61000-4-3:2006+A1:2007+A2:2010, IEC61000-4-4:2012, IEC61000-4-5:2014, IEC61000-4-6:2013, IEC61000-4-8:2009, IEC61000-4-11:2004, IEC61000-2-2:2002IEC- 62040-3 (Second Edition):2011,EN62040-2:2018, EN61000-3-12:2011, EN61000-3-3:2013	
	SUPPORT		
	Web/Windows-based Support	It is mandatory to provide an online centralized call tracking system, like OVSD (Open View Service Desk), for monitoring of logged calls viewing through web / Windows-based access for at least 2 Officials.	

21. Network Racks (Sr.No. 26,27,28)

S.No	Specification		Compliance (Yes/No)
1	Basic Frame	Steel folded	
2	Construction	Welded	
3	Top & Bottom Cover	Welded to the frame with Cable entry exit cutouts	
4	Front Door	Lockable Toughened Glass Door OR Lockable Perforated Steel Door	
5	Rear Door	Lockable Steel Door - Plain / Vented / Perforated	
6	Mounting Angle	Formed Steel	
7	Std. Equipment Mounting	DIN Std. 10mm Sq. Slots	
8	Standard Finish	Powder coated	
9	Standard Colour	Grey & Off White OR Black	
10	Standard Mounting	Caster wheels (2 with Brake & 2 without Brake) OR Levelers OR Plinth	
11	Rack Standard	Conforms to DIN 41494 or equivalent standard	
12	Dimensions (W x D)	6U (600*800), 12U (600*1000), 12U (800*1200) and 42U (800*1200)	
13	Static Load	Min 200Kg with casters and 550 Kg with Levelers / Plinth	

22. CAT-6 Cable (Sr.No.29)

	Unshielded Twisted Pair Category 6 LSZH Cable	Compliance (Yes/No)
1	Make:	
2	Model Number:	
3	Features	
4	Supply of Cat 6, 23 AWG Bare Copper Solid Conductor UTP Unshielded LSZH, in accordance to ANSI/TIA-568-C.2 and ISO/IEC 11801 Class E, Flame Rating IEC 60332-1, Halogen Acid IEC 60754 -1, Smoke Density IEC 60134-2, 250 Mhz Bandwidth	
5	Should support 1000BASE-T (1 Gigabit Ethernet) standard.	
6	Category 6 should operate on bandwidth up to 250MHz as per standard.	
7	Construction Characteristics	
8	Conductor should be 23 AWG solid bare copper.	
9	Conductor Insulation material should be HDPE and Insulation.	
10	The conductors should be twisted in pairs with four pairs contained in LSZH jacket.	
11	Four twisted pairs separated by internal X shaped, full separator. Half shall not be accepted.	
12	Sheath material should be LSZH and Flame rating as per IEC-60332-1	
13	Cable outer diameter should be 6.1 mm nominal.	
14	Cable weight should be 12.6Kg/Box.	

15	Cable should be ETL verified.	
16	Cable should be RoHS Compliant	
17	Electrical Properties	
18	Conductor Resistance: $\leq 9.38\Omega/100m$	
19	Mutual Capacitance: $< 5.6nF/100m$	
20	Resistance Unbalance: 5% Max	
21	Delay Skew: $< 50nS$	
22	Capacitance unbalance: 330pF/100m	
23	NVP: 69%, Dielectric Strength should be 1kv DC.	
24	Insertion Loss should be max. 35.9db/100m	
25	Other Characteristics	
26	Each meter printed with sequential Length Counter	
27	Temperature Range -20° to $+70^{\circ}C$	
28	Contact Resistance : 100 MILLIOHMS Max	
29	Insulation Resistance : 1000 MEGOHMS Min @ 500V DC	
30	Housing Material : Zinc Alloy	
31	RJ45 Jack Life : 750 Times Min	
32	IDC Life : 200 Times Min	
33	Voltage : 150V AC max	

23. 12/24C Fibre Optic Cable (Sr.No.30,31)

S. No.	Specification	Compliance (Yes/No)
1	Fiber Optic Cable Single Mode 12/24 Core Outdoor/Indoor Use	
	Make	
	Model Number	
2	General Features	
	Fiber cable should be Single Mode. Suitable for Indoor/Outdoor (Duct) Local Area Network Systems.	
	Should have excellent Water Proof Layer & Good Moisture Resistance.	
	Central Loose tube with jelly compound.	
	Glass yarns in between Steel tape & loose tube.	
	Fiber cable should support standard ITU-T: REC G.652D and Telecordia: GR-20 Core.	
	Fiber cable jacket material should be HDPE.	
3	Mechanical Characteristics	
	12 core Fiber cable outer diameter should be 9 mm $\pm$ 0.5.	
	Thickness of the Jacket should be 1.8mm $\pm$ 0.2.	
	Should have 3000N/100mm Crush Load (IEC 60794-1-2-E3).	
	Bend Radius (IEC 60794-1-2-E11 & E6) should be Short Term 20D in mm and Long Term 10D in mm.	

	Should have 2000N short term pulling tension (IEC 60794-1-2-E1).	
	Proof Test - The entire fiber length is subjected to a tensile stress of 100Kpsi (0.7Gpa). This is equivalent to 1% strain.	
4	Geometrical Properties	
	Mode field diameter 9.2um ±0.5	
	Clad Diameter 125um ±1.0	
	Dispersion At 1285 - 1330nm should be ≤3.5 ps/nm.km	
	Dispersion At 1550nm should be ≤18.0 ps/nm.km	
5	Other Characteristics	
	Maximum Attenuation at 1310nm should be ≤0.36 dB/km.	
	Maximum Attenuation at 1550nm should be ≤0.22 dB/km.	
	Cabled Cutoff Wavelength should be ≤1260 nm.	
6	Environmental Characteristics	
	Operating Temperature should be -20 deg C to +70 deg C.	
	Storage Temperature should be -40 deg C to +70 deg C.	
	All Passive cable and component from Same OEM. OEM must have OEM owned 4 different service centres in India catering to these products service and support. OEM must have a local office in this state. Proof of all this to be attached with the bid.	

24. 6/12 Port LIU (Sr.No.33,34)

S. No.	Specification	Compliance (Yes/No)
1	Make	
2	Model Number	
3	LIU Features	
	Fiber optic LIU should include the LIU Box itself, Adapter Panel, Adapters, and Pigtail as per the requirement.	
	Have sufficient slots for accommodating 12 LC simplex adapters / 6 LC duplex adapters.	
	It should be 1U 19-inch rack mountable.	
	Aluminum and cold steel base material for light mounting.	
	Should have Splice Tray & Cable Spool provision inside LIU.	
	Accessory kit consists of cable ties, mounting ear screw, and spiral wrap tube.	
	Removable front and rear covers for better access to the interior of LIU.	
	Should have a rubber fiber slotted bracket built in, a splice shelf/tray to protect the fibers.	
	Should be capable of storing up to 3 meters of 900 µm tight-buffered fiber per adapter.	
4	Adapter Plate Features	
	Plate made from cold-rolled steel materials.	
	Suitable for LC adapters.	
5	Adapter Features	

	LC adapters should have a compact design & high precision, which perform well under various circumstances & maintain good plug retention strength.	
	Should have Telcordia, TIA/EIA, and IEC compliance.	
	The sleeves are basically recommended zirconia type.	
	Insertion Loss should be $\leq 0.20\text{dB}$ for Zirconia Sleeve	
	Sleeve/Ferrule Withdrawal Force should be $1.0\text{N} \sim 2.5\text{N}$.	
6	Fiber Optic Simplex Pigtail LC with 1 Meter Features	
	Fiber optic pigtail with one core fiber cable terminated with an LC connector at one end and open at the other end.	
	The terminated connectors in assemblies are designed to and are compatible with industry standards (IEC 61754 TIA/EIA).	
	It should have good geometrical characteristics of apex offset & radius of curvature & fiber height.	
	Should be 100% inspected for optical characteristics & fiber end face finish.	
	Pigtail length requires – 1 meter Simplex.	
7	Pigtail Performance Characteristics	
	Should have a single-mode G652D optic fiber.	
	Typical Insertion Loss should be $\leq 0.2\text{dB}$, Max. 0.3dB .	
8	Pigtail Mechanical Characteristics.	
	Should have a Ceramic Connector Ferrule.	
	Repeatability should be $\leq 0.2\text{dB}$, 200 times mating cycles.	
	Working Temperature should be 0 degrees Celsius to + 70 degrees Celsius.	
	All passive cables and components from the same OEM. OEM must have owned 4 different service centers in India, catering to these products' service and support. OEM must have a local office in this state. Proof of all this is to be attached to the bid.	

25. Firewall (Sr.No.51)

Sl.No.	Technical Specification	Compliance (Yes/No)
1. General		
a.	The appliance-based security platform should be in HA mode, Active-active or Active-Passive, providing firewall, AVC, Anti malware, Anti-Bot, Anti-Spyware, URL, and IPS functionality in the same appliance from day one.	
b.	The proposed appliance shall have a minimum 128 GB SSD drive and can be extendable up to 500 GB SSD for future requirements.	

c.	Hardware Appliance-based firewall with a multicore CPU architecture, a hardened 64-bit OS, and capable of providing URL/Web Protection, Application Control, IPS, DOS/DDOS protection, SSL / TLS Inspection & zero-day protection in a single appliance.	
d.	Firewall should have a redundant power supply for future requirements.	
e.	The appliance should have a minimum 16 x 10/100/1000 Base T Ethernet Port	
f.	The appliance should have a minimum of 3 x 10G SFP+ ports, which can be downgradable to 5G/2.5G/1G interface.	
g.	The appliance should have a minimum of 1 x management port, 1 console, and 2 x USB 3.0.	
2. Sizing Parameters:		
a.	Should have 8 Gbps or more firewall inspection throughput, 6 Gbps or more application inspection throughput, and 6 Gbps or more Threat prevention throughput with enabling Application-ID/AVC, NGIPS, Anti-Virus, Anti-Spyware, Anti-Malware, Anti-Bot, and zero-day attacks.	
b.	Firewall should have at least 5 Gbps of IPsec VPN throughput.	
c.	Firewall should support at least 50K new connections per second or more, and shall support at least 2 million concurrent sessions/connections with all application control enabled.	
d.	The proposed solution should support a minimum of 6 Gbps IPS throughput	
e.	The proposed solution should support a minimum of 1800 Mbps of TLS/SSL inspection and decryption throughput	
f.	The proposed solution should support a minimum 1M Deep packet inspection connection	
g.	The proposed solution should support a minimum of 150K SSL Deep packet inspection connections	
h.	No of VLANs – 200	
i.	Minimum IPSec VPN Site-to-site peers - 2000	
3. NG Firewall Features:		
a.	Should support manual NAT, Auto-NAT, Static NAT, Dynamic NAT, and Dynamic PAT.	
b.	The firewall has the capability of identifying the network traffic of network hosts from both virtual and physical machines and their activities.	
c.	Should be capable of detecting and blocking IPv4 and IPv6 attacks at the DNS level with DNS security.	
d.	The solution should support the capability to detect threats emerging from inside the network.	
e.	The solution must provide an IP reputation feed that comprises several regularly updated collections of poor-reputation IP addresses determined by the proposed security vendor.	
f.	The detection engine should support the capability of detecting and preventing a wide variety of threats (e.g., network probes/reconnaissance, VoIP attacks, buffer overflows, P2P attacks, etc.).	

g.	The proposed firewall shall perform application-based signature matching beyond the traditional hash-based signatures for AVC.	
h.	The proposed firewall shall be able to restrict application traffic to its default ports to prevent evasive applications from running on non-standard ports.	
i.	The proposed firewall shall be able to protect the user from malicious content upload or download by application/protocol by enforcing total threat protection for known and unknown malicious content, such as viruses, malware, or a bad URL.	
j.	Support NAT, PAT & Policy-based NAT/PAT, Mapped IP (MIP) & Virtual IP(VIP).	
k.	IPSec and SSL VPN Tunnelling	
4	Data encryption support DES, 3DES, AES 128-, 256-bit	
5	Support stateful HA in Active-Active or Active-Passive Mode	
6	Tunnelling functionality Nat66 (IPv6-to-IPv6) & Nat 64 (IPv6-to-IPv4).	
7	IP address assignment features PPPoE, DHCP	
8	The proposed firewall should support Bi-directional raw TCP inspection that scans raw TCP streams on any port.	
9	The Firewall should support deep packet SSL to decrypt HTTPS traffic for scanning (IPS, Gateway Antivirus, Content Filtering, Application control) transparently for future requirements and then re-encrypt and send to the destination if no threat is found.	
10	Firewall must support Cloud-based / On Prem Advanced Threat Protection solution from day one, and both the solutions should be from the same OEM.	
11	The firewall should have the ability to prevent potentially malicious files from entering the network, and those files should be sent to the sandbox for analysis to be held at the gateway until a verdict is determined.	
12	IPv6 features Syn Cookie, Syn-proxy DoS attack detection, SIP, RTSP, ALGs, BGP4, DHCPv6 Relay, and GRE IPv4 to IPv6 tunnelling.	
13	System management and configuration using web GUI/client-based (without any limitation in the number of clients), Command Line interface (console/SSH).	
14	Supporting Protocols: FTP, SMTP, HTTP, HTTPS, SNMP, UDP, ICMP, RPC, DNS, DHCP, ARP, TCP, POP3, IGMP, PIM.	
15	Authentication protocols RADIUS, LDAP methods	
16	Routing protocols: Static, RIP, OSPF, OSPFv3, and BGP, BGPv6.	
17	content filtering, Java & ActiveX blocking	
18	Proposed FW shall also support:	
a.	DoS & DDoS prevention	
b.	TCP reassembles the fragmented packet protection	
c.	Brute Force attack mitigation	
d.	SYN cookie protection	
e.	Zone / Interface-based IP spoofing	
f.	Malformed packet protection	
g.	Stateful packet inspection	
h.	Detailed logging and packet capture	

19	Should have a facility to block the URLs based on categories, granular control like Allow/Block, Bandwidth Management, Passphrase override, and Notify. The URL database should have at least 15-20 million sites and 80 + categories	
20	Should support deep packet SSL to decrypt HTTPS traffic for scanning (IPS, Gateway Antivirus, Content Filtering, Application control) transparently for future requirements, and then re-encrypt and send to the destination if no threat is found.	
21	The Appliance OEM must have its own threat intelligence analysis centre and should also use the global footprint of security deployments for more comprehensive network protection	
22	The proposed system should be accessed from a cloud-based management system to manage the firewall with multi-factor authentication.	
23	The proposed system should support a minimum of 7 days of comprehensive reporting through its cloud-based analytics platform, enabling detailed firewall activity reports. Access to the reporting system must be secured with multi-factor authentication (MFA) for enhanced security. Also have the option to extend the minimum days of reporting to 30 days / 90 days / 365 days with additional licenses.	
24	Proposed Appliance should support SD WAN features without adding any additional hardware components, & Necessary licenses, if required, need to be provisioned from day 1.	
25	The Firewall Solution must have the option of on-prem / Cloud-based dedicated centralized analytics, logging, reporting, & Management from the same OEM for future requirements. The solution should support customized reporting with the capability to create scheduled reports. The reporting platform must be accessible via a web-based interface / client-based GUI (without any limitation on the number of clients).	
26	Should detect and prevent hidden attacks that leverage cryptography, block encrypted malware downloads, cease the spread of infections, and thwart command and control (C&C) communications and data exfiltration. Should protect against DDoS/DoS attacks using both Layer 3 SYN proxy and Layer 2 SYN blacklisting technologies. It protects against DOS/DDoS through UDP/ICMP flood protection and connection rate limiting	
27	The proposed firewall should support Bi-directional raw TCP inspection that scans raw TCP streams on any port and bi-directionally to detect and prevent both inbound and outbound threats. Solution should have a single-pass DPI architecture that simultaneously scans for malware, intrusions, and application identification, and ensures that all threat information is correlated in a single architecture.	
28	Should be capable of detecting and blocking IPv4 and IPv6 attacks, including capabilities like DNS security/equivalent.	
29	The firewall should have the ability to prevent potentially malicious files from entering the network, and those files should be sent to the sandbox for analysis to be held at the gateway until a verdict is determined.	

30	IPv6 features Syn Cookie, Syn-proxy DoS attack detection, SIP, RTSP, ALGs, BGP4, DHCPv6 Relay, and GRE IPv4 to IPv6 tunnelling.	
31	Solution shall support cloud-based Sandboxing technology for preventing zero-day threats, with detecting 99.99% of previously unknown threats. The latest published report must be available to the public.	
32	The Firewall should support both the analysis of a broad range of file types, either individually or as a group, including executable programs (PE), DLL, PDFs, MS Office documents, archives, JAR, and APK, plus multiple operating systems, including Windows, Android, Mac OS X, and multi-browser environments. Should have the ability to prevent potentially malicious files from entering the network, and those files should be sent to the sandbox for analysis to be held at the gateway until a verdict is determined.	
33	Should have the ability to prevent potentially malicious files from entering the network and those files sent to the sandbox for analysis to be held at the gateway until a verdict is determined.	
34	Should have continuously updated a database of tens of millions of threat signatures residing in the sandbox servers and referenced to augment the capabilities of the onboard signature database, providing deep packet inspection with extensive coverage of threats. Should support min 20K DPI signatures, 70 million Cloud AV signatures, and 3500+ Application Signatures from day 1.	
35	License	
a.	Warranty - 5 years comprehensive onsite warranty, including 24x7 telephone, email, and web-based technical support, and should be extended to another 2 years	
b.	Manufacturer's warranty should be mentioned minimum 03 (Three) years warranty including all services like Gateway Antivirus, Next Generation Intrusion Prevention System (IPS), Zero Day Protection / Advance Malware protection, Web Security Essentials / URL Filtering, Reputation based URL Filter, Application Filtering, Anti-Spam, Anti-Spyware, Botnet Protection, Geo-IP Filtering, Advance DNS Security and Cloud Management license with 24x7 OEM Support.	
Other Terms & Conditions		
1	The product shall comply with a minimum 30% and Above Local content or higher.	
2	The proposed firewall should have scored a minimum 97% in Exploit Block rate and a minimum 93% Security Effectiveness in the last NSS Lab report for NGFW (2019)	
3	The Firewall OEM must be EAL4+/ICSA Lab certified for Network Firewall, Anti-virus, and ATD, and should have a detection rate of 99% or higher.	
4	The proposed appliance should come from the firewall appliance family, which has EAL4+/ICSA labs certification/NSS/NDP/ Indian Standard, IC3S/Common Criteria, and TEC certification.	
5	OEM should have a TAC and R&D centre in India with a toll-free number.	

26. SD-WAN (Sr.No.22 ,53)

Field Office SD-WAN Specification		Compliance Yes/NO
Sl. No.	Specification	
1	The device shall be able to connect in a true SD-WAN architecture and shall meet requirements as per the specification mentioned under the functional requirement	
2	Device shall support QoS on physical and sub-interface, NAT, and DHCP	
3	Device shall support Radius, LDAP and/or TACACS+, SSHv2, SNMPv3 and/or Telemetry, Syslog, NTP	
4	The device shall support deep packet inspection to identify applications and shall be able to apply QoS based on application	
5	The device should be rack-mountable at the site offices	
6	Device shall be a hardened appliance from OEM and shall have the capability to boot from OEM-provided image only and not from non-standard/unauthorized software	
7	The device shall have a hardening procedure and disable unwanted services	
8	The device shall have a minimum of 4 X 1G RJ-45 ports with the flexibility of any LAN/WAN combination. The device should have a console port	
9	The device should be able to support high availability by directly connecting one WAN link on each device and be able to do per-packet or per-session load balancing.	
10	The device should have a minimum of 8GB of RAM	
11	The device shall meet the requirements as per the specification mentioned under the General section requirement	
12	The device shall support a minimum of 8 VRF segments for end-to-end segmentation of traffic	
13	The device should have a minimum of 120GB of SSD	
14	The device shall support ILL, MPLS, Broadband, and LTE with an external converter-based connection.	
15	The device should support 50 Mbps IPSec-encrypted traffic in each direction from day-1 and be scalable to 500Mbps by upgrading the license	
16	Hardware and software should both be from the same OEM	
17	The device should support a minimum of 5000 SD-WAN tunnels	

27. Network Router (Sr.No.52)

S. No	Section	Details	Compliance (Yes/No)
1	Scope	Router behind SD-WAN for LAN routing, segmentation, and secure communication	
2	Architecture	LAN/Core deployment, VLAN/VRF support, SD-WAN compatible	

3	Hardware	4xGE LAN, 2xSFP, Rack mount, 8GB RAM, Redundant PSU	
4	Performance	>=1 Gbps throughput, 200k sessions, low latency	
5	Routing	Static, OSPF, BGP, Inter-VLAN, IPv4/IPv6	
6	Segmentation	VLAN 802.1Q, VRF, and DHCP support	
7	Security	ACL, NAT, Firewall, SSH/HTTPS	
8	QoS	Traffic prioritization, shaping, DSCP	
9	High Availability	VRRP/HSRP, link redundancy	
10	Management	GUI, CLI, SNMP, Syslog, RBAC	
11	SD-WAN Integration	Routing exchange, overlay handling	
12	Compliance	IEEE, IPv6, CE/FCC/RoHS	
13	Warranty	3 Years, 24x7 support	

28. Videowall & Videowall Controller with GPU cards **(Sr.No.47,48)**

Functional & Technical Requirements for Video Wall		
Sr.No		
1	Overview Display	The displays shall utilize direct LED lit LCD panel technology with 100,000 Hours Life time of LED, with a matrix of 3(C) and 3(R)
2		All panels shall of 55" diagonal size with Screen gap <0.88mm
3	Native Resolution per Panel	In order to achieve acceptable image quality for both video and graphics, and to avoid pixel loss, the LCD panel must be of native resolution of 1920 x 1080.
4	Aspect Ratio	16:9,
5	Backlight	Direct LED with 500 Nits of brightness and 100,000 Hours lifetime of LED minimum
6	Brightness	The "Typical" Luminance specification must be 500 Cd/m2 (nits) or higher with a "Typical" Static Contrast Ratio of 1500:1 or greater in normal operation.
7	Viewing angle	Each display shall utilize a high contrast screen (anti-glare) with sizes of 55" diagonal. The screen shall have a H 178°/V 178° viewing angle or greater with a screen "haze" value of 28% or greater for wide viewing angles for operators.
	Connectivity	2 DP , 2 HDMI , 2 USB , 2 LAN
8	HDCP	Yes
9	Ethernet ports	2
10	Redundant Power supply	Inbuilt Dual Redundant Power supply for Fail safe Operations.
11	Service	Front Access only
12	Redundant wall	Complete wall should be redundant and no downtime to be there in case of power supply failure
13	Remote Redundancy	Option should also be available to give Remote Rack based Redundancy to ensure 24x7 Fails safe operations
14	Power consumption (Max)	Less than 190 watt in Full Brightness Mode

15	Operating Temperature	system shall be operate properly under 0°C to 40°C Temperature
16	Storage Temperature	-20°C to +60°C
17	Heat Dissipation (Max)	Less than 650 BTU/Hr in Full Brightness Mode
19	Humidity	upto 80% (non-condensing)
20	Size (L x H x D)	Minimum 1211 x 682 x 91.1 mm
21	Automatic calibration	Each LCD panel shall be equipped with two (2) built-in sensors, permitting the brightness level of each LED Backlight to be controlled and adjusted automatically.
22	Certifications	BIS , CE,CB, UL , FCC , ISO 9000 , ISO 14000 & ISO 27000 to be submitted along with bid
23	Class 1/ Class 2 Suppliers	OEM should be Class 1/ Class 2 are allowed to particpate who have Local content & value addition is being done at there respective factory to be checked if required
24	Modules	The Display Modules, Display Mount, Display Controller & Software should be from a single OEM
25	Brightness Uniformity	98% .Proof of same to be submitted
26	Bit depth	3 x 10 Bits
27	Inputs	2 DP , 2 HDMI , 1 DP Out & HDCP
28	Cooling	Fanless
29	Calibration	Automatic color calibration in real time
30	Input Ports	2 x DP1.2 (4K@60Hz), 2 x HDMI 2.0 (4K @60 Hz.)
31	Output ports	1 x DP1.2 (support UHD @ 60 Hz)
32	Communication Ports	2 x RJ-45 (Ethernet Ports) with Loop-in feature
33	Panel Design	Fanless & Modular (External Power & I/O Board) for faster replacement of faulty part
34	Mounting system	Complete front acessible mounting system must have feature of Auto alignment in X-Y-Z direction using gravity/hydraulics to ensure minimum efforts & fast replacement of display or faulty components.
35	Display Control	Display panels must have Integrated Webserver to manage the display from remote using any web browser of any system in network or via dedicated controller.
36	Videowall Management	Dedicated Controller for managing Videowall Display over IP network using any web-browser of any system in the network. (without Installaing any application on system)
37	Key Feature required	Temp. sensors, Brightness and color sensors, Wake on LAN, ON/Off time scheduling, Source sensing & auto switch feature (Failover) in case of primary signal faisure, IP Controlled with dedicated Controller for remote monitoring and management, Auto colour and brightness adjustment
	Controlware specifications	
38	Features	

		Any operator can access any PC or multiple from their desk simultaneously and can work on any or multiple PC using single Keyboard and Mouse
		Supports output up to 3840 x 2160 resolution with 60fps per port
		Supports H.265, H.264, MPEG2/ 4, MxPEG, MJPEG, V2D, H.263, RDP,8 Inputs
		Supports Multicasting Protocol IGMP V1, V2, V3
39	Output	Need to Connect minimum 9 Displays & same should be driven through controlware
31	MTBF	More than 350000 Hours
32	Image processing	Network-based content synchronization between multiple display nodes driving a single wall, Frame lock between multiple display nodes
		6 inputs to be connected
		Output nodes can display high density content
33	Network	1000 MB network with active failover
		Supports protocol - DHCP, TCP/IP, Supports only Dynamic IP scheme
34	Security	Product should be full secure with end-to-end encryption from Source to Video wall
		Product should be based on RTSPS only to secure streaming over the network
		All communication between devices should be encrypted with TLS to protect from cyber attack
		Auto-discovery allows modules to announce themselves to the central management service across network segments (VLANs) at a site and across different sites. Industry standard protocols like DHCP, DNS and NTP are deployed to achieve minimal maintenance of the components. All sources for operator desk and wall are only configured once and managed by the central service.
		Video wall GUI should be accessible using only FQDN directly
		All connected devices must be signed with certificates to avoid any tampering or security threat
		All system settings and configured parameters can be securely backed up and restored with password encrypted backups. The configuration of the system is done via a web-based administration tool, which is operated by means of secure https-based communication
35	Operator Collaboration Solution	Proposed solution enables the operator to be more efficient by offering an integrated view, control and interaction
		All video wall operations and configuration shall be operable from web-browser only no native application is required

		No more switching between screens and computers to consult specific information: everything is available within the same pixel space. The operator can simply call the needed information to the screen in front of him/her, enabling swift decision-making
36	AD Integration	Proposed solution should support LDAPS integration to fetch customer's Active Directory so that any operator can login the application using their own credentials "Follow me" function provides operator's personalized workspace upon login
37	HDD	Complete solution should be equipped with SSD Hard disk (SATA Hard Disk is not acceptable)
38	Operating Range	Temperature: 0-40 degree Centigrade Humidity - upto 80% non-condensing
39	LED indicator	LED indicators for Power, HDD, Network, Identification
40	Specify the proposed Make and Model	Complete end-to-end video wall and operator collaboration solution is from single OEM only to avoid any compatibility issue
41	Certifications	CE, CB, UL, FCC Class B BIS, KC, CU-EAC, DoC, RCM, TAA
	Software Spec	
42	Software	The software should be able to preconfigure various display layouts and access them at any time with a simple drag and drop operation
43	Sharing and Collaboration	Any content of main console NOC room can be shared in WAR/ Meeting/ Conference Room or vice-versa over the IP only
44	Software	Any workstation in the NOC Room can be displayed in any size and anywhere on video wall over the IP only
45	Screen Scrapping	Live view (minimum atleast 1FPS) of video wall can be seen anywhere over the network without the need of any application over the web-browser
46	Software	Capability to show one or more input sources (workstation or direct) on the entire or part of the video wall or on single cube.
47	Sharing between Operators	Any operator can share there screen with other operator in the same room in real-time for fast decision making
48	Software	The software should be able to create layouts and launch them as and when desired
49	Software	It should be possible to create layouts comprising of screen scrapped content of Workstations, DVI inputs, Web sources, URLs configured as sources. Layouts can be pre-configured or changed in real time Can be pre-configured or changed in real time

RAILTEL

50	Software	The control of the wall shall be possible via a network. All cubes shall have their own IP address, and the control software can access all of them at the same time. The available features shall be: On/Off, Brightness and Colour, Input control Separate hardware server for monitoring features Wall or Panel On/Off, Brightness and Colour, Input control, health monitoring
51	Modules	Complete end-to-end video wall and operator collaboration solution is from single OEM only to avoid any compatibility issue

29.10KVA Online UPS with 30Min Backup in HA (Sr.No.65)

Sr.No.	Parameter	Minimum Specifications	Compliance Yes/No
1	Capacity	10 KVA, 8000 Watt (1Øinput/ 1Ø output)	
2	Topology	True Online Double Conversion UPS Standalone UPS	
3	Technology	Microprocessor based, PWM with IGBT based rectifier and inverter, DSP Technology	
INPUT			
4	Input Facility	1Ph + N+PE, 3 wire	
5	Input Voltage Range	110~ 300 VAC @50% Load, 140V ~ 295 VAC @100% Load	
6	Input Frequency Range	45 ~ 55Hz	
7	Input Power Factor	≥0.99	
OUTPUT			
8	Power Factor	0.8	
9	Nominal Output Voltage	220/230/240 VAC	
10	Voltage regulation	± 1% static, ± 5% for Dynamic Load	
11	Nominal Frequency	50/60 Hz ± 1~10% Sync Mode (Configurable), 50/60 Hz ±1 Hz Battery Mode	
12	Waveform	Sine wave	
13	Crest factor	03:01	
14	Total harmonic distortion (THDv)	≤ 3% (linear load); ≤5% (nonlinear load)	
15	Output Short Circuit Protection	Electronic, trip	
16	Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <5 ms	
17	Maintenance/Manual Bypass	Automatic & Manual	
18	Efficiency	Overall (AC to AC) : ≥ 88%	

19	Inverter overload capability	upto 100% infinite	
20		>100% ~ 110%: for 10 mins;	
21		>110% ~ 130%: for 1 minute;	
22		> 130%-150%: for 3 seconds	
23	Indications (LED)	Normal , abnormal, fault, bypass, Battery Mode	
24	Indications (LCD)	Input Voltage/frequency , Output Voltage , Output frequency , Battery Voltage & Load VA and Percentage, Inverter Temperature, On line, ON Battery or on bypass, Fault Codes, Load & Battery Bar graph, Input Current, Output Current, Battery current.	
25	Alarms	Inverter under/over voltage, UPS over load, Battery low, DC high, Short circuit, UPS fault, Fan Fault, Transient Surge, input and output fuse.	
26	Special Protection Device		
27	IP Rating	IP 20	
28	Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available	
29	Self Diagnosis	UPS should be capable to carry out self test of Rectifier/Charger & Inverter Module during start up	
BATTERY BANK			
30	BATTERY BACK UP & BATTERY BANK CHARGER	30 mins on System Load	
31	Batteries Configuration (VAH)	10800 VAH	
32	DC BUS voltage	144V-240 V	
33	Batteries Type	SMF VRLA	
34	Battery Make	Exide/Quanta/HBL	
PHYSICAL			
35	Operating Temperature	0-40 degree C	
36	Operating Humidity/Altitude	0-95% RH (non-condensing)/<1500 m.a.s.l	
37	Type of Cooling	Forced Air	
38	Noise Level	<55 db dBA at 1 meter distance	
39	Remote Monitoring (SNMP): Optional	UPS Network Management Card with suitable software with auto shutdown facility compatible in Linux /Windows Server OS 2003/2008/2012, Windows 7/Windows 8.1 to monitor all parameters of UPS like Output voltage, Battery Voltages, UPS load , Mains frequency, Dynamic Battery Backup time, UPS Temp, Etc	
CERTIFICATIONS OF UPS REQUIRED			
40	BIS	Valid BIS Certificate to be enclosed for the quoted Model	

41	ISO Certification	ISO 9001:2018, ISO 14001: 2018, ISO 45001:2018, ROHS	
42	EMC and IEC Test Certificate conducted from. reputed NABL accredited Laboratory in India fo Model quoted to be submitted along with the Bid (Accptenace of Test Report is under jurisdiction of Authority)	IEC61000-3-12:2011, IEC61000-4-2:2008, IEC61000-4-3:2006+A1:2007+A2:2010, IEC61000-4-4:2012, IEC61000-4-5:2014, IEC61000-4-6:2013, IEC61000-4-8:2009, IEC61000-4-11:2004, IEC61000-2-2:2002IEC-62040-3 (Second Edition):2011,EN62040-2:2018, EN61000-3-12:2011, EN61000-3-3:2013	
43	SUPPORT		
44	Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 Bank Officials	

Additional Accessories (Sr.No.24,25,29,35,36,40,41,42,43,44,61,62,63,66,67,68,69,70)

OFC Patch Cord	Bidder to suggest. Quote Reputed Make
Factory Crimped 2MTRS Cat-7 STPP Patch Cords	Bidder to suggest. Quote Reputed Make
PVC Conduits/DWC Pipes	Bidder to suggest. Quote Reputed Make
Suspension unit for Camera	Bidder to suggest. Quote Reputed Make
5Mtrs HDMI Cable for Workstation	Bidder to suggest. Quote Reputed Make
Surge Protections for electrical protections	Bidder to suggest. Quote Reputed Make
3CX1.5Sqmm, Multistranded ,Armoured ,CU, Twisted Power Cables	Bidder to suggest. Quote Reputed Make
Chemical earthing with Earthing cables	Bidder to suggest. Quote Reputed Make
Electrical Accessories including MCB, Power Distribution box	Bidder to suggest. Quote Reputed Make
Air Condition with controller for 24 Hours operation	Bidder to suggest. Quote Reputed Make
Operator desk	Bidder to suggest. Quote Reputed Make
Biometric Access control with EML Lock and Power Supply, Exit Switch (UPS Room, Viewing Center, DC)	Bidder to suggest. Quote Reputed Make
Fire Extinguisher	Bidder to suggest. Quote Reputed Make
Fire Alarm & suppression System	Bidder to suggest. Quote Reputed Make
Rodent Repellent System	Bidder to suggest. Quote Reputed Make
Civil work for Command-and-Control Centre with data centre.	Bidder to suggest.

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RAILTEL