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RAILTEL

**A Navratna CPSE
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Southern Region Office

6A, 6th Floor, Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Corporate Office

Plate-A, 6th Floor, Office Tower2,
NBCC Building, East Kidwai Nagar, New Delhi-110023

www.railtel.in

Invitation for Expression of Interest

For

“Supply Installation and Commissioning for Smart Video Surveillance, Artificial Intelligence (AI)/Machine Learning (ML) based Video Analytics (VA), Predictive Analysis (PA), Incident Management System and IoT Technologies along with Integrated Command Control Centre (ICCC) and 5 Years Operations & Maintenance (O&M) Support for RailTel’s End Customer”

For Empanelled Business Associates with RailTel before Floating of this EoI.

EoI No.: RailTel/SR/SC/Mktg/2025-26/EoI/027 Dt. 08/10/2025

EoI NOTICE

RailTel Corporation of India Ltd.
6A, 6th Floor, Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station, Begumpet, Hyderabad – 500016

EXPRESSION OF INTEREST

EoI No.: RailTel/SR/SC/Mktg/2025-26/EoI/027 Dt. 08/10/2025

RailTel Corporation of India Ltd., (hereafter referred to as RailTel) invites responses from RailTel Empanelled Partner/System Integrator for exclusive TEAMING ARRANGEMENT for Engagement of an Agency for “Supply Installation and Commissioning for Smart Video Surveillance, Artificial Intelligence (AI)/Machine Learning (ML) based Video Analytics (VA), Predictive Analysis (PA), Incident Management System and IoT Technologies along with Integrated Command Control Centre (ICCC) and 5 Years Operations & Maintenance (O&M) Support for RailTel’s End Customer”

The details of EoI are as under:

1	Date of EoI Floating	08/10/25
2	Last Date of Submission of Bid against EoI	13/10/25 by 12:00 Hours
3	Opening of Bids submitted against EoI	13/10/25 at 12:15 Hours
4	Number of packets	Two Stage (Two Packet System)
5	Estimated EoI Value	Rs. 30,40,53,028.02 (Incl. GST)
6	Portal for EoI Submission	https://railtel.enivida.com
7	EoI EMD	Token EMD of Rs. 30,41,000.00/- to be submitted along with the EoI in form of BG or in the form of Insurance Surety Bond or Payment through NEFT/RTGS. Advice of the Bank Guarantee (via SFMS IFN760COV) to be sent to advising bank (RailTel’s Bank) through SFMS by the issuing Bank (Applicant’s Bank), RailTel Corporation of India Limited Account No: 327301010373007, IFSC Code: UBIN0805050, Bank Name: Union Bank of India. Branch address: Union Bank of India, RP Road Branch, Bungalow no 109, New No 1-7-252 to 254 Oxford Street, SD Road, Near Park Lane Center Secunderabad – 500003 No exceptions to startups and MSMEs for EMD.

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

Bidders need to share copy in case of EMD in form of BG & in case of online payment bidder to share transfer details like UTR No. date and Bank along with the proposal.

Eligible bidders 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. Nirav Vaghela, Position: Sr. DGM/Mktg/SR
Email: niravvaghela@railtelindia.com Contact: 9701611844

Level 2: Contact: Sh. P. Vikrant Kumar, Position: Jt. GM/Mktg/SR
Email: vikrantk@railtelindia.com Contact: 9003144205

SPECIAL CONDITIONS OF EOI

1. The EoI response is invited from RailTel's Empanelled Partners before floating of this EoI with RailTel only.
2. Partners are required to submit soft copy of response through Online on RailTel's e-nivida portal at <https://railtel.enivida.com> duly signed by Authorized Signatories with Company seal and stamp.
3. All the documents must be submitted with proper indexing and page no.
4. If, the interested partner is OEM/Distributor of OEM/Direct Partner of OEM, it should submit the supporting document for the same.
5. Consortium not allowed.
6. Transfer and Sub-letting: The Partner/consortium 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.
7. Partner must agree to comply with all scope of work and terms and conditions including special terms and conditions, SLA and OEM technical & Financial documentation including technical certificates/others as per EoI
8. Selected partner will be responsible for facilitating RailTel to get/collect/prepare all the documentations related to end customer requirement/queries.
9. Affidavit as per Annexure 4, Pre – Contract Integrity Pact, Power of Attorney and EMD Bank Guarantee should be submitted in original and hard copy within 5 working days of submission of the EoI response at RailTel Regional Office (Southern Region, Hyderabad).

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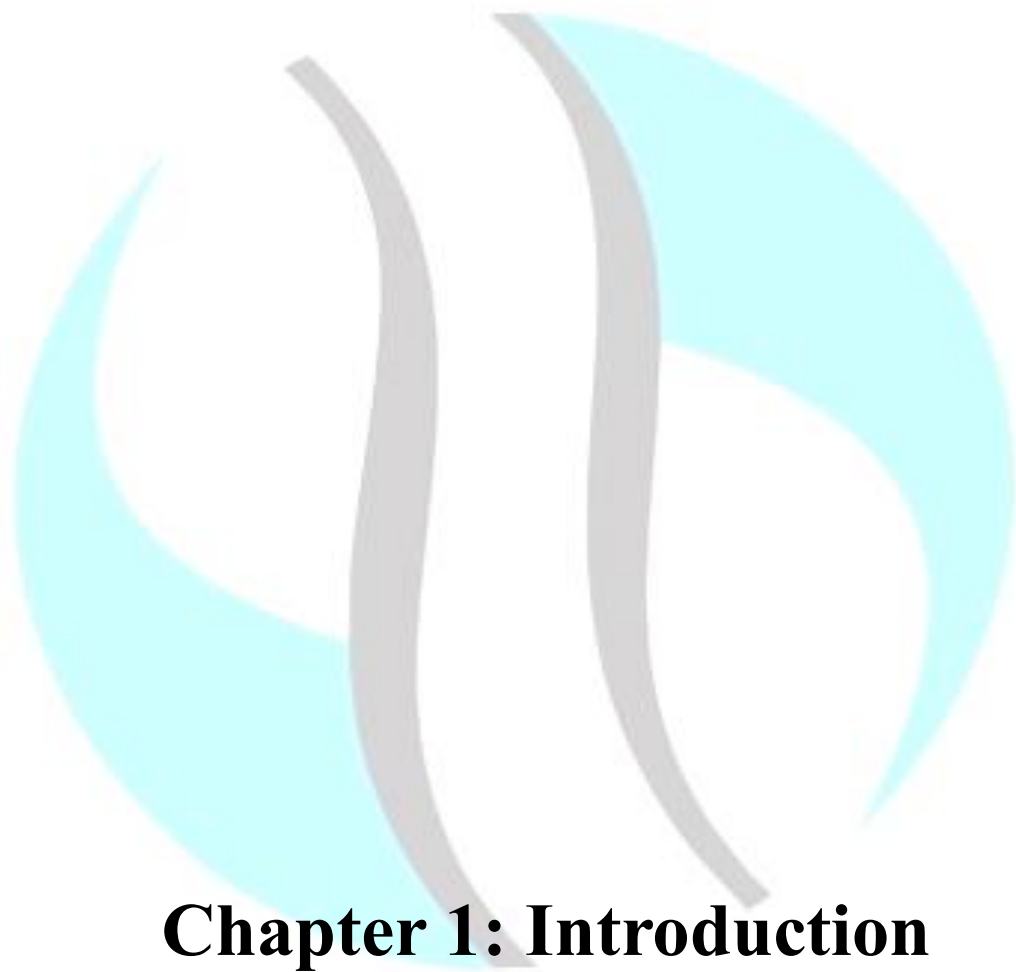
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Chapter 1: Introduction

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1.1 About RailTel

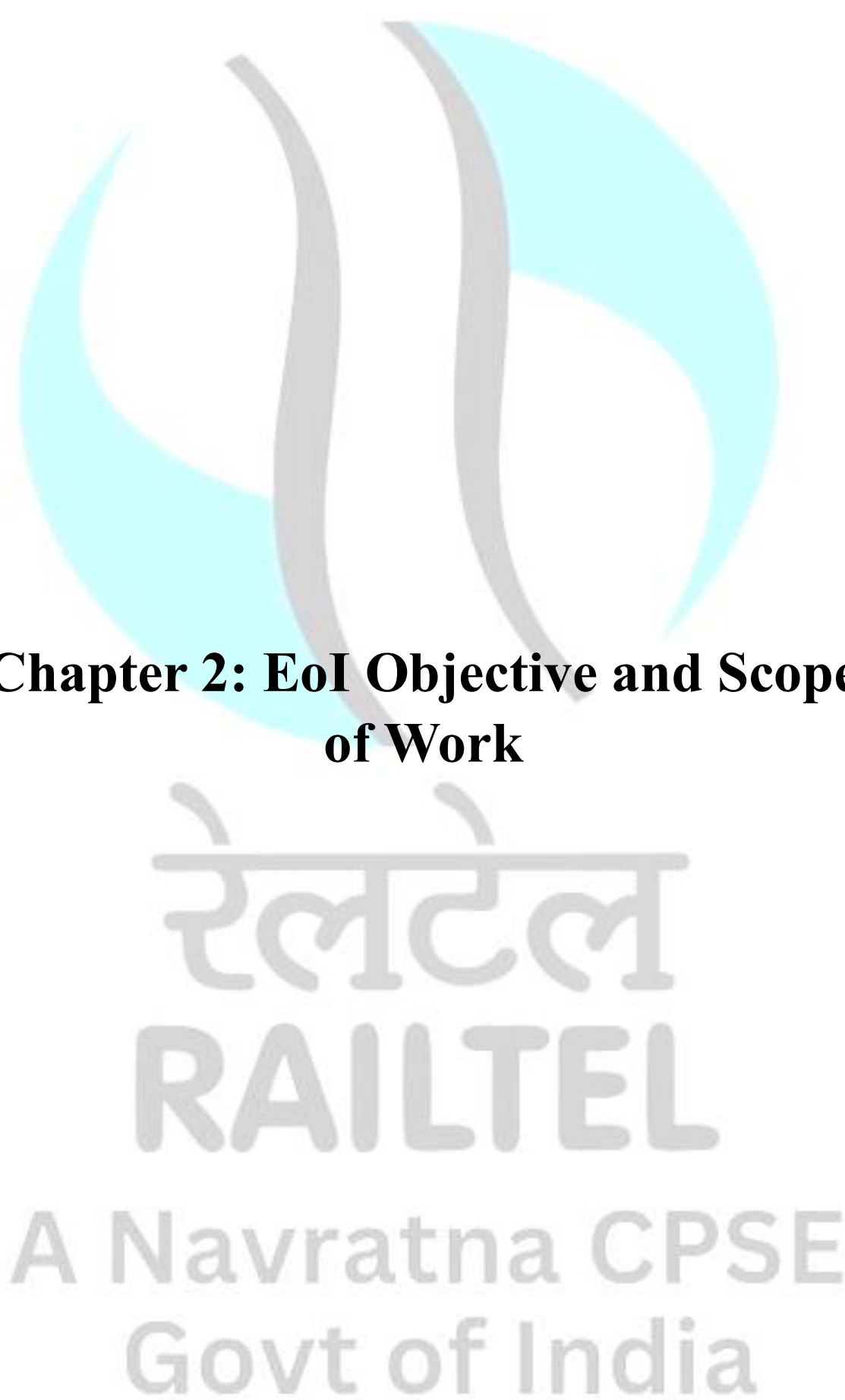
RailTel, a distinguished Nav-Ratna Central Public Sector Enterprise under Ministry of Railways, is recognised as one of the nation's most reliable end-to-end Telecom, IT, ICT, Railway Signalling solution provider. With a focus on excellence and innovation, RailTel has garnered unwavering trust as a partner in delivering cutting-edge services across sectors. RailTel is also working towards creating a knowledge society at multiple fronts and has been selected for implementation of various mission-mode projects for the Government of India in the telecom field. With a team of highly skilled and seasoned experts in Telecom, Signalling and IT, along with an extensive nationwide infrastructure, RailTel possesses the ability to deliver digital transformation services across the country and beyond border.

The ongoing wave of digitalisation is creating new prospects for companies like RailTel. In the specific context of the telecom sector, the advent of 5G is a significant growth factor. The demand for network and allied infrastructures is poised to propel RailTel's business forward. With our experience in setting-up and running Tier-3 Data Centres and cloud office, RailTel is implementing Data Centre services like cloud deployments for various customers. Thus by, leveraging RailTel's network infrastructure, data centres, security operation centre and in house capabilities, RailTel is helping in digitalisation by providing comprehensive ICT services. In essence, RailTel's goal is to be a supportive partner in guiding its customers through their Digital transformation endeavours.

For ensuring efficient administration across India, country has been divided into four regions namely, Eastern, Northern, Southern & Western each headed by Executive Director and Headquartered at Kolkata, New Delhi, Secunderabad & Mumbai respectively. RailTel's business service lines can be categorized into three heads namely B2G/B2B (Business to Government and Business to Business) and B2C (Business to customers).

RailTel's various operations are certified for, ISO 27001:2022-Certified for Information Security Management System, ISO 20000-1:2018-Certified for Information Technology Service Management System, ISO 9001:2015-Certified for Quality Management System, ISO 27017:2015 Certified for Information Security for Cloud Services, ISO 27018:2019-Certified for Data Privacy in Cloud Service, ISO 27033-Certified for Network Security, ISO 14001:2015-Certified for Environmental Management System Standard, ISO 17024:2012- Certified for Telecom Services, Railway Signalling & Telecom Training, Design Testing and Licensing Services and CMMI Maturity Level-4-Certified for Process Improvement. The RailTel's Data Centres are Tier-III (Design & Facility) certified.

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Chapter 2: EoI Objective and Scope of Work

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2.1 EoI Objective

RailTel's Customer is one of India's premier maritime hubs on the eastern coast, spans three harbours—outer, inner, and fishing—comprising a total of 24 berths. With increasing cargo volumes and complex logistical operations, there is a critical need for intelligent surveillance to ensure safety, operational efficiency, and regulatory compliance.

In alignment with the goals of Maritime Vision 2030, RailTel's Customer envisions a modern, AI-enabled surveillance system that harnesses cutting-edge technologies to address existing inefficiencies and provide real-time situational awareness.

Current port operations face multiple challenges including limited visibility into berth utilization, manual wagon inspections, unmonitored railway crossings, and non-compliance with safety and environmental norms. Traditional surveillance approaches fall short in handling scale, complexity, and real-time response requirements.

The proposed system offers an integrated, layered surveillance architecture featuring AI-powered analytics, smart CCTVs, edge computing, and centralized dashboards. This initiative is designed to modernize RailTel's Customer - surveillance infrastructure, enabling intelligent monitoring, predictive analytics, and automated alerting.

2.2 Scope of Work

The Smart Video Surveillance System at RailTel's Customer location is designed to address critical operational and safety challenges across multiple domains through AI, Video Analytics, and IoT integration. The scope of work comprises of 2 Phase:

Phase 1:

Part 1: Consists of AI/ML based video analytics and incident management system. The proposed solution contains Artificial Intelligence (AI)/Machine Learning (ML) based Video Analytics (VA), Predictive Analysis (PA) and Incident Management System. Our main objective is to monitor critical operations in various locations within the port using video analytics. This technology will analyse different scenarios in the proposed solution. The key operations included in the proposed solution are:

- Berths (Utilisation, loading, Occupancy, Idle time, etc)
- Vessels (Arrivals, Type, Cargo, Frequency, stay, and handling)
- Cargo (Identification, loading/unloading, stacking, spillage)
- Vehicle (Tracking, Dwell time, Unauthorised parking, accident prevention)
- Cargo Stacks (Coverage with tarpaulin, Pilferage, Height, etc)
- Gates (Access control, congestion monitoring C control, violation, etc)
- Railway Gate crossings (over speeding, unmanned crossing, Signalling)
- Railway Sidings (Wagon damage, Tarpaulin coverage, Weighments)
- Asset Monitoring (Security, watch keeping, unauthorized entry)
- Environment and Safety (Traffic signalling, Berth lighting, Accident Prevention)
- Incident management system (Fire accidents, road accidents, rail accidents, etc)
- Dashboard for KPIs (TAT, OSBD, Dwell Time, Pre-berthing detentions time, etc)

Part – 1 of the subject work also includes the Design and establishment of a 24/7 monitoring and control system, the "ICCC - Integrated Command and Control Centre" will be able to establish as Centre of excellence for SMARTPORT. The proposed ICCC will connect with all AI/ML based smart devices like, Edge computing-based CCTV cameras, Sensors, IOT devices through a reliable and redundant storage network. ensuring continuous monitoring and management of operations

Part 2: Consists of AI/ML based Data Analytics using Predictive Analytics (PA)

The primary focus of this phase is to convert the data collected from smart surveillance systems into actionable intelligence by creating a robust data analytics layer. The proposed scope includes:

- i. The Data Analytics Platform aggregates multi-source data from surveillance systems, IoT sensors, and other sources, normalizes and structures video-derived data, and implements AI/ML models for historical trend analysis.
- ii. Monitoring the generated data from various critical applications of port like, NLP- marine, POS, SAP, ULIP, Sagarmanthan, E-office, EMR, E-MB etc and analyse the data in line with KPIs of port.
- iii. Establish both real-time and scheduled reporting systems for various departments, including Shipping, Railways, Safety, and others.
- iv. Enable anomaly detection, root cause identification, and predictive failure analysis.
- v. Initiate development of department-specific operational dashboards with filters and custom views.
- vi. Create early warning systems based on analytical models (e.g., delay prediction, accident likelihood).

The deliverables of this phase include Visual Analytics Dashboards with drill- down capabilities and KPI filters, a Port-Wide Data Warehouse integrated with video metadata, an Alerts C Insights engine linked to the ICCC, and an AI-based Operations Report Generator (Daily, Weekly, and Monthly).

Part 3: Consists of Integrated Digital Platform with KPIs Predictive Analytics

The scope of work during this phase includes building a scalable and Unified Digital Platform that consolidates surveillance, analytics, and operations management under one umbrella with predictive capabilities. The scope includes:

- i. Develop an Integrated Operations Platform (IOP) for central access to all port data feeds, analytics, and alerts.
- ii. Integrate external systems like POS, SCADA, SAP, NLP-Marine, logistics scheduling, vessel tracking, and rail operations, etc.
- iii. Design and implement a KPI engine to monitor performance across all port operations (berth efficiency, gate processing time, cargo dwell time, safety compliance).
- iv. Enable Predictive Maintenance for port assets based on AI models.
- v. Implement Policy Simulation Tools to support What-If analysis for traffic flow, cargo movement, and resource allocation.
- vi. Provision for downloading necessary BI/MIS reports through portal.

Phase 2:

Operation and Maintenance Support for a period of 05 years from the date of Commissioning and Go-Live of the entire project as per scope of work mentioned at Phase 1 and compliance of all BOO items.

The deliverables include the development of a Unified Port Operations Dashboard, a Predictive Analytics and Simulation Engine, and the preparation for the Digital Twin Prototype for port operations to improve the port performance and efficiency with effective utilization of available resources existing at port as part of Smart and Sustainable port.

The payment will be made in phases as per milestones to be finalized in the project agreement, post submission of necessary invoices and certifications.

The entire project shall be completed within 10 Months and 15 Days (Phase-1 which is inclusive of Part-1, Part-2 & Part-3 of the Scope of work and compliance of all BOO items) from the date of the Work Order, followed by 5-years O&M period thereafter. The entire work including the BOO items shall have a warranty of 60 months from the date of commissioning and Go-Live.

The Phase-2 of the Project (Operation and Maintenance support) shall commence from the date of commissioning of the entire project including compliance of BOO items.

The scope of work cited above also includes establishment of the following:

SN	Project Scope Covers
1	ICCC Setup with War Room
2	VMS Software
3	Low-Code Computer Vision AI Platform (Perpetual License)
4	ICCC Software (Perpetual Licence)
5	AI Powered Business Intelligence Dashboard
6	Port Intelligence Integration Layer
7	NMS tool for remote management and monitoring (1000 IP Nodes)
8	Security Infrastructure Includes Network Firewall
9	RDBMS
10	24 RAILTEL'S CUSTOMER Berths
11	6 Tugs
12	3 Lane Railway Port Handover Junction
13	10 Railway Sidings
14	32 Traffic Signals
15	36 Railway Crossings
16	RFID Gates

The following key focus areas have been identified for implementation:

- 2.2.1 Berth Operations: The system will monitor berth occupancy, turnaround times, and cargo activities to enhance berth utilization and reduce anchorage congestion. Real-time visibility into vessel movements and cargo handling will support efficient scheduling and maximize port throughput.
- 2.2.2 Vehicle Movement and Traffic Management: Intelligent surveillance will streamline vehicle inflow and outflow within port premises by detecting congestion, unauthorized parking, and inefficiencies in traffic signal operations. This will help reduce clearance delays, improve turnaround times, and maintain a safer and more organized traffic flow.
- 2.2.3 Tugboat Monitoring: AI-powered systems will be deployed to track tugboat movements and log operational versus idle time. This will help resolve crew-related delays, improve resource allocation, and ensure that tugboats are optimally utilized for vessel manoeuvring operations within the port.
- 2.2.4 Railway Siding Inspection: Automated visual analytics will be used to detect damage, tampering, and cargo coverage issues in wagons stationed at sidings. This will replace time-consuming manual inspections, reduce the risk of oversight, and ensure compliance with Loading and safety standards.
- 2.2.5 Railway Speed and Crossing Monitoring: To improve safety at unmanned railway crossings and monitor train speeds, the system will include AI-driven motion analysis and alarm triggers. This will reduce the likelihood of accidents and support enforcement of speed regulations within port-controlled tracks.
- 2.2.6 Berth Safety Compliance: Surveillance infrastructure will be leveraged to detect PPE usage, monitor berth lighting conditions, and identify unsafe behaviour or idle personnel. The system will assist in enforcing labour safety standards, ensuring a safer working environment, especially during night operations.

2.3 Use Cases to be covered

Sub-Area	Monitored Elements
Berth Performance	Real-time Berth Occupancy, Berth Utilisation Metrics, Idle-Time Analysis & Efficiency Scores
Vessel Turnaround	Actual Time of Arrival (ATA), Actual Time of Departure (ATD), Vessel Classification (Type), Detailed Vessel Particulars
Quayside Cargo Handling	Cargo Type, Live Loading-Unloading Status, On-Berth Stacking Patterns, Spill & Proliferation Events
Yard & Road Vehicles	Vehicle Tracking, Detection of Unauthorized Parking, Congestion / Jam Alerts, Collision & Accident Events, Automated Traffic-Signal
Tug Operations	Tug Idle-Time Calculations, Movement & Routing Logs
Railway Sidings	Wagon Structural Damage, Wagon Roof-Top Coverage Compliance, Speed-Violation Detection, Railcar Weighment Checks
Main Track & Crossings	Over-Speed Monitoring, Safety Breaches at Unmanned Crossings
Berth Safety Envelope	Lighting Intensity at Berth, Personal Protective Equipment (PPE) Adherence, Idle / Under-Utilised Resources
Critical Infrastructure	Port Administration Buildings, Unutilised / Vacant Land Parcels
Transport & Parking Zones	Cruise-Terminal Bays, Truck Staging

2.3.1 Use case Implementation Details

2.3.1.1 Berth Monitoring:

Delays in vessel clearance caused by residual cargo and lack of real-time berth data are mitigated through AI-powered solutions. These include automated detection of Actual Time of Arrival (ATA) and Actual Time of Departure (ATD), vessel identification (name, International Marine time Organization (IMO) number and type), and continuous monitoring of cargo operations and spillage across 24 berths.

KPIs: Berth occupancy rate, idle time analysis, and average vessel turnaround time.

AI Models: OCR for IMO numbers, object detection for vessel/cargo type, and temporal analysis for time calculations.

2.3.1.2 Vehicle Traffic Management

Port traffic is streamlined using ALPR for vehicle tracking, congestion detection via density analysis. These features reduce cargo clearance delays, traffic-related incidents, and unauthorized parking.

KPIs: Vehicle entry/exit time, congestion-related incident frequency, and unauthorized parking rate.

AI Models: ALPR for vehicle IDs, heatmap-based congestion models.

2.3.1.3 Tugboat Operations Monitoring

Operational visibility is improved by detecting tug presence at jetties, tracking movement patterns, and logging active/idle durations. This ensures better tug allocation and minimizes scheduling delays.

KPIs: Tug utilization efficiency, delay occurrence, and root cause tracking.

AI Models: Object detection for tugboats and temporal analytics for operational cycles.

2.3.1.4 Wagon Inspection at Sidings

Automated inspection systems detect structural damage, verify tarpaulin coverage, and estimate Overloading, enhancing safety and inspection accuracy.

KPIs: Inspection time per rake and detection accuracy for damage, coverage, and Overloading.

AI Models: Image classification for wagon assessment and anomaly detection for structural integrity.

2.3.1.5 Train Speed and Unmanned Crossing Monitoring

Train speeds are tracked using motion detection, and alarms are triggered at unmanned crossings to prevent accidents and enforce safety standards.

KPIs: Incident reduction at crossings and train speed compliance rates.

AI Models: Velocity-based motion detection and event-triggered alert systems.

2.3.1.6 Environmental Monitoring

Fire, smoke, and dust emission risks are addressed through visual detection, spillage monitoring.

KPIs: Response time to fire/smoke and compliance rate with pollution and coverage norms.

AI Models: Dual-spectrum fire/smoke detection and image segmentation for spillage/ coverage.

2.3.1.7 Safety Compliance at Berths

Automated safety checks detect PPE usage, identify unsafe behaviour or idle personnel, and evaluate lighting conditions to improve workforce safety.

KPIs: PPE compliance rates and frequency of safety violations.

AI Models: Object detection for PPE and analytics for activity and lighting compliance.

2.3.2 System Architecture Overview

2.3.2.1 Architecture Flow:

- a) CCTV Camera Layer (Edge)
 - i. Function: Continuous video capture across different port zones (berths, rail sidings, yards, etc.)
 - ii. Hardware: Fixed, PTZ, and panoramic 4MP cameras
 - iii. Output: Raw video streams in real-time
- b) Network Video Recorder (NVR) Layer
 - i. Function: Aggregates video feeds from multiple cameras.
 - ii. Capabilities: Stores footage temporarily, acts as a buffering point, can replay or forward live feeds.
 - iii. Output: Streamed footage pushed to the Feed Manager Layer
- c) Feed Manager Server Layer
 - i. Function: Receives feeds from NVR, Segregates frames per camera, Tags frames with camera ID and timestamp, Routes frames based on pre-configured use-case mapping.
 - ii. Key Tasks: Frame extraction, Use-case lookup (per camera ID), Load-balancing across inference nodes.
 - iii. Output: Individual frames passed to corresponding Inference Server(s)

- d) Inference Server Layer (AI/ML Engine)
 - i. Function: Frame analysis based on assigned AI models per use case.
 - ii. Use-Cases Examples: PPE detection (at berths), Intrusion detection (rail crossings), Vehicle & container tracking (yards), Smoke/fire detection (stacks)
 - iii. Process: Receives frame, runs inference using model (e.g., YOLO, SSD, etc.), Generates structured metadata: Timestamp, Camera ID, Detected object(s), Event type, Location info (if geo-tagged)
 - iv. Output: Metadata stream (JSON/XML)
- e) Application Server Layer
 - i. Function: Central orchestration of AI events, Threshold-based alert generation, Event aggregation and logging, Forwarding alerts to GUI/dashboard or control room
 - ii. Process: Ingests metadata from Inference Servers, compares against pre-set thresholds (e.g., “No helmet for 2+ minutes”), Generates: Alerts (SMS/email/dashboard), Event logs, Visualization feeds
- f) User Interface & Dashboard Layer
 - i. Function: Visual interface for port operators, Event-wise camera playback, Real-time alert board, Analytics (heatmaps, frequency charts)
 - ii. Access: Control room, Mobile/tablet access (if web-based)
 - iii. Features: Search by event/camera/time, Incident acknowledgment, Reporting tools.

2.3.2.2 Detailed Module Wise Features

a) Computer Vision

<i>SN</i>	<i>Category</i>	<i>Module / Component</i>	<i>Description</i>
<i>a)</i>	Admin Console	Configuration & User Governance	Central panel for system setup, account administration and permission control
		Incident Visualisation Dashboard	Graphical reporting and trending of all security events
		Archive Playback & Case Review	Deep-dive examination of stored footage and prior incidents
		Geographic Camera Grouping	Groups cameras by region for streamlined oversight
<i>b)</i>	Alert & Incident Handling	Real-time Notification Service	Instantly pushes threat alerts to the appropriate responders
		Incident Ticketing & Audit Logs	Maintains a full history of cases for compliance and investigation purposes
<i>c)</i>	Machine-Learning Analytics	Video Stream Decoder	Converts raw CCTV feeds into frames suitable for AI analysis
		Deep-Learning Detection Models	Identifies objects or intruders using neural-network algorithms
		Real-time Video Analytics Engine	Performs immediate analysis on incoming frames
		Compute Load Balancer & Thread Manager	Distributes processing workload across GPUs / servers for efficiency
		Event-Driven Trigger Engine	Automatically raises alerts when defined anomalies appear
		GPU-Optimised Processing Pipeline	Accelerates AI computations for high-throughput scenarios

<i>SN</i>	<i>Category</i>	<i>Module / Component</i>	<i>Description</i>
<i>d)</i>	Camera & Stream Management	RTSP Stream Handler	Ingests and manages video streams from each camera
		Camera Settings Manager	Adjusts resolution, framerate and other parameters
		Alert Rule Manager	Defines the specific conditions that generate an alert
		Camera Health Monitor	Detects offline units or hardware faults in real time
		Per-Camera Analytics Profiles	Applies customised detection rules to individual cameras

b) Business Intelligence Dashboard (Integrated with AI)

Operational Efficiency Features (From All Data Sources: Port OS, NLP Marine, RFID, Weighbridge, FOIS, Computer Vision, SAP):

- i. Unified Real-Time Command Center: Single dashboard combining operational, environmental, and safety data from all port systems, CV feeds, and SAP sensors.
- ii. Vessel Operations Tracking: Arrival/departure confirmation from Computer Vision (CV) vessel recognition, Vessel type and name auto-detection from CV and AIS data.
- iii. Cargo & Wagon Movement Monitoring: FOIS + Weighbridge + CV wagon enumeration for precise cargo flow visibility, Tarpaulin covers status detection for cargo security compliance.
- iv. Traffic Management: Live traffic congestion maps from CV traffic counts, Unauthorized parking detection & alerts.
- v. Resource Utilization: Idle cranes/vehicles detection via CV, Tugs movement tracking for operational scheduling.
- vi. Safety & Compliance Monitoring: PPE detection for workers at berth, Fire/smoke/dust detection for safety alerts.

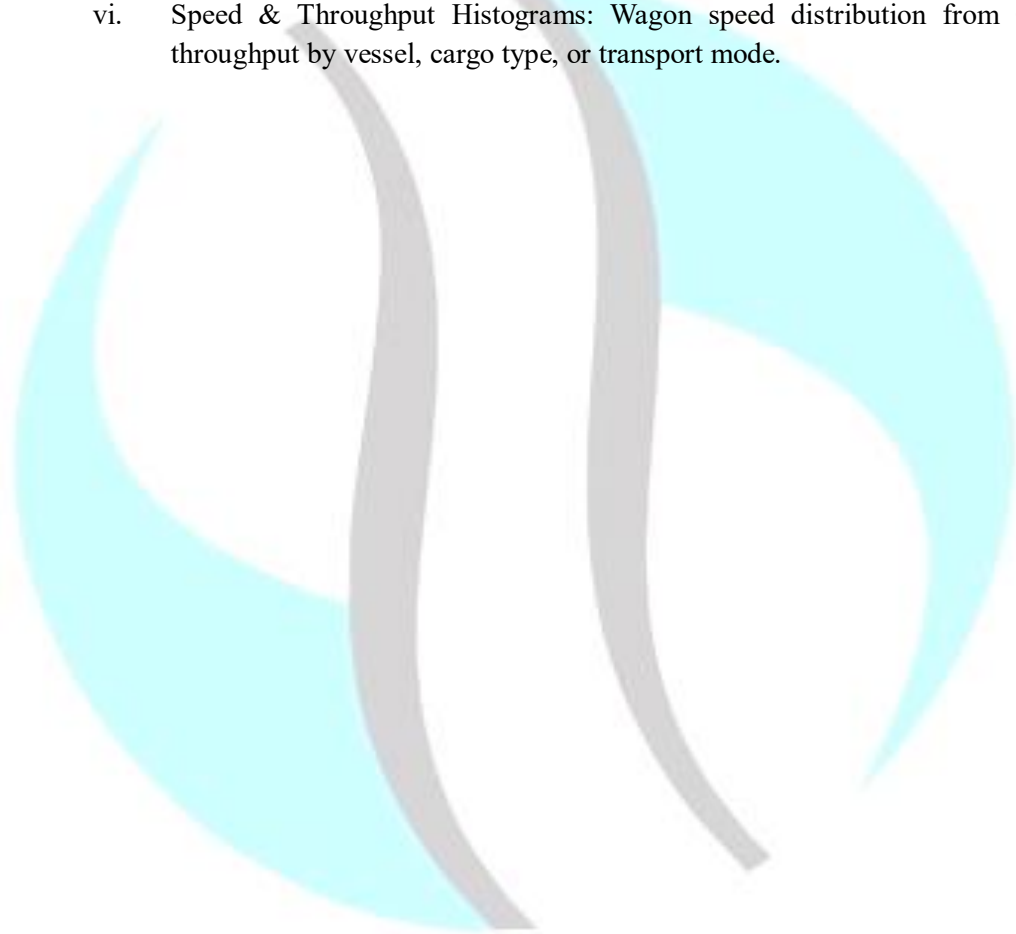
c) Prediction & Analytics

- i. ETA & Turnaround Forecasts: Using vessel arrival history + CV confirmation + AIS/weather integration.
- ii. Cargo Handling Time Prediction: Based on historical berth productivity, CV wagon speeds, and crane activity logs.
- iii. Wagon Requirement Forecast: Combining FOIS requests + CV enumeration trends.
- iv. Traffic Congestion Forecast: CV traffic data + RFID timestamps to predict yard and approach road congestion.
- v. Safety Risk Prediction: AI risk scoring based on PPE compliance history, unauthorized access patterns, and equipment downtime trends.
- vi. Resource Allocation Optimization: Predict idle vs. peak resource demand at berths.

d) Graphical Plotting & Visualization

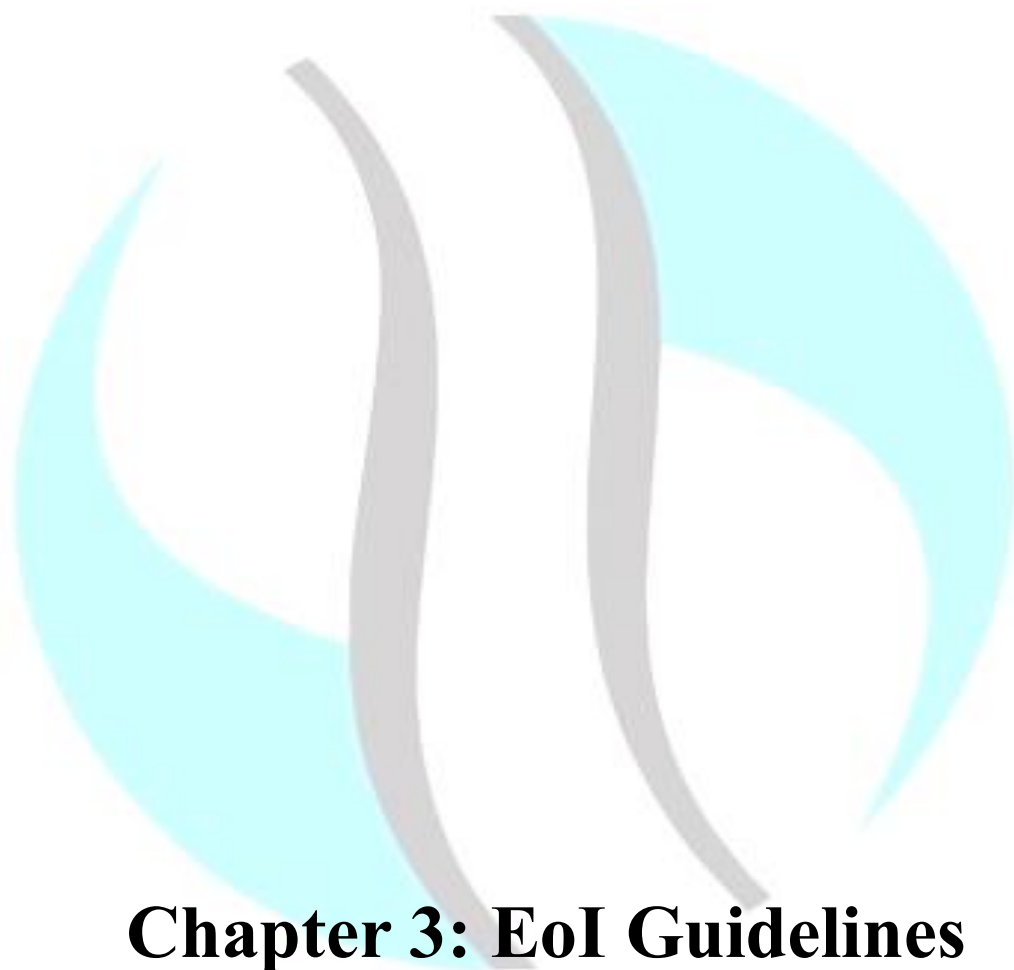
- i. Operational Timeline Gantt Charts: Vessel berthing and tug movement schedules, Cargo handling phases with actual vs. planned completion times.
- ii. Heatmaps & Flow Visualizations: Vehicle flow animations for port traffic patterns.
- iii. Object Count & Activity Dashboards: Real-time charts for number of vessels at berth, wagons in yard, people on-site, trucks waiting.
- iv. Stacked KPI Gauges: Berth utilization, yard congestion %, PPE compliance %, crane productivity.

- v. Event & Alert Timelines: Chronological display of fire/smoke alerts, unauthorized parking events, and safety violations.
- vi. Speed & Throughput Histograms: Wagon speed distribution from CV, Cargo throughput by vessel, cargo type, or transport mode.



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Chapter 3: EoI Guidelines

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3.1 EoI Guidelines

3.1.1 Language of Proposal:

The proposal and all correspondence and documents shall be written in English only.

3.1.2 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 Partner or without any obligation to inform the affected partner or partners about the grounds for RailTel's action.

3.1.3 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 numbered and 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.

Partner must agree to comply with all scope of work and terms and conditions including special terms and conditions, SLA and OEM technical & Financial documentation including technical certificates/others as per EoI.

3.1.4 Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of 90 days from the date of last date of EoI Bid submission.

3.1.5 Bidding Process

Online mode through RailTel's e-nvida portal. Single packet system.

3.1.6 Bid Earnest Money (EMD)

3.1.6.1 The Partner shall furnish a sum as given in EoI Notice via in the form of BG/DD/online transfer, before submission of final bid to the end customer as given in EoI Notice.

3.1.6.2 Offers not accompanied with valid EoI Earnest Money Deposit shall be summarily rejected.

3.1.6.3 No exemption for Start-Ups and MSME towards EMD.

3.1.6.4 In case of sole partner/ consortium offer is selected for bidding, sole partner/consortium 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 Partner 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.

3.1.6.5 Return of EMD for unsuccessful Partners: EoI EMD of the unsuccessful Partner shall be returned without interest after completion of EoI process.

3.1.6.6 Return of EMD for successful Partner: EoI-EMD & Earnest Money Deposit (balance proportionate EMD) if applicable of the successful partner will be discharged / returned as promptly as possible after the receipt of RailTel's EMD/BG from the Customer and or on receipt of Security Deposit Performance Bank Guarantee as applicable (clause no. 6.2) from Partner whichever is later.

3.1.6.7 Forfeiture of EoI EMD or EoI EMD & EMD (balance proportionate EMD) and or Penal action as per EMD Declaration:

- i. The EoI EMD may be forfeited and or penal action shall be initiated if a Partner withdraws his offer or modifies the terms and conditions of the offer during validity period.
- ii. In case of non-submission of SD/PBG (as per clause no. 6.2) lead to forfeiture of EoI EMD, EMD (balance proportionate EMD) if applicable and or suitable action as prescribed in the EMD Declaration shall be initiated as applicable.

3.1.7 Security Deposit / Performance Bank Guarantee (PBG)

Security Deposit (SD) / Performance Bank Guarantee (PBG) will be back-to-back in value terms as per customer's LoA/Work Order/PO.

3.1.8 Last date & time for Submission of EoI response

EoI response must be submitted to RailTel at <https://railtel.enivida.com> specified in the preamble not later than the specified date and time mentioned in the preamble.

3.1.9 Modification and/or Withdrawal of EoI response

EoI response once submitted will treated, as final and no modification will be permitted except with the consent of the RailTel. No Partner shall be allowed to withdraw the response after the last date and time for submission. 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 Partner, the Earnest Money Deposit shall be forfeited, and all interests/claims of such Partner shall be deemed as foreclosed. RailTel may also consider for blacklisting of partner for 5 Years.

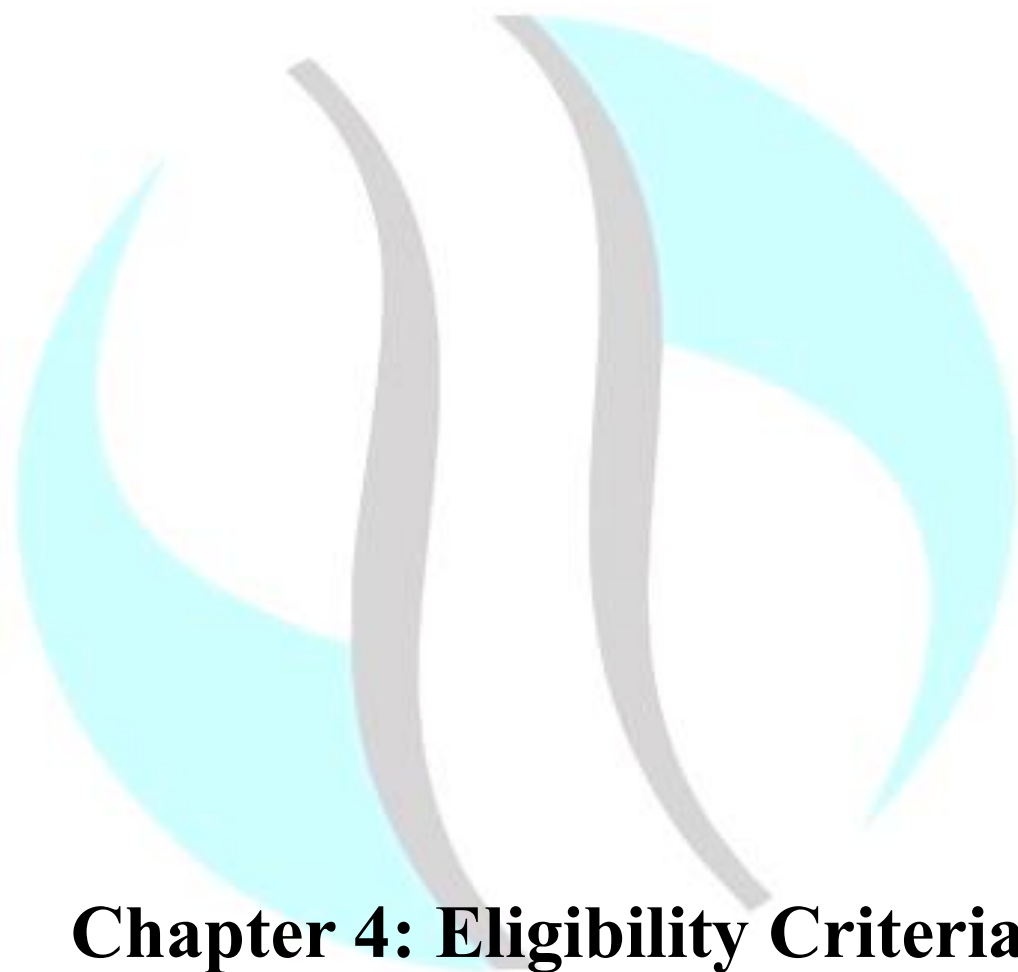
3.1.10 Clarification of EoI Response

To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the Partner 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.

3.1.11 Period of Association/Validity of Agreement

RailTel will enter into an agreement with selected partner with detailed Terms and conditions.





Chapter 4: Eligibility Criteria

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4.1 Partner's Profile

The partner shall provide the information of the below table on company letterhead:

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/Director of the partner's organization, 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	

4.2 Eligibility Criteria for Bidding Business Partner of RailTel

SN	Description	Documents to be uploaded
A) General Eligibility		
1	RailTel's Empanelled Partners before Floating of this EoI.	Valid Empanelment letter issued by RailTel.
2	a) Should be an organization registered under the provisions of the Indian Companies Act, 2013/ Companies Act, 1956 or a partnership firm registered under the Indian Partnership Act, 1936 or the Limited Liability Partnerships Act, 2008 or an organization registered under society Act. b) Registered with the Income Tax Authorities c) Registered with GST Network d) Should have been operating for the last 3 years as on date of bid submission (applicable only for non-MSE bidders).	a) Certificate of Incorporation/ Registration Certificate b) Copy of PAN Card. c) Copy of GST registration certificate. d) Letter from Company Secretary/ Statutory Auditor for operating business for last 3 years as on date of bid submission.
3	Cover letter of the bid with valid authorization details of the person(s) signing the bid document as on date of bid submission.	a) Cover letter signed by an authorized signatory of the bidder as per Annexure 1 b) Power of Attorney (POA) on Non-Judicial stamp paper of Min Value of Rs. 100/- along with Board Resolution.
4	Notarized Affidavit as per Annexure 4	Notarized Affidavit as per Annexure 4

	(Bids without Notarized Affidavit as per Annexure 4 will be summarily rejected)	
B) Financial Eligibility		
5	The bidder should have minimum cumulative turnover from operations in the previous 3 financial years and the current financial year at least 45.61 Cr. Partner should have positive Net Worth for each of the last three (3) i.e., (FY 22-23, FY 23-24 and FY 24-25)	Copy of the audited financial statement and ITR certified by CA for required financial years. Audited Accounts (Balance Sheet and Profit and Loss Account, ITR certified by CA etc.) with Certificate from CA/CS/Cost Accountant with valid UDIN for last 3 FYs and current financial year.
C) Technical Eligibility		
6	The bidder must have successfully completed any of the following Similar Projects during last 5 years ending last day of month before the one in which EoI is invited: Three Project works each costing not less than 9.12 Crs. Or Two Project works each costing not less than 12.16 Crs. Or One Project work costing not less than 18.24 Crs. Similar Work: - Project with CCTV and setting up ICCV and its O&M. - AI Integration with ICCV/VMS for generation of dashboard	Work Order and Completion/Partial Completion Certificate from user department indicating the date of completion of work and value of work, nature of work etc Completion with Documentary Proof of Payment Receipt from CA. (with Valid UDIN number)
7	Client references and contact details (email/landline/ mobile) of customers for whom the Bidder has executed similar projects.	Bidder should specifically confirm on their letter head in this regard
8	Bidder to confirm they adhere to the Technical Requirements outlined in Scope of Work	All Bidders must submit signed and stamped copy of technical Compliance as per Annexure 14 If the Bidder complies with the mandatory requirements, the Bidder should enter a “Y” or “Yes” in the column supported by Verifiable documents like Data Sheet, Product Documentation etc.
D) Other Eligibility		
9	Undertaking that bidder will not submit directly or indirectly their bids/offer and techno-commercial solution/association to RailTel's End Customer once selected in this EoI for teaming arrangement.	Undertaking on Company's letter head.

10	Bidder should provide detailed postal address for Head Office of Bidder	Bidder should specifically confirm on their letterhead in this regard.
11	Bidder should have at least 70+ employee on its payroll.	Certificate from the Head of HR Department & ESIC (wherever applicable), PF registration certificate/documents
12	Bidder should have any 4 valid certifications from the following list: • ISO 9001 • ISO 27001 • ISO 27017 • ISO 27018 • ISO 20000	Copies of valid certificates in the name of the bidding entity

4.3 Comprehensive Evaluation Matrix

Section	Evaluation Criteria	Max Marks
A.	Bidder Profile	40
B.	Relevant Experience of the Bidder	30
C.	Technical Solution Proposal, Approach & Methodology and Project Implementation, PoC	30
Total		100

SN	Criteria Category	Evaluation criterion details	Max Marks	Supporting Documents Required
A	Bidder Profile (Maximum Marks– 40)			
A1	Annual turnover	Minimum cumulative turnover of INR 45.61 crore from operations in 3 previous years & current financial years. Marks shall be allotted as given below: • Between 45.60 and 95.60 Crs. (5 marks) • Between 95.60 and 145.60 Crs. (8 Marks) • Above 145.60 Crs. (10 Marks)	10	Certificate from the Statutory Auditor/Cost Auditor on turnover details in any 3 of last 04 audited financial year(s). (Format given in Annexure)
A2	Manpower	At least 70+ Full time Employees (FTE) on payroll of bidder working in firm. Marks shall be allotted as given below: • 70 to 85 FTEs. (5 marks) • 85 to 100 FTEs. (8 marks) • More than 100 FTEs. (10 Marks)	10	Certificate from the Head of HR Department & ESIC (wherever applicable), PF registration certificate/ documents/ Challans

SN	Criteria Category	Evaluation criterion details	Max Marks	Supporting Documents Required
A3	Certification	The valid certifications with Bidder from the following list: Certificates • ISO 9001 (1 Marks) • ISO 27001 (1 Marks) • ISO 27017 (2 Marks) • ISO 27018 (2 Marks) • ISO 20000 (1 Marks) Additional Certificates • ISO 22301 (4 Marks) • CMMI Dev V 2.0 Maturity level 5 (5 Marks) • ISO 42001 (4 Marks)	20	Copies of valid certificates in the name of the bidding entity.
B	Relevant experience of the Bidder (Maximum Marks– 30)			
B1	Project Experience	The bidder should have successfully completed or be on-going similar projects either of the following criteria within the last 5 years: Three Project works each costing not less than 9.12 Crs., Or Two Project works each costing not less than 12.16 Crs., Or One Project work costing not less than 18.24 Crs. Similar Work: - Project with CCTV and setting up ICCC and its O&M. - AI Integration with ICCC/VMS for generation of dashboard.	30	1. Work order/ Contract clearly highlighting the scope of work and value of the contract / order. 2. Completion/ Partial Completion Certificate issued & signed by the competent authority of the client entity on the entity's letterhead.
C	Technical Solutions proposed and Approach & Methodology for implementation (Maximum Marks– 30)			
C1	Technical Solution, Approach and Methodology	Technical Proposal Submission and Proposed Approach & Methodology Above shall be evaluated on following parameters: • Project Understanding demonstrated by the Bidder • Completeness of project plan • Clarity and details on Bill of Material	5	Assessment to be based on the evaluation of Technical Proposal & Presentation made by Bidder

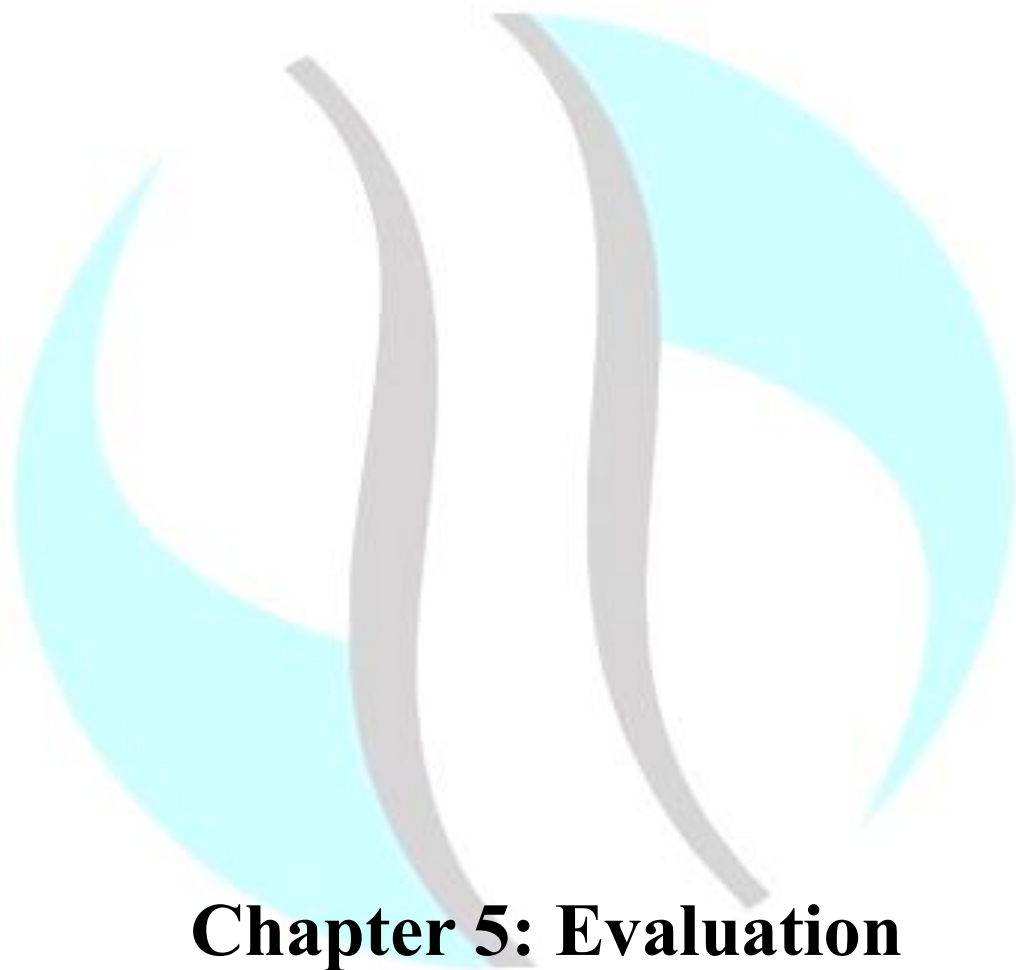
SN	Criteria Category	Evaluation criterion details	Max Marks	Supporting Documents Required
C2	Proof of Concept (PoC)	The PoC will require a live demonstration of five use cases, of which two are mandatory. Assessment will be based solely on demonstration performance against the defined evaluation parameters: 1. Wagon Enumeration, Tarpaulin Cover Detection. (Prerecorded video will be provided during demonstration) This will be evaluated on: • The system shall automatically extract relevant information from the wagons captured in the video. • The system shall identify and flag any wagon that is not covered with tarpaulin. • The system shall display the extracted information and flagged exceptions in a clear and user-friendly manner. 2. Low Code Computer Vision AI Platform: The system shall have the following minimum capability: The platform should, have following use cases with at least one of the use cases with reidentification – investigation feature. • PPE Detection: Ability to detect safety gear including shoes, helmets/hard hats, and safety vests. • People Counting: Real-time counting and monitoring of individuals in a defined area. • Traffic Congestion Detection: Identification and reporting of traffic build-up or congestion. • Intrusion Detection: Detection and alerting of unauthorized access or movement in restricted zones. 3. Low Code Integration Dashboard with Adaptive Integration Capability: The system shall include a Low-Code, Adaptive Visualization Dashboard designed to meet real-time data integration and analysis requirements. The system will demonstrate the following key capabilities: • Multi-Source Data Integration: Ability to seamlessly integrate with	20	

SN	Criteria Category	Evaluation criterion details	Max Marks	Supporting Documents Required
		multiple data sources. The system shall support real-time ingestion and synchronization of data provided in various formats such as Excel. • Real-Time Data Extraction and Processing: Capability to extract and process data from diverse sources in real-time, ensuring accuracy and up-to-date insights. • Interactive Visualization and Analytics: Display of extracted data through a structured, user-friendly interface featuring interactive graphs, charts, and tabular views for enhanced analytical clarity. • Drill-Down and Insight Generation: Provision for drill-down analysis to enable users to explore data hierarchies and access detailed information dynamically 4. NMS Tool Demonstration. This will be evaluated on: • Automatic discovery and identification of IP nodes within the same network. • Generation of reports on node/device uptime and availability. • Monitoring and reporting of overall device and network health status. • Inbuilt database. 5. Business Intelligence Dashboard – With Anomaly Detection. This will be evaluated on: • The system shall demonstrate the capability to ingest and process historical sensor data provided in form of Excel/CSV. • The dashboard shall visualize the data using various graph types (e.g., line charts, bar charts, pie charts, scatter plots, etc.). • The visualizations shall be clear, user-friendly, and suitable for decision-making.		

SN	Criteria Category	Evaluation criterion details	Max Marks	Supporting Documents Required
		The system should use AI models to do predictive analysis based on the historical sensor data		
C3	Project Presentation	Following parameters will be evaluated during presentation: - System Integrator's understanding of project requirements (functional and technical) and completeness of proposed solution - Integration approach with different systems. - Presentation of the Approach and Methodology for implementation and maintenance Support.	5	

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Chapter 5: Evaluation

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5.1 Evaluation

5.1.1 Pre – Qualification Evaluation (PQ)

- 5.1.1.1 RailTel will examine the bids to determine whether they are complete, responsive, whether required EMD has been furnished, whether the letters/certificates have been properly signed, and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting any criteria specified in the tender, will be rejected by RailTel and shall not be included for further consideration. Any deviations in proposal response may make the bid liable for rejection.
- 5.1.1.2 All eligible bids will be considered for further evaluation by RailTel and according to the evaluation process defined in this Bidding document.
- 5.1.1.3 Each of the Pre-Qualification criteria outlined in the respective section is essential and expected to be complied with by the bidder. However, RailTel reserves the right to review and evaluate any deviations on a case-by-case basis, and may, at its sole discretion, consider such deviations as acceptable if they are found to be substantially compliant and do not materially affect the intent of the qualification requirements.
- 5.1.1.4 Bidders would be informed of their qualification/disqualification based on the Pre-Qualification criteria through email and/or Phone and subsequently, the Bid Security amount shall be returned to the respective disqualified Bidders after the submission of Performance Bank Guarantee by the successful Bidder.

5.1.2 Technical Evaluation (TQ)

- 5.1.2.1 Technical bid will be evaluated only for the bidders who qualify in above stage.
- 5.1.2.2 RailTel will review the technical bids of the short-listed bidders to determine whether the technical bids are responsive. Bids that are not responsive are liable to be disqualified.
- 5.1.2.3 The bidders' technical solutions proposed in the bid document shall be evaluated as per the requirements specified in the EoI and technical evaluation framework as mentioned in subsequent sections. Bidder will be intimated about date and time for live demonstration, presentation of part C as stated above.
- 5.1.2.4 Each Technical Bid will be assigned a technical score (T) out of a maximum of 100 marks. Only the bidders who get total of minimum 70% marks will qualify for commercial evaluation stage. However, if only one bidder achieves 70% of the total marks, then 60% marks would be considered for the technical qualification. Failing to secure minimum marks shall lead to technical rejection of the Bid.

5.1.3 Commercial Evaluation

- 5.1.3.1 The commercial bids shall not be opened by RailTel until the evaluations of technical bids have been completed. Only the bidders who have technically qualified for the EoI as per above stage, will be considered for their financial evaluation. The technically shortlisted Bidders will be informed of the date and venue of the opening of the Commercial Proposals through email or written communication
- 5.1.3.2 The bid should clearly indicate the price to be charged without any qualifications whatsoever and should include all taxes, duties, fees, levies and other charges as may be applicable in relation to the activities proposed to be carried out.
- 5.1.3.3 The taxes quoted in the offer should be as per the prevailing tax rates. Any subsequent increase in the tax rates or introduction of new tax will be paid by RailTel. Similarly, any benefits arising due to downward revision in tax rates, or any exemptions availed by the Bidders organization should be passed on to RailTel.
- 5.1.3.4 Complete commercial offering of BoQ must be entered online only. Only the final bidding price is required. The successfully bidder will be intimated to provide BoQ line-item wise break up at a later stage or when required as RailTel.

5.1.3.5 Errors & Rectification: Arithmetical errors will be rectified on the following basis:

- a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected.
- b) Bidders shall indicate the unit rates and total Bid Prices of the equipment/ services, it proposes to provide under the Contract. Prices should be shown separately for each item as required in the tender.
- c) If there is no price quoted for certain material or service, the bid shall be declared as disqualified. The bidder must bid for total products and solutions.
- d) The RailTel will award the work including CapEx + 5 - year OpEx and the contract will be signed for project go live plus Five-year of operation and maintenance period.

5.1.3.6 The lowest Total Price (C) as calculated above shall be given a commercial score (CS) of 100 points. The Commercial Score of the other bidders shall be calculated with respect the lowest Total Price by any bidder. The methodology of Commercial Score shall be as follows:

$$\text{Commercial Score of the bidder under consideration} = \frac{(\text{Lowest Total Price from all Commercial Bids})}{(\text{Total Price based on the Commercial bid by the bidder under consideration})} \times 100$$

5.1.4 Total Bid Evaluation

5.1.4.1 Evaluation criteria proposed to be adopted will be Quality cum Cost Based System (QCBS) where Technical Bid Score will get a weightage of 70% and Commercial Bid Score a weightage of 30%.

5.1.4.2 The bidder would be technically evaluated out of 100 marks. All the bidders who secure overall minimum of 70% (70 Marks out of 100 across all the components together) will be considered as technically qualified. However, if only one bidder achieves 70% of the total marks, then 60% marks would be considered for the technical qualification. Technical score of all bidders will be calculated based on the following formula:

$$\text{Technical Score of bidders (TS)} = \frac{\text{Technical Marks received by the bidder}}{\text{Technical Marks available}} \times 70\%$$

5.1.4.3 The Bid having the Lowest Commercial Quote shall be termed as the Lowest Evaluated Bid and will be awarded 100 marks. Commercial score of all the other bidders will be calculated based on the following formula:

$$\text{Commercial score of bidders (CS)} = \frac{\text{Commercial Quote of the lowest bidder} \times 30\%}{\text{Commercial Quote of the bidder}}$$

5.1.4.4 Final Score of the bidder: Final Score of each bidding party will be computed by adding the technical score and Commercial Score based on the following formula:

$$\text{Total Score} = \text{TS} + \text{CS}$$

5.1.4.5 The bidder whose bid has secured the "Highest Total Score" out of 100 as per above evaluation will be considered as best evaluated Bid.

5.1.4.6 In case of a tie where two or more bidders achieve the same highest overall score, the bidder with the higher technical score will be considered as best evaluated Bid and will be invited first for negotiations

5.1.4.7 RailTel is not bound to accept the best evaluated bid or any bid and reserves the right to accept any bid, wholly or in part.

5.2 Payment Terms

- 5.2.1 All payments will be made on a back-to-back basis on value basis.
- 5.2.2 Payment will be made after receiving the invoice for the work / services and after RailTel has received the payment from End Customer for the same work / services. Any deduction/Penalties levied by End Customer on invoices of RailTel will be carried back-to-back in value terms and will be deducted from PARTNER's invoices, subject to the cause to deduction / penalty is due to deviation in terms and conditions of service standards by the PARTNER.
- 5.2.3 Invoices should be submitted to RailTel on RailTel's BTS portal <https://bts.rcil.gov.in>.
- 5.2.4 Documents list required at the time of payment/invoice submission by selected partner shall be:
- PO copy issued to selected vendor.
 - Submission/Declaration of applicable BG amount against PO issued to selected partner/vendor.
 - Signed Agreement Copy
 - Original Invoice for the period claimed.
 - Certified Proof of Completion of Work from RailTel's Representative/RailTel's End Customer.
 - TDS declaration (Income Tax Declaration – TDS ON Software/Licenses Sales Under Notification No. 21/2012 [F.No.142/10/2012-SO (TPL) S.O. 1323(E), Dated 13-6-2012).
 - PAN, GST Registration Certificates.
- 5.2.5 Payment and Project Schedule

Phase	Activity	Payment	Timelines
Phase 1: Part 1 (AL/ML Based Video Analytics)	Supply of relevant software and hardware as per BOQ and compliance of Terms and Conditions	50% of the relevant software and hardware value	135 days from the date of issue of Work Order
	Installation and Commissioning	30% of the relevant software and hardware value.	90 days from the date supply of material
	Stabilization Period	20% of the relevant software and hardware value	95 days from the date of commissioning
Part 2 (AL/ML Based Video Analytics)	Supply of relevant software and hardware as per BOQ and compliance of Terms and Conditions	50% of the relevant software and hardware value	135 days from the date of issue of Work Order
	Installation and Commissioning	30% of the relevant software and hardware value.	90 days from the date supply of material
	Stabilization Period	20% of the relevant software and hardware value	95 days from the date of commissioning
Part 3 (Design and Establishment of Integrated Command	Supply of relevant software and hardware as per BOQ and compliance of Terms and Conditions	50% of the relevant software and hardware value	135 days from the date of issue of Work Order

Phase	Activity	Payment	Timelines
Control Centre (ICCC))	Installation and Commissioning	30% of the relevant software and hardware value.	90 days from the date supply of material
	Stabilization Period	20% of the relevant software and hardware value	95 days from the date of commissioning
Phase 2 (O&M Support)	Operation and Maintenance	Monthly Payments	05 Years from the date of accepted O&M Support date.

##Any deduction/LD/Penalty levied by customer on RailTel will be deducted from Partner in value terms.

#Payment will only be released once proof of submission of GSTR-1 and GST-3B is submitted for claimed invoice.

#The last bills shall be settled after the end of the contract period after adjusting all outstanding dues.

#No interest is payable at any amount whatsoever.

5.3 Submission of Bills

Invoices to be submitted along with necessary reports including SLA's details duly certified by designated official of Customer End and RailTel. Payment will be made based on the timelines and payment milestones of subject work.

5.4 Bill Passing Authority

RailTel's authorized representative as mentioned in Work Order/Agreement

5.5 Bill Paying Authority

RailTel's authorized representative as mentioned in Work Order/Agreement

5.6 Delivery Location

The delivery location will be informed to the selected bidder at a later phase.

5.7 Contract Period and Warranty

The entire project shall be completed within 10 months and 15 days (Phase-1 which is inclusive of Part-1, Part-2 & Part-3 of the Scope of work and compliance of all BOQ items) from the date of receipt of the Work Order, followed by 5-years O&M period thereafter. The entire work including the BOQ items shall have a warranty of 60 months from the date of commissioning and Go-Live. For software, any patches/security updates/bug fixes etc. shall be free of cost during the entire period of contract.

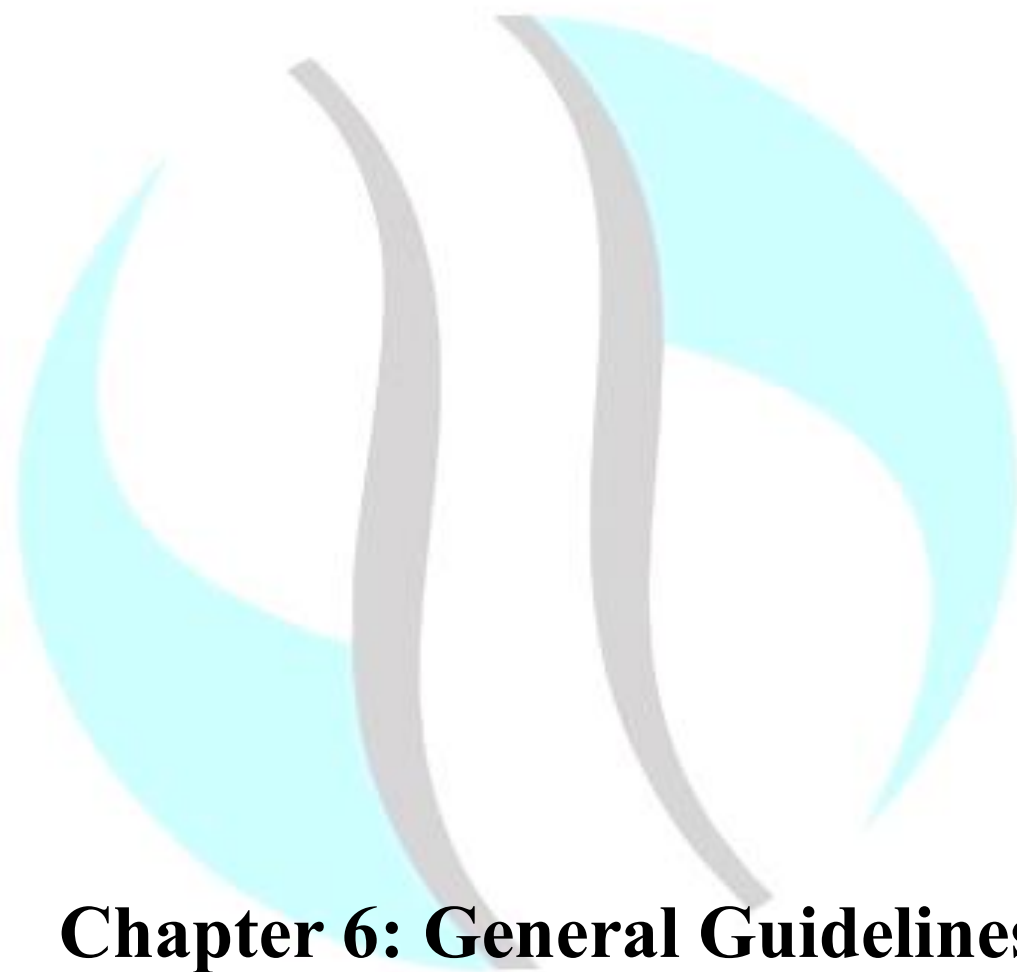
The Phase-2 of the Project (Operation and Maintenance support) shall commence from the date of commissioning of the entire project including compliance of BOQ items.

5.8 Commencement Period

The selected bidder must commence the work from the date of receipt of the Work Order/LoA

5.9 Contract Agreement

A contract agreement is to be executed on non-judicial stamped paper of Rs. 100. The Draft Agreement will be sent to the selected bidder.



Chapter 6: General Guidelines

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6.1 Service Level Agreement (SLA)

The selected partner will be required to adhere to the SLA as given in EoI for given scope of work and the SLA breach penalty will be applicable back – to – back on the selected partner on value terms. The SLA scoring and penalty deduction mechanism for in-scope of work area shall be followed as specified in the EoI. All associated clarifications, responses to queries, revisions, addendum and corrigendum, associated Prime Services Agreement PSA/MSA/SLA also included.

The bidder must comply with the below-mentioned service level agreement for the services mentioned in the subject work during O&M period i.e., Phase 2.

Service	Availability	Downtime/non-availability
Network Infrastructure	99%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost
Server Infrastructure	99.5%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost
Application/ Software	99.5%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty
Supporting IT Infrastructure	99%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty
Database	99.5%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty
Integrated Command Control Center (ICCC)	99%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty
Supporting Infrastructure	95%	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty
Manpower	As per agreed timelines	0-4 Hours: No Penalty 4-12 Hours: 0.001% of the relevant infrastructure cost 12 Hours above: 0.005% of the relevant infrastructure cost0 – 4 Hours: No Penalty

Penalty may impose during the following conditions:

- Non-compliance of the supply of Bill of Quantity (BOQ) as per agreed technical specifications.
- Non-compliance of valid software licenses during project period.
- Non-compliance of secure by code design guidelines during the implementation of required software/application.

- d. Non-compliance of cyber security guidelines, non-compliance of cyber security audit reports (VAPT Test, SQL injections, Red Teaming etc) and Advisories to be received from regulatory bodies like CERT-In, NCIIPC etc., during the execution of the subject work.
- e. Non-compliance of IT Act 2000, instructions during the execution of the subject work.
- f. RailTel reserves right to take a call on penalty to be imposed based on the impact of above mentioned non compliances for Customer End.
- g. The selected bidder needs to comply SLA's mentioned in this Work Order and penalties to be implement as mentioned in SLA.

Note: Any deduction/LD/Penalty levied by customer on RailTel will be deducted back – to – back from Partner in value terms

6.2 Performance Bank Guarantee (PBG)

- 6.2.1 In case of successful participation the PARTNER shall at its own expense, deposit PBG within thirty (30) days of the notification of award (done through issuance of the Purchase Order/Work Order/LoA etc.) and communicated through email, an unconditional and irrevocable Performance Bank Guarantee (PBG) from a Nationalized/Commercial Scheduled Indian Bank (either private or PSU) but not from any co-operative bank or NBFC as per the format enclosed in this EoI, payable on demand, for the due performance and fulfilment of the contract by the PARTNER. This PBG will be for an amount of '10 %' of the contract value. The claim period should be one year more than the expiry date. All charges whatsoever such as premium, commission, etc. with respect to the PBG shall be borne by the PARTNER. Besides, if the total BG amount comes up to ₹5 Lakhs, then same may be deposited through DD/RTGS/NEFT. Along with submission of PBG, PARTNER needs to submit PBG issuing bank's SFMS report.
- 6.2.2 Under SFMS system, a separate advice of the Bank Guarantee (via SFMS IFN760COV) to be sent to advising bank (RailTel's Bank) through SFMS by the issuing Bank (Applicant's Bank), after which the paper Bank Guarantee would become operative. Similar process to be followed for Bank Guarantee amendment/extension also and separate advice (via SFMS IFN767COV) advising bank (RailTel's Bank) through SFMS by the issuing Bank (Applicant's Bank).
- 6.2.3 PBG should have validity of **75 months**. 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. However, no interest shall be payable on the PBG. In the event, PARTNER being unable to service the contract for whatsoever reason, RailTel would invoke the PBG at it discern. 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.
- 6.2.4 RailTel shall also be entitled to make recoveries from the PARTNER's bills, PBG or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.
- 6.2.5 If the service period gets extended by virtue of extension of same by End Customer, PBG should also be extended accordingly.
- 6.2.6 During the contract period, RailTel may issue Purchase Order(s) for the additional services ordered by End Customer (in case) to RailTel.
- 6.2.7 In case the End Customer sought PBG of the contract in 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.

- 6.2.8 In case End Customer has sought any other types of PBG in this contract at present or in future or else Integrity Pact PBG (presently or in future), same remain applicable on selected Partner/Consortium. The said PBG will be issued by Selected Partner from Scheduled Bank favoring RailTel Corporation of India Limited. No Indemnity Bond in lieu of such PBG will be accepted by RailTel.
- 6.2.9 If End Customer ask for submission for value more than 5%, same also needs to be submitted by the selected Partner /Consortium.
- 6.2.10 PBG will be discharged/released only after receipt of RailTel's PBG from RailTel's End Customer.
- 6.2.11 The successful bidder will have to pay additional security deposit of 5% of contract value within 2 weeks of the issuance of the LoA/WO. The validity of the Security deposit should be 12 months.

6.3 Insurance

The selected Partner agrees to take insurances to cover all the elements of the project under this EoI including but not limited to Manpower, Hardware, Software etc. as per End Customer EoI specified terms.

6.4 Liquidity Damages (LD):

If the subject work is not implemented within the stipulated timeline on the receipt of work order/LoA, then 0.5% of the total work order/LoA for each week of delay will be deducted. The LD can be extended upto 10% of the total work order/LoA value.

Any deduction/LD/Penalty levied by customer on RailTel will be deducted back – to – back from Partner in value terms.

For all liquidity damages mentioned above are exclusive of GST. Final deduction will include GST values.

6.5 Termination:

In case Bidder/Selected Partner fails to execute the terms and conditions of the contract, RailTel will have the right to terminate the contract with 15 days' notice and carry out the work through another contractor. In such circumstances all the security/BG will be forfeited by RailTel.

6.6 Delivery and Inspection:

- 6.6.1 Delivery, Installation and Commissioning Period: As per RailTel's Project Delivery Schedule.
- 6.6.2 All the material should be made available for Inspection by RailTel nominated person/agency if required.
- 6.6.3 Partner will be custodian of all the material till installation and commissioning of system.

6.7 Provisional Acceptance Certificate (PAC)

Upon completion of the project, and prior to the commencement of Operations & Maintenance (O&M), subject to acceptance by RailTel's end customer and certification by RailTel's representative.

6.8 Final Acceptance Certificate (FAC)

6 months after completion of the entire project including O&M, subject to acceptance by RailTel's end customer and certification by RailTel's representative.

6.9 Pre – Contract Integrity Pact

As per Annexure 15 of the EoI document.

6.10 Additional Terms and Conditions

- a. The Selected Bidder needs to comply to the entire scope of work in both the phases, i.e., Phase-1 & Phase-2 cited above along with Bill of Material (BoM) enclosed with all necessary technical features and specifications in good condition with 05 years warranty.
- b. The Selected Bidder needs to provide necessary software tools with valid licenses during the entire project period.
- c. The Selected Bidder needs to comply secure by code design guidelines during the development of necessary Software/Application (Dashboard, BI/MIS reports etc.,) and to comply latest cyber security guidelines and standards as per the industry best practices.
- d. The Selected Bidder needs to handover source code of the customised software designed for deployment of subject work at Customer End with all necessary updates along with configuration documentation and user manuals, post commissioning and Go-Live of the Project and after completion of O&M period duly certified by Customer End designated official, RailTel Corporation of India Limited and the selected bidder. Non-compliance of the same shall be treated as breach of the Contract.
- e. Detailed Scope of work, milestones, deliverables and SLAs will be governed by the Work Order/Agreement to be signed between Customer End and RailTel Corporation of India Ltd.
- f. The project shall comply with all applicable government guidelines, cyber security standards and industry best practices.
- g. The selected Bidder shall provide regular project status reports a coordinate with all stakeholders for successful implementation.
- h. Penalties and Liquidated Damages clauses for delay or performance shortfall shall be specified in the detailed Work Order/Agreement/EoI/LoA.
- i. The selected bidder should bear the entire maintenance and operations cost for the Bill of Quantity (BoQ) of the subject work.
- j. The work has to be carried out as per the Work Schedule and as per the directions of the Officer-in-charge from time to time.
- k. If any discrepancy arises during the execution of the subject work, the decision of the Competent Authority of RailTel will be final.
- l. RailTel reserves the right to cancel or foreclose of the subject work without assigning any reasons with 01 (one) month notice.
- m. The work has to be conducted as per the Work Schedule and as per the directions of the Officer-in-charge from time to time.
- n. If any discrepancy arises during the execution of the subject work, the decision of the Competent Authority of Customer End will be final.
- o. The quantities indicated in the BoQ and work Schedule are tentative and may vary according to the prevailing site conditions and work requirements.
- p. The entire work may be awarded in full or in part, at the discretion of the Competent Authority.
- q. Any damage to the Customer End property due to the negligence of the designated staff/personnel of the selected bidder, shall be rectified by the selected bidder at his own cost and responsibility.
- r. The selected bidder should ensure that no obstruction is caused to the normal working staff, consultants etc., in the vicinity.
- s. The selected bidder shall not sublet, assign or transfer the subject work to any other agency.
- t. The selected bidder should ensure that their staff will follow the precautions prescribed to avoid spreading of COVID - 19 Pandemic such as Nose Mask, Social Distance, Sanitizer etc. as and when it prevails.
- u. The Project Manager/Designated Official from RailTel shall inspect the work to ensure compliance of the entire scope along with BOQ items, as per the timelines specified and also conduct review meetings between Customer End officials and bidder time to time. The bidder shall be responsible to get periodical inspection reports certified by the PMC

appointed by RailTel's End Customer during the execution of the subject work. Certification of PMC consultant is necessary for processing any payment for the subject work

- v. In the event of continued unsatisfactory performance or non-compliance with any of the provisions of the aforesaid contract, RailTel reserves the right to cancel the contract and forfeit the Security Deposit without giving any notice.
- w. If the selected bidder is not in a position to continue the contract, the firm should give intimation to RailTel, in writing, 15 Days prior to the proposed date of discontinuation of the contract. In such a case, Performance Bank Guarantee shall be forfeited

6.11 Right of Rejection

RailTel reserves the right to rejection of supplied materials and also reserve the right to withdraw any item in the bill of quantities attached to the deviated technical specifications for which the selected bidder will have no right to claim any compensation for rejected Bill of Material during the execution of work.

RailTel at its own discretion may increase the quantities of the bill of material as per confirmation from RailTel's Customer for the agreed rates during the execution of the subject work.

6.12 Cancellation of Items

RailTel reserves the right to cancel the execution of some items of work awarded at any time during the execution of the subject work. No claim by the bidder on this account and due to variation of any particular items will be entertained.

6.13 Taxes

Income Tax Recovery: Income Tax will be recovered from the selected bidder hire charges bills on the prevailing rate given by the Income Tax Authorities to the extent of rules.

Recovery/Reimbursement of taxes: Taxes if any will be recovered or reimbursed from the selected bidder as per the extant rules. The successful bidder must submit the GST Registration Certificate after receipt of Work Order. Tax details should be produced in invoice by the bidder with documentary evidence.

Structure of Reimbursement of GST

As per the extant of rules prevailing at the time of the contract. However, RailTel will not be responsible for any GST related disputes against submitted invoices without any certification of designated official.

The Supplier/Contractor is required to remit GST as per the Tax Invoice and file the details in GSTR1 on or before 10th of subsequent month to enable RailTel to claim input tax credit. Otherwise, the said tax invoice will be kept pending for payment.

6.14 Safety Measures

The selected bidder is responsible for taking precautionary measures for the safety of lives of staff working under the firm and the responsibility arising due to any mishap during the execution of the subject work. The payment of any compensation etc, lies entirely on the part of the firm.

6.15 Customer End Statutory Requirements

- The firm shall comply with the provisions of all the Acts, Laws, any Regulation or Byelaws of any Local or other Statutory Authority applicable in relation to the execution of the subject works, such as but not limited to:
 - Payment of Wages Act, 1936 (Amended).
 - Minimum Wages Act, 1948 (Amended).
 - The Labor (Regulation & Abolition) Act, 1970 with Rules framed there under as amended.
 - Workmen Compensation Act, 1923 as amended by Amendment Act No.65 of 1976.

- The Personal Injuries (Compensation Insurance) Act, 1963 and any modifications thereof and rules made there under from time to time. The firm shall take into account all the above-mentioned financial liabilities in his quoted rates and nothing extra, whatsoever, shall be payable to firm on this account.
- Motor Vehicle Act, 1988 & Motor Vehicle Rules-1989 as amended up to 2007.
- Electricity Act, 2010 with up-to-date amendments from time-to-time.
- IT Act, 2000 to be complied.
- DPDP Act, 2025 to be complied.





Chapter 7: Annexures

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Govt of India

Annexure 1: Format for COVERING LETTER

(to be submitted by sole partner/lead partner in case of consortium)

COVERING LETTER

(To be on company letter head)

EoI Reference No:

To,
The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Dear Sir,

Sub: Participation in the EoI process

Having examined the Invitation for EoI 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 EoI document.

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

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for EoI 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 EoI is liable to be rejected.

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

Authorized Sign and Stamp

Name:

Designation:

Place:

Date:

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Govt of India

Annexure 2: Format for Self-Certificate & Undertaking

Self-Certificate (To be on company letter head)

EoI Reference No:

To,
The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Dear Sir,

Sub: Self Certificate for Tender, Technical & other compliances

- 1) Having examined the technical specifications mentioned in this EoI & end customer EoI, we hereby confirm that we meet all specification.
- 2) We agree to abide by all the technical, commercial & financial conditions of the end customer RFP for which EoI is submitted (except pricing, termination & risk purchase rights of RailTel). We understand and agree that RailTel shall release the payment to selected sole partner/lead partner in case of consortium after the receipt of corresponding payment from end customer by RailTel. Further we understand that in case selected sole partner/lead partner in case of consortium fails 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 sole partner/lead partner in case of consortium.
- 3) We agree to abide by all the technical, commercial & financial conditions of the end customer's RFP 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 RFP. We hereby enclose the arrangement of OEMs against each of the BOQ item quoted as mentioned end customer's RFP. We also undertake to submit MAF and other documents required in the end Customer organization EoI 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 RFP terms and conditions. We confirm to submit all the supporting documents constituting/ in compliance with the Criteria as required in the end customer's RFP terms and conditions like technical certificates, OEM compliance documents.
- 7) We understand and agree that RailTel is intending to select sole partner/ consortium who is willing to accept all terms & conditions of end customer organization's RFP 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 Pre Bid Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.

- 10) We undertake that we will not submit directly or indirectly out bids and techno-commercial solution/association with any other organization once selected in this EoI for teaming arrangement (before and after submission of bid to end customer organization by RailTel)

Authorized Sign and Stamp

Name:

Designation:

Place:

Date:



Annexure 3: Undertaking for not Being Blacklisted/Debarred

(On Company Letter Head)

EoI Reference No:

To,
The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Subject: Undertaking for not Being Blacklisted/Debarred

We, (Company Name), having its registered office at Address hereby declare 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.

Authorized Sign and Stamp

Name:

Designation:

Place:

Date:

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Annexure 4: Affidavit

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 must 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 Partner 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 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 named 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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Govt of India

Annexure 5: Non - Disclosure Certificate

To,
The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Dear Sir,

Sub: EoI Reference No: Dtd.

A. This is in response to the Invitation for EoI for “Selection of Business Associate/Partner(s) from RailTel’s empaneled BAs for the requirement of customer of RailTel (CoR) “_____”

B. During the course of the above negotiations RailTel (including its affiliates) may in conjunction with the said purpose and for our mutual benefit, disclose to us certain information being proprietary and/or of a confidential nature and/or sensitive;

C. We and our affiliates wish to ensure the protection and secrecy of RailTel’s confidential information which may be disclosed, received or granted access to by RailTel and wish to reduce to writing, our confirmation in this respect.

With regard to the above said purpose, we hereby covenant, warrant and confirm as follows:

1.1 NON-DISCLOSURE &CONFIDENTIALITY

We agree and undertake to regard and preserve as Confidential Information provided by RailTel or which may be disclosed, received or granted access to by RailTel or come to the knowledge of us in any manner in connection with the negotiations for possible business relationship.

(a) In maintaining the Confidential Information here under we agree that we shall not, without first obtaining the written consent of RailTel, disclose or make available to any person, firm or enterprise, reproduce or transmit, or use (directly or indirectly) for our own benefit or the benefit of others, any Confidential Information avian except that we may disclose any Confidential Information to its Directors, officers, employees, or advisors on a "need to know" basis to enable them to evaluate such "Confidential"

(b) We shall ensure that our employee(s) and/ or person(s) shall maintain confidentiality with regard to the disclosed Confidential Information, if any, and shall issue suitable instructions and/ or get suitable written undertakings or agreements executed to bind our employees and/or person(s) to the same obligations of confidence and safeguarding and to adhere to the confidentiality/ non-disclosure terms contained herein.

(c) Save and except for the purposes mentioned in clause (a) above we further agree that we will not part with/ disclose any "Confidential Information" received by us to any other person directly or indirectly nor make copy(ies) or reproduce in any way (including without limitation store in any computer or electronic system any written material/ documents containing "Confidential Information" and such written material/ documents will be retained under strict confidentiality by us.

(d) We further agree to exercise the same degree of care that we exercise to protect our own Confidential Information of a like nature from unauthorized disclosure, but in no event shall a less than reasonable degree of care will be exercised by us.

1.2 We acknowledge and agreed that information shall not be considered "Confidential Information" to the extent, that such information:

(a) At the time of disclosure was in the public domain; or

- (b) Is already known to us free of any confidentiality obligation at the time it is obtained from RailTel; or
- (c) After disclosure is or becomes publicly known or available through no wrongful act of ours; or
- (d) Is right fully received from a third party without restriction; or
- (e) Is approved for release, disclosure, dissemination or use by written authorization from RailTel; or
- (f) Is required to be disclosed pursuant to a requirement of a governmental agency or laws as long as we provide RailTel with timely prior written notice of such requirement and provide all reasonable co-operation in regard to taking protective action against such disclosure requirement; or
- (g) Is disclosed after expiry of 5(five) years from the date of signing of this certificate.

However, before we disclose any Confidential Information under clause 6, we (to the extent permitted by law) shall use our best endeavor to inform RailTel of any circumstances and the information that will be disclosed.

1.3 We further agree and undertake not to disclose the information marked “Confidential Information” of RailTel to our agents or Bidders without prior written approval from RailTel and without having first to obtain from each agent or Bidder a separate written agreement or undertaking binding them to the same obligations of confidence and safeguarding.

1.4 We further agree that at the request of RailTel, we shall promptly (and in any case, within 15 days of request), deliver to the RailTel all copies of the Confidential Information in its possession or under its direct or indirect control or shall destroy all memoranda, notes and other writings prepared by us or our affiliates, Directors, officers, employees or advisors to the extent the same are based on the confidential information with a written statement to the effect that upon such return we have not knowingly retained in our possession or under our control, either directly or indirectly, any information or copies of such (other than Confidential Information embedded in our records).

1.5 The confidentiality obligations set out herein above shall survive any such return or destruction of Information.

1.6 Except as specifically provide adhere in, disclosure of confidential information by us pursuant there to shall not be deemed to grant or s, any rights, interest or property in such confidential information and accordingly we agree that we will not directly or indirectly claim or submit any application for grant of any patent, copyright, design right or other intellectual property rights in, to on the basis of the confidential information.

1.7 We here to acknowledge and agree that in the event of a breach or threatened breach by us of the provisions herein, RailTel may have no adequate remedy in money or damages and accordingly notwithstanding anything contained in clause 4 here of, RailTel shall be entitled to seek injunctive relief against such breach or threatened breach by us: provided, however, no specific action in this confidentiality certificate of a specific legal or equitable remedy shall be construed as a waive or prohibition of any other legal or remedies in the event of a breach or threatened breach of this certificate and there remedies specified here in shall be in addition to all other reliefs and remedies available to RailTel under prevailing laws.

Signature with seal:

Name:

Designation:

Date:

Annexure 6: EMD (as BG) Format

BG NO:

Issuance Date: dd/mm/yyyy

BG Amount: Rs.

Expiry Date: dd/mm/yyyy

Claim Expiry Date: dd/mm/yyyy

In consideration of the RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905) having its registered office at Plate-A, 6th Floor, Office Block Tower-2, East Kidwai Nagar, New Delhi - 110023 (Here in after called RailTel) having agreed to exempt Partner Name (CIN:) having its registered office at Partner's address (Here in after called "the said Contractor(s)") from the demand, under the terms and conditions of EoI NO. made between RailTel Corporation of India Limited and Partner Name for (here in after called "the said Agreement") of security deposit for the due fulfilment by the said contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs. /- (In Words).

We, Bank Name a banking company incorporated under the Companies Act, 1956 and carrying on Banking Business under The Banking Regulation Act, 1949 and having its Registered Office at Bank's Address and its Central office at Bank's Corporate Office Address (indicate the name of the Bank) here in after referred to as "the Bank") at the request of Partner's Name Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs /- (In Words) 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 said Contractor(s) of any of the terms or conditions contained in the said Agreement.

We, Bank Name do here by undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount as 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 terms and conditions contained in the said Agreement or by 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. /- (In Words).

We, Bank's Name, undertake to pay to the RailTel any money so demanded not to withstand 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 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's Name further agree that the Guarantee here in 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 discharge this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the DD-MM- YYYY (Claim Expiry Date.) We shall be discharged from all liability under this Guarantee thereafter.

We, Bank's Name 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 or 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 effect 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).

Bank's Name lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Date:

Place:



Annexure 7: MAF

MANUFACTURERS' AUTHORIZATION FORM

(To be obtained and submitted by bidder for each OEM separately whose solution/systems/services are proposed in this EoI)

EoI No.:

Date:

To,

The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Dear Sir:

Ref: EoI No:

1. We, who are established and reputable manufacturers / producers of having factories/ development facilities at (address of factory / facility) do hereby authorize to submit a Bid and sign the contract with you against the above EoI.

2. We hereby extend our full warranty and support in accordance with the terms of the above EoI for the Products and services offered by the above ABP against the above RFP. Support (Warranty and AMC) shall be on-site and comprehensive in nature having back-to-back support from us. In case Service Provider/ABP fails to provide Warranty and AMC or out of service due to any reasons, then we shall either provide ourselves or make alternative arrangement for the Warranty/ Service/AMC of the Product(s) as required in accordance with the terms and conditions of the above EoI, at no extra cost and to the satisfaction of the Bank.

3. We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products supplied by the ABP:

(a) Products such as the Bank may opt to purchase from the ABP, provided that this option shall not relieve the ABP of any warranty obligations under the EoI; and

(b) In the event of termination of production of such Products:

i. advance notification to the Bank of the pending termination, in sufficient time to permit the Bank to procure needed requirements; and

ii. following such termination, furnishing at no cost to the Bank, operations manuals, standards and specifications of the Products, if requested.

4. We duly authorize the said ABP to act on our behalf in fulfilling all installations, technical support and maintenance obligations required by the contract.

5. We hereby certify that we have read the clauses contained in O.M. No. 6/18/2019-PPD, dated 23.07.2020 order (Public Procurement No. 1), order (Public Procurement No. 2) dated 23.07.2020 and order (Public Procurement No. 3) dated 24.07.2020 regarding restrictions on procurement from a bidder of a country which shares a land border with India. We further certify that we are not from such a country or if from a country, has been registered with competent authority. We certify that we fulfil all the requirements in this regard and our ABP is eligible to participate in the above EoI.

6. We have gone through the EoI and customer RFP and agree with all the terms and conditions.

Yours faithfully,

(Name of Manufacturer / Producer)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it.



Annexure 8: Self declaration against corrupt and fraudulent practice

(To be submitted on the letterhead of the Partner)

To,
The Principal Executive Director,
RailTel Corporation of India Ltd. 6A, 6th Floor,
Gumidelli Towers, Begumpet Airport Road,
Prakash Nagar Metro Station,
Begumpet, Hyderabad – 500016

Ref: EoI No.:

Sub: Self declaration of not being under Ineligibility for corrupt and fraudulent practice

Dear Sir/Madam, we have examined the EoI document, we, the undersigned, herewith submit our response to your EoI no.: dated for

I. We have read the provisions of the EoI document and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our EoI shall not be given effect to.

II. We agree to abide by this EoI, consisting of this letter, the detailed response to the EoI and all attachments, for a period of 180 days from the date of submission of the bid.

III. We would like to declare that we are not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this assignment and we are not under a declaration of ineligibility for corrupt or fraudulent practices.

IV. We would like to declare that there is no conflict of interest in the services that we will be providing under the terms and conditions of this EoI.

V. We hereby declare that all the information and statements made in this proposal are true and accept that any misrepresentation contained in it may lead to our disqualification.

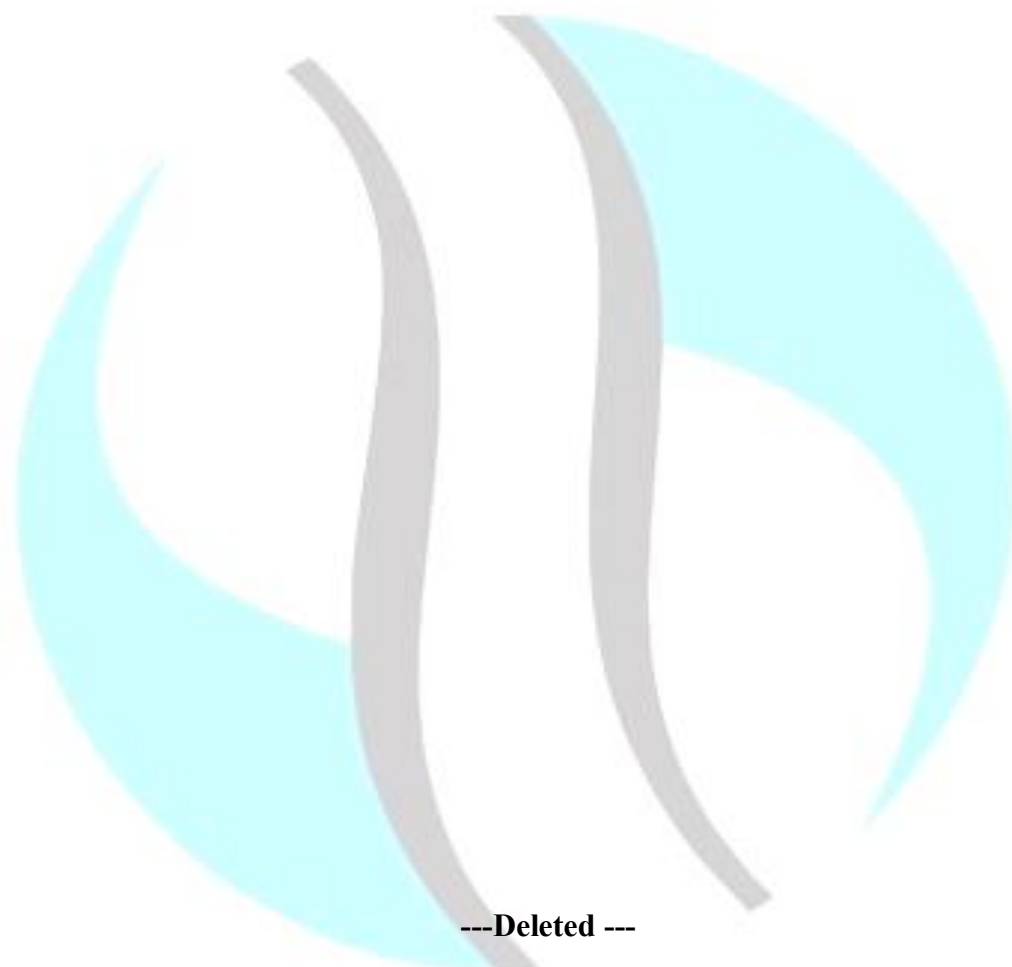
VI. We understand you are not bound to shortlist / accept any EoI you receive.

Sincerely,

Signature of Authorized Signatory and Seal of the Partner Name:

Designation:

Date:



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Annexure 10: NIL Deviation Compliance Undertaking

(This letter should be on the letterhead of the bidder duly signed by an authorized signatory)

To,
The Principal Executive Director,
RailTel Corporation of India Ltd.,
1-10-39 to 44, 6A, 6th Floor, Begumpet Airport Road,
Opp. Shoppers Stop, BEGUMPET, HYDERABAD- 500 016

EoI Reference No.:

Sub: NIL Deviation Compliance

Over and above all our earlier confirmations and submissions as per your requirements of the EoI, we confirm that,

1. All proposed in scope are compliant to the technical specifications of the equipment as mentioned in the latest version of the specifications in the EoI.
2. We hereby certify that the hardware and software (if applicable) mentioned in our technical solution and Bill of Material (BOQ) are complete.
3. We confirm that there is no requirement of any other hardware and software to fulfil requirements as per scope against the EoI. If any additional hardware and software is required to meet in-scope requirements, then it would be procured by us at no extra cost to RailTel.
4. We will also ensure unconditional compliance of all the terms and conditions as mentioned in the EoI document including all corrigenda, addenda and specifications.
5. List of deviations (Partial Compliance and Non-compliance) from terms and conditions as mentioned in the EoI document including all corrigenda, addenda and specifications, if any, is enclosed as Annexure with this form. We understand that any partial compliance or non-compliance may result in REJECTION of our bid.

Seal and signature of the bidder

Place:

Date:

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Annexure 11: Price Bid Format

(To be submitted in excel format price-bid in e-nivida portal)

EoI Ref No:

Name of the Bidder:

SN	Description of Work	Price (Excl. of GST)	GST in Rupees	Price Incl. of GST
1	Supply Installation and Commissioning for Smart Video Surveillance, Artificial Intelligence (AI)/Machine Learning (ML) based Video Analytics (VA), Predictive Analysis (PA), Incident Management System and IoT Technologies along with Integrated Command Control Centre (ICCC) and 5 Years Operations & Maintenance (O&M) Support for RailTel's End Customer" as per BoQ.			
Total Price (Incl. of GST)				

Bill of Quantity

SN	Item Description	Unit	Qty	Unit Price (Excl. GST)	Total Price (Excl. GST)
CAMERA COST					
1	Supply of Bullet Cameras (4MP)	No	389		
2	Supply of PTZ Cameras 35x Zoom	No	49		
3	Supply AI Edge Cameras (Wired only)	No	55		
Camera Costs Subtotal					
SOFTWARE COST					
1	VMS Software	No	1		
2	Low-Code Computer Vision AI Platform (Perpetual License)	No	1		
3	ICCC Software (Perpetual Licence)	No	1		
4	AI Powered Business Intelligence Dashboard	No	1		
5	Port Intelligence Integration Layer (POS, FOIS, Automation Weighment, NLP, SAP)	No	1		
6	NMS tool for remote management and monitoring (1000 IP Nodes)	No	1		
7	Security Infrastructure (Comprising Network Firewall)	No	1		
8	RDBMS	No	1		
Software Costs Subtotal					
INFRASTRUCTURE COST					
1	SAN Storage of 1 PB	No	1		
2	Video Management System Server	No	2		
3	Video Analytics Server	No	7		

SN	Item Description	Unit	Qty	Unit Price (Excl. GST)	Total Price (Excl. GST)
4	ICCC Server	No	3		
5	Video Storage devices, along with Hard Disk and Accessories	No	9		
6	Client Work Stations	No	8		
7	IP Joystick	No	2		
8	72" Video Wall (4×4)	No	1		
9		No	20		
10	Industrial Grade 16-Port PoE L2 Manageable Switch & Accessories	No	36		
11	Industrial Grade 24-Port PoE L2 Manageable Switch & Accessories	No	2		
12	Network Racks of 9U for network switches and Accessories	No	3		
13	Network Racks of 16U for network switches and Accessories	No	13		
14	16-Channel NVR + Outdoor Enclosure	No	13		
15	32-Channel NVR + Outdoor Enclosure	No	2		
16	64-Channel NVR + Outdoor Enclosure	No	3		
17	1 TB Surveillance Storage	No	12		
18	2 TB Surveillance Storage	No	1		
19	10 TB Surveillance Storage	No	1		
20	20 TB Surveillance Storage	No	1		
21	40 TB Surveillance Storage	No	1		
22	1 TB SD Card for AI Camera at Traffic Signals	No	88		
23	Wireless Transmission Equipment (PTP Kit) Outdoor CPE	No	13		
24	Wireless Receiver Equipment (Point to Multi Point Hop)	No	13		
25	Patch Cord (3 meter)	No	300		
26	Industrial Grade Power Converter (DC to DC) - Charge Controller	No	88		
27	Switch + UPS + NVR IP67 Weatherproof Casing (Enclosure Only)	No	34		
28	GPS Tracker with 4G GSM	No	6		
29	4G Cards + Activation Costs	No	98		
30	1 KVA UPS	No	47		
31	10 KVA UPS	No	1		
32	100 W panel with DC-DC Charge Controller, external batteries, charge controller and accessories (Battery and Enclosure)	No	75		
33	Edge Gateway with 4G Connectivity	No	88		
34	Power Cable for Camera (Industrial Grade)	Rmts	12160		
35	Power Over Ethernet - Network connectivity cables with all accessories	Rmts	15550		
36	Power cable switch with all accessories	Rmts	6000		
37	Optical Fibre cables with all accessories	Rmts	7000		

SN	Item Description	Unit	Qty	Unit Price (Excl. GST)	Total Price (Excl. GST)
38	Customized GI pipes and mounts	No	171		
39	lighting arrestor rod with insulator, copper insulated flexible cable, aviation lamp with power cable with accessories	No	32		
40	Surge Protector	No	400		
41	Earth Pit	No	10		
42	Workstations With Wide Viewing Monitor	No	8		
43	Multi-Function Laser Printer	No	1		
44	VC Unit (War Room)	No	1		
45	War Room 75 LED	No	1		
46	Online Uninterrupted Power Supply (UPS) System 30 KV	No	1		
47	ICCC interior (False ceiling, Wall putty & Painting, Glass Partition & Doors)	SFT	1500		
48	Integrated Building Management System	No	1		
49	Access Control System	No	1		
50	Rodent Repellent System	No	1		
51	Fire Alarm System	No	1		
52	High Sensitivity Smoke Detection System	No	1		
53	Gas Suppression System	No	1		
54	Water Leak Detection System	No	1		
55	Fixed Dome Cameras for Indoor Surveillance	No	10		
56	HVAC System	No	1		
57	Electrical Works	No	1		
58	LAN (Networking & Cabling)	No	1		
59	PA system incl. hardware, software, mounting infrastructure, accessories etc. at junctions.	No	5		
60	MD Cabin Table with Chair	No	1		
61	Manager Table with Chair	No	1		
62	War Room Table (16+1 Pax)	No	1		
63	War Room Chairs	No	17		
64	Modular Control Desk with Chair	No	3		
65	Supply of Reception Table with Chair	No	1		
66	Center Table	No	1		
67	3-Seater Sofa	No	2		
68	Printer Table	No	1		
69	Pantry Table	No	2		
70	Pantry Chair	No	12		
71	15 Meter Pole Structure (For CCTV) (Including accessories & labour)	No	130		
72	30 Meter Pole Structure (For CCTV) (Including accessories & labour)	No	49		
73	1.5 Meter Pole Top Extension Structure	No	3		

SN	Item Description	Unit	Qty	Unit Price (Excl. GST)	Total Price (Excl. GST)
74	20 Meter Pole Structure (For Wireless Transmission) - 2.5 Galvanised Steel Pipe with Accessories & labour	No	19		
75	PoE 1 Gbps Switches	No	5		
76	PoE 10 Gbps Switches at the ICCC	No	2		
77	3 plug switchboard	No	100		
Infrastructure Costs Subtotal					
IMPLEMENTATION COST					
1	Implementation, customization of Business Intelligence and Computer Vision Platform with different usecases	Job	1		
2	Implementation of ICCC Software	Job	1		
3	Integration with PoS and other applications for Port Intelligence Integration Layer	Job	1		
4	Installation and Commissioning Costs (All Hardware)	Job	1		
Implementation Costs Subtotal					
CAMC Costing (Including Manpower Supply) (1 Project manager, 3 Technicians, 3 Control Room Controller)					
1	1st Year CAMC @% of Capital expenditure	%			
2	2nd Year CAMC @% of Capital expenditure	%			
3	3rd Year CAMC @% of Capital expenditure	%			
4	4th Year CAMC @% of Capital expenditure	%			
5	5th Year CAMC @% of Capital expenditure	%			
Operation and Maintenance Costs Subtotal					
NETWORK COST					
1	24 C SMF Fiber	Rmts	11850		
2	Lay Length soft trench	Rmts	1000		
3	Lay length of the wall/conveyor (Fiber Optic Cabling)	Rmts	1600		
4	Lay length of the hard trench (Fiber Optic Cabling)	Rmts	9250		
5	Fiber Cable Converter / Tapping Equipment	Rmts	40		
6	Configuration and training	Job	1		
7	Electrical control panel - distribution panel	No	30		
Network Costs Subtotal					
DIGITAL TWIN PROTOTYPE (1 ROOM)					
1	Digital Twin Prototype Data Acquisition (Lidars, 360 Degree Cameras)	Lot	1		
2	Hardware Requirements (Servers)	Lot	1		
3	Digital Twin Software (Data Aggregator + Simulation)	Lot	1		
Total Amount (Excl. GST)					

Note: CAMC Percentage should not exceed 6%.

Annexure 12: Escalation Matrix

To,
The Principal Executive Director,
RailTel Corporation of India Ltd.,
1-10-39 to 44, 6A, 6th Floor, Begumpet Airport Road,
Opp. Shoppers Stop, BEGUMPET, HYDERABAD- 500 016

EoI Reference No.:

Sub: Escalation Matrix

Level	Name/ Designation	Responsibility	Expected Response Time	Mode of Contact
Level 1	Support Engineer / Helpdesk	Initial troubleshooting, logging, and first-level response	Within 1 hour	Phone, Email, Ticketing System
Level 2	Field Technical Lead	Escalation for unresolved issues, field coordination	Within 4 hours	Email, Mobile
Level 3	Regional / Project Manager	Issue prioritization, resource alignment, timeline control	Within 8 hours	Email, Phone
Level 4	Account / Delivery Head	Strategic resolution, compliance assurance, SLA deviation	Within 24 hours	Email, Official Letter (if required)

#Note: Name and Designation to be updated along with mode of contact.

Seal and signature of the bidder

Place:

Date:

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Annexure 13: Make and Model

To,
The Principal Executive Director,
RailTel Corporation of India Ltd.,
1-10-39 to 44, 6A, 6th Floor, Begumpet Airport Road,
Opp. Shoppers Stop, BEGUMPET, HYDERABAD- 500 016

EoI Reference No.:

Sub: Make and Model

SN	Item Description	Unit	Quantity	Make	Model
CAMERA					
1	Supply of Bullet Cameras (4MP)	No	389		
2	Supply of PTZ Cameras 35x Zoom	No	49		
3	Supply AI Edge Cameras (Wired only)	No	55		
SOFTWARE					
1	VMS Software	No	1		
2	Low-Code Computer Vision AI Platform (Perpetual License)	No	1		
3	ICCC Software (Perpetual Licence)	No	1		
4	AI Powered Business Intelligence Dashboard	No	1		
5	Port Intelligence Integration Layer (POS, FOIS, Automation Weighment, NLP, SAP)	No	1		
6	NMS tool for remote management and monitoring (1000 IP Nodes)	No	1		
7	Security Infrastructure (Comprising Network Firewall)	No	1		
8	RDBMS	No	1		
INFRASTRUCTURE					
1	SAN Storage of 1 PB	No	1		
2	Video Management System Server	No	2		
3	Video Analytics Server	No	7		
4	ICCC Server	No	3		
5	Video Storage devices, along with Hard Disk and Accessories	No	9		
6	Client Workstations	No	8		
7	IP Joystick	No	2		
8	72" Video Wall (4x4)	No	1		
9	Industrial Grade 8-Port PoE L2 Manageable Switch & Accessories	No	20		
10	Industrial Grade 16-Port PoE L2 Manageable Switch & Accessories	No	36		
11	Industrial Grade 24-Port PoE L2 Manageable Switch & Accessories	No	2		

SN	Item Description	Unit	Quantity	Make	Model
12	Network Racks of 9U for network switches and Accessories	No	3		
13	Network Racks of 16U for network switches and Accessories	No	13		
14	16-Channel NVR + Outdoor Enclosure	No	13		
15	32-Channel NVR + Outdoor Enclosure	No	2		
16	64-Channel NVR + Outdoor Enclosure	No	3		
17	1 TB Surveillance Storage	No	12		
18	2 TB Surveillance Storage	No	1		
19	10 TB Surveillance Storage	No	1		
20	20 TB Surveillance Storage	No	1		
21	40 TB Surveillance Storage	No	1		
22	1 TB SD Card for AI Camera at Traffic Signals	No	88		
23	Wireless Transmission Equipment (PTP Kit) Outdoor CPE	No	13		
24	Wireless Receiver Equipment (Point to Multi Point Hop)	No	13		
25	Patch Cord (3 meter)	No	300		
26	Industrial Grade Power Converter (DC to DC) - Charge Controller	No	88		
27	Switch + UPS + NVR IP67 Weatherproof Casing (Enclosure Only)	No	34		
28	GPS Tracker with 4G GSM	No	6		
29	4G Cards + Activation Costs	No	98		
30	1 KVA UPS	No	47		
31	10 KVA UPS	No	1		
32	100 W panel with DC-DC Charge Controller, external batteries, charge controller and accessories (Battery and Enclosure)	No	75		
33	Edge Gateway with 4G Connectivity	No	88		
34	Power Cable for Camera (Industrial Grade)	Rmts	12160		
35	Power Over Ethernet - Network connectivity cables with all accessories	Rmts	15550		
36	Power cable switch all accessories	Rmts	6000		
37	Optical Fibre cables with all accessories	Rmts	7000		
38	Customized GI pipes and mounts	No	171		
39	lighting arrestor rod with insulator, copper insulated flexible cable, aviation lamp with power cable with accessories	No	32		
40	Surge Protector	No	400		
41	Earth Pit	No	10		
42	Workstations With Wide Viewing Monitor	No	8		
43	Multi-Function Laser Printer	No	1		
44	VC Unit (War Room)	No	1		

SN	Item Description	Unit	Quantity	Make	Model
45	War Room 75 LED	No	1		
46	Online Uninterrupted Power Supply (UPS) System 30 KV	No	1		
47	ICCC interior (False ceiling, Wall putty & Painting, Glass Partition & Doors)	SFT	1500		
48	Integrated Building Management System	No	1		
49	Access Control System	No	1		
50	Rodent Repellent System	No	1		
51	Fire Alarm System	No	1		
52	High Sensitivity Smoke Detection System	No	1		
53	Gas Suppression System	No	1		
54	Water Leak Detection System	No	1		
55	Fixed Dome Cameras for Indoor Surveillance	No	10		
56	HVAC System	No	1		
57	Electrical Works	No	1		
58	LAN (Networking & Cabling)	No	1		
59	PA system incl. hardware, software, mounting infrastructure, accessories etc. at junctions.	No	5		
60	MD Cabin Table with Chair	No	1		
61	Manager Table with Chair	No	1		
62	War Room Table (16+1 Pax)	No	1		
63	War Room Chairs	No	17		
64	Modular Control Desk with Chair	No	3		
65	Supply of Reception Table with Chair	No	1		
66	Center Table	No	1		
67	3-Seater Sofa	No	2		
68	Printer Table	No	1		
69	Pantry Table	No	2		
70	Pantry Chair	No	12		
71	15 Meter Pole Structure (For CCTV) (Including accessories & labour)	No	130		
72	30 Meter Pole Structure (For CCTV) (Including accessories & labour)	No	49		
73	1.5 Meter Pole Top Extension Structure	No	3		
74	20 Meter Pole Structure (For Wireless Transmission) - 2.5 Galvanised Steel Pipe with Accessories & labour	No	19		
75	PoE 1 Gbps Switches	No	5		
76	PoE 10 Gbps Switches at the ICCC	No	2		
77	3 plug switchboards	No	100		
NETWORK					
1	24 C SMF Fiber	Rmts	11850		
2	Lay Length soft trench	Rmts	1000		

SN	Item Description	Unit	Quantity	Make	Model
3	Lay length of the wall/conveyor (Fiber Optic Cabling)	Rmts	1600		
4	Lay length of the hard trench (Fiber Optic Cabling)	Rmts	9250		
5	Fiber Cable Converter / Tapping Equipment	Rmts	40		
6	Configuration and training	Job	1		
7	Electrical control panel - distribution panel	No	30		
DIGITAL TWIN PROTOTYPE (1 ROOM)					
1	Digital Twin Prototype Data Acquisition (Lidars, 360 Degree Cameras)	Lot	1		
2	Hardware Requirements (Servers)	Lot	1		
3	Digital Twin Software (Data Aggregator + Simulation)	Lot	1		

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Annexure 14: Technical Specification

1) Camera Specifications (Bullet, PTZ and AI Camera)

SN	Parameter	PTZ	Bullet	AI Camera
1	Image Sensor	1/2.8" 4MP CMOS	1/2.7" 4MP CMOS	1/2.8" 4MP CMOS
2	Resolution	Up to 4MP (2560×1440)	Up to 4MP (2688×1520)	2560(H)X1440(V)
3	Lens	Optical Zoom (36X)	Fixed 3.6mm	Fixed 3.6mm
4	IR Range	Up to 250m	Up to 50m	Up to 50m
5	Operating Temperature	−50°C to +70°C	−40°C to +60°C	−40°C to +60°C
6	Power Supply	DC 24V	DC 12V	DC 12V
7	POE	PoE+	PoE	PoE
8	IP Rating	IP67	IP67	IP67
9	Security Certification	STQC	STQC	STQC
10	Motion Detection	NA	NA	Set Detection Area, Period, Can Set Multi-Level Sensitivity
11	Accessories	Power Adapters and any other accessories if required	Power Adapters and any other accessories if required	Power Adapters and any other accessories if required

The camera shall be capable of continuous 24×7 operation and provide video streams compatible with the ICCV Video Management System (VMS) over standard IP protocols. The camera shall support resolutions and frame rates suitable for surveillance and analytics applications, with configurable bandwidth and compression settings (H.264/H.265 or higher). The camera shall support secure network connectivity, remote NMS Monitoring, and interoperability with ICCV-side systems. The device shall be designed for reliable outdoor/indoor operation as per deployment requirements and shall meet the performance, latency, and storage integration needs of the respective application.

2) Software Specifications (VMS Software)

SN	Technical Specification
1.	Architecture: Centralized + Distributed edge support
2.	ONVIF compliance: Profile S, G, T
3.	Camera Compatibility: Support for 100+ Camera Models (Major OEMs)
4.	Live and Playback Stream – Up to 16 live streams per operator; 4K decoding support
5.	Recording Options: Continuous, scheduled, event-based
6.	Alerts – Motion, Tamper, Storage loss, network loss
7.	User Access Management – Role-based, Multi-level
8.	Licensing – Per Camera channel; Floating/Concurrent model

3) Software Specifications (Low Code Computer Vision AI Platform)

SN	Technical Specification
1.	Drag-and-drop interface for training & deploying models.
2.	Auto-retraining with new data.
3.	Simple 3-click installation
4.	Centralized management for all domains
5.	Real time key stakeholder alerts
6.	Distributed processing design
7.	Works with SAP, AWS, Azure, GCP, IoT
8.	GDPR & SOC2 compliance
9.	AES-256 encryption + role-based access

SN	Technical Specification
10.	Heatmaps, anomaly detection, playback
11.	Multi-site, multi-source support
12.	Adaptive AI pipelines
13.	Real Time Inference

4) Software Specifications (ICCC Software)

SN	Technical Specification
1	Assets Management – Movable, Immovable, Fixed Assets Register (for new assets installed as part of this project)
2	Warranty Information & Renewal Calendar (for new assets installed as part of this project)
3	Equipment – Tracking and Maintenance (for new assets installed as part of this project)
4	Spare Tools & Assembly Items – Management and Allocation (for new assets installed as part of this project)
5	Access Control Systems – Authentication, Authorization, Identity Management will have a dashboard in ICCC.
6	Point of Sale (POS) Integration – Terminal transactions and receipts
7	Attendance & Rosters – Daily Attendance, Monthly Attendance, Shifts (for manpower supplied for the scope of this project)
8	Incident Management – Incident Categories, Reporting, Escalation
9	Dashboard of existing systems integration with the port intelligence integration layer.
10	Alerts and Notifications: In-App
11	Assets Management – Movable, Immovable, Fixed Assets Register (for new assets installed as part of this project)
12	Warranty Information & Renewal Calendar (for new assets installed as part of this project)
13	Equipment – Tracking and Maintenance (for new assets installed as part of this project)
14	Reporting and System Functionality of the following: • Reports on incidents • Reports on alerts • Reports on Attendance (for manpower supplied for the scope of this project) • Report on Asset Lifecycle Management – Age, warranty, service history tracking • Report on Work Order & Maintenance Tracking • Spare Parts & Inventory Management – Stock levels & reorder alerts

5) Software Specifications (Port Intelligence Integration Layer (POS, FOIS, Automation Weighment, NLP, SAP))

SN	Technical Specification
1	Integration between ICCC, AI Powered BI Dashboard, and Legacy Systems via Port Intelligence Integration Layer: Integration Layer ↔ Cargo Management Integration Layer ↔ POS Integration Layer ↔ FOIS Integration Layer ↔ SAP Integration Layer ↔ NLP Integration Layer ↔ Automation Weighment Integration Layer ↔ Computer Vision Integration Layer ↔ BI Dashboard
2	Rules-driven data movement – Define conditions for data flows
3	Change Data Capture (CDC) – Update target systems as source data changes

SN	Technical Specification
4	Retry Mechanism – Automatic retries on data transfer failures
5	Notifications – Alerts to concerned teams for data pipeline issues
6	Job Scheduling – Define and execute data integration jobs at specific times
7	Support for Different Load Types – Batch, incremental, and real-time loads
8	Transfer Methods: - SFTP / HTTPS - Future real-time methods: MQTT, AMQP

6) Software Specifications (AI Powered Business Intelligence Dashboard)

SN	Technical Specification
1	Data Visualization – Charts, graphs, tables, heatmaps
2	Real-Time Data Updates – Auto-refresh dashboards with latest data
3	Interactive Filters – Time, region, department, parameters
4	Drill-Down Capability – Click metrics to view detailed data
5	KPIs & Metrics Tracking – Monitor critical performance indicators
6	Export & Sharing – Export or share dashboards with teams
7	User Access Control – Role-based dashboard access & security
8	Alerts & Notifications – Auto-alerts when thresholds crossed
9	Predictive & Prescriptive Analytics – AI/ML forecasting & recommendations
10	Mobile Optimization & Access – Responsive dashboards on phones/tablets
11	Geo-Spatial Analytics – Interactive maps & location-based insights
12	What-If Analysis & Scenario Planning – Simulate scenarios, assess risks
13	Automated Insights – Text summaries of trends/anomalies
14	Collaboration Tools – Commenting, sharing, co-editing in real time
15	Augmented Analytics – AI to discover hidden patterns/correlations

7) Software Specifications (NMS tool for remote management and monitoring (1000 IP Nodes))

SN	Technical Specification
1.	On Premises Hosting
2.	Licensing: Subscription/Perpetual
3.	Hardware Requirements: Windows / Linux based server
4.	Single Server Installation
5.	1000 Sensors / 1000 IP Nodes
6.	Regular Updates
7.	Maps and Dashboard
8.	Alert and Notification
9.	Distributed Monitoring
10.	Multiple User Interfaces
11.	Customizable Reporting
12.	Automatic Network Discovery

8) Software Specifications (Security Infrastructure (Firewall))

SN	Component	Details
1	GE RJ45 Ports	16
2	GE RJ45 Management / HA	02
3	GE SFP Slots	8
4	10 GE SFP+ Slots	2
5	USB Port	1
6	Console Port	1

SN	Component	Details
7	IPS Throughput	5 Gbps
8	NGFW Throughput	3.5 Gbps
9	Threat Protection Throughput	3 Gbps
10	IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP)	27 / 27 / 11 Gbps
11	Firewall Latency (64 byte, UDP)	4.78 μ s
12	Firewall Throughput (Packets per Second)	16.5 Mpps
13	Concurrent Sessions (TCP)	3 million
14	New Sessions per Second (TCP)	2,80,000
15	Firewall Policies	10,000
16	IPsec VPN Throughput (512 byte)	13 Gbps
17	Gateway-to-Gateway IPsec VPN Tunnels	2,000
18	Client-to-Gateway IPsec VPN Tunnels	16,000
19	SSL-VPN Throughput	2 Gbps
20	Concurrent SSL-VPN Users (Max Recommended, Tunnel Mode)	500
21	SSL Inspection Throughput (IPS, avg. HTTPS)	4 Gbps
22	SSL Inspection CPS (IPS, avg. HTTPS)	3,500
23	SSL Inspection Concurrent Sessions (IPS, avg. HTTPS)	3,00,000
24	Application Control Throughput (HTTP 64K)	13 Gbps
25	CAPWAP Throughput (HTTP 64K)	20 Gbps

9) Infrastructure Specifications (SAN)

SN	Parameter	Technical Specifications
1	No. of Controllers per appliance	2 redundant hot-swap controllers
2	Host Connectivity Per Controller	Fibre Channel 16/8Gb, iSCSI 10/1Gb, SAS 12/6Gb
3	Capacity Expansion	3.5Gbps Read, 3Gbps Write
4	Storage Expansion Port per Controller	4
5	Capacity Details	43 $\times$ 24TB = 1,032 TB raw
6	Supported Network Protocols	HTTP(S)
7	Drive Support and Type	NL-SAS HDD
8	Cache/Memory	16 GB per controller, mirrored, supercap + flash backup
9	Additional Storage Capacity (minimum) along with expansion using JBODs from day 1	Scalable to 120 drives with JBOD expansion
10	Management Port per Controller	10/100/1000 Ethernet, Mini USB
11	Supported OS	Windows Server, Linux, Unix
12	Power Supply	hot swappable Redundant power supply
13	RAID configuration	RAID 1,3,5,6,10,50;
14	Hot Spare Disk	Hot standby spare supported
15	General Features	Thin provisioning, snapshots, async replication, auto-tiering
16	Working Temperature & Humidity	5–35°C; 10%–80% RH non-condensing
17	Certifications / Regulatory compliance	"RoHS Directive (2011/65/EU) The WEEE Directive (2012/19/EU) The REACH Directive (EC) No. 1907/2006 and WFD Directive (EU) 2018/815"
18	Additional Features	Virtual pools, ADAPT
19	Encryption	Self-Encrypting drive
20	Virtualization Integration	VMware, Hyper-V, Citrix
21	Spare Disk at each site	≥ 1 per SAN

The SAN shall be designed using SAN switch and support high-speed Fibre Channel / iSCSI / NVMe-oF connectivity (as per project design). The SAN fabric shall provide connectivity between servers and storage. The SAN shall support Quality of Service (QoS) for secure and efficient traffic segregation.

SAN Switch

SN	Parameter	Specification
1	Fibre Channel ports	≥ 13
2	Access Gateway Mapping	40 SFP+ F_Ports, 8 SFP+ N_Ports
3	Scalability	Full-fabric architecture with a maximum of 239 switches
4	Certified Max	6,000 active nodes
5	Performance – Line Speed	4.25 / 8.5 / 14.025 Gbps full duplex; auto-sensing 4/8/16/32 Gbps
6	ISL Trunking	Up to 8×32 Gbps per trunk
7	Aggregate Bandwidth	2TBPS
8	Fabric Latency	Latency for locally switched ports is 700 ns
9	Max Frame Size	2,112-byte payload
10	Frame Buffers	15360 dynamics
11	Port Types	D_Port (ClearLink Diagnostic Port), E_Port, EX_Port, F_Port, AE_Port;
12	Management Supported Software	HTTP, SNMP v1/v3 (FE MIB, FC Management MIB), SSH; Auditing, Syslog; NTP v3 EZSwitch; Command Line Interface (CLI); SMI-S compliant; REST API; Administrative Domains; trial licenses for add-on capabilities
13	Management Access	10/100/1000 Mbps Ethernet (RJ-45), in-band over Fibre Channel, serial port (RJ-45)
14	Security	DH-CHAP (between switches and end devices), FCAP switch authentication; HTTPS, IPsec, IP filtering, LDAP with IPv6, OpenLDAP, Port Binding, RADIUS, TACACS+, user-defined Role-Based Access Control (RBAC), Secure Copy (SCP), Secure RPC, Secure Syslog, SFTP, SSH v2, SSL, Switch Binding, Trusted Switch
15	Operating Temp.	0°C to 40°C
16	Operating Humidity	10% to 85% non-condensing
17	Power Supply	Dual, hot-swappable redundant power supplies with integrated system cooling fans
18	AC Input Voltage	90 V to 264 V ~3.5 A
19	Maximum AC Power Consumption	204 W

10) Infrastructure Specifications (Video Management Server, Video Analytics Server, ICCS Server)

SN	Parameter	Specification
1	No. Of servers	12
2	Processor Make	Intel Xeon Silver 4416+ or equivalent
3	Maximum Number of sockets available on Server	2
4	Maximum number of Sockets populated with Processors available on Server	1

SN	Parameter	Specification
5	Number of cores per Processor	20
6	Chipset compatible with CPU	Yes
7	Storage	1TB SSD
8	Type of RAM	32GB DDR4 or better
9	Total number of DIMM slots available	32
10	Number of DIMM Slots populated	2
11	RAM Size (GB)	64 GB
12	No. of Raid Controller Ports	RAID Controller Ports (Internal): 8 RAID Controller Ports (External): 8 Total = 16 RAID controller ports
13	Speed of Raid Controller Ports (Gbps)	Speed of RAID controller ports = 12 Gb/s (both internal and external)
14	Video Controller (Support VGA or Above Resolution)	supports VGA
15	USB Ports (Version 2.0/3.0)	USB 3.x Ports: 3 (all USB 3.2 Gen1, equivalent to USB 3.0 speed – 5 Gb/s) USB 2.0 Ports: 1 (internal)
16	Network Card Supported	Broadcom 57416 10GBASE-T 2-port OCP or equivalent
17	No. of Network Ports	Network Data Ports: 2 (10GbE) Management Port: 1 (1GbE XCC) Total Network Ports = 3 (2 × 10GbE + 1 × 1GbE management).
18	Redundant Power Supply	Hot-Swap (2 × redundant)
19	GPU	NVIDIA RTX 6000 ADA, 48 GB VRAM or Equivalent
20	Power & Temperature monitoring: Should support Real-time power meter graphing thresholds alerts & capping with historical power counters Temperature monitoring & graphing through dashboard.	Required
21	HTML5 support for virtual console & virtual media without using Java or ActiveX plugins.	Required
22	The server should have dedicated secure Remote management port over LAN / WAN with SSL Encryption.	Required
23	10G Base-T OCP NIC -> 2 x 10G Base T-ports, Management Port, 16G FC HBA cards	Required
24	Material required for Installation and commissioning of Servers and switches in Data (Patch cords, Patch cable connectors, etc)	Required

The bidder/OEM shall design, size, and configure the server hardware appropriately to meet the performance, scalability, and availability requirements of the designated applications to be hosted. The final configuration shall ensure optimal performance under peak load conditions, with adequate headroom for future growth. Necessary SFPs and power supply cables and any other accessories to be

supplied along with Server. The server shall be equipped with sufficient host bus adapters (HBAs) / Fibre Channel / iSCSI ports to ensure seamless integration with the SAN storage through the SAN switch. The number and speed of ports shall be provisioned in accordance with the SAN design and adequate bandwidth for storage access.

11) Infrastructure Specifications (Video Storage device)

SN	Parameter	Specifications	Requirement
1	Physical Identification	No. of Controllers	1
2	Type	Storage System Type	NAS Appliance
3	Capacity	Storage Capacity (TB)	1152 TB Raw storage, 882TB usable after RAID 5
4	Disk	Disk Type	3.5" SATA HDD
		Speed of dual ported disk drive in Gbps	SATA 6 Gb/s (single port)
		Total Numbers of Drive Slots	10 (8 × 3.5" bays, 2 × M.2 slots)
		Number of Drive Slots Populated with drives of different type in the Storage System	Up to 8 populated
		Provision for additional Capacity	Yes (M.2 SSD, PCIe expansion)
		If Yes, Number of Drive Slots available to achieve additional capacity	2 × M.2 NVMe slots
5	Connectivity / Port	Type of Front-end Ports	Ethernet (2 × 2.5GbE)
		Number of Front-end Ports	2
		Speed of front-end Ports in Gbps	2.5 Gbps each
		Type of Back-end Ports	SATA 6Gb/s (drive backplane)
		Number of Back-end Ports	8
		Speed of Back-end ports in Gbps	6 Gb/s
6	Controllers	Number of Controllers/VSD/ Node available in the storage System on common back plane without using external switch/device OR without common backplane using switches	1 controller
		RAID Level Support	RAID 1,5,6,10, JBOD
7	System Cache	Total Configurable Cache (GB)	8 GB DDR4 standard, expandable to 64 GB
8	Stripping	Wide Stripping or equivalent feature	Supported via RAID 5/6
9	Snapshot	No of Snapshot Copies Per Volume	Up to 1024
		License for Snapshot included	Yes
10	Data Replication	Remote Replication	Supported (RTRR, Rsync)
		Synchronized Replication Support	Yes (Rsync)
		Asynchronous Replication Support	Yes (RTRR)
11	Data Compression	Data Compression	Available
12	Encryption Mode	Encryption Required	Yes

		Type of Data at Rest Encryption	AES-NI hardware engine
13	Management	Storage management software for configuration and multi-pathing (part of the supply)	Web, CLI, Apps
14	Protocol Support	Protocols Supported by the storage system from day one	SMB/CIFS, NFS, AFP, iSCSI, FTP, WebDAV
15	OS Support	Operating System Platform and Clustering Supported by the Storage from day one	Windows, Linux, macOS, VMware
16	Environmental Parameters	Operating Temperature Range	0°C to 40°C
		Storage Temperature Range	-20°C to 70°C
		Operating Humidity (Rh)	5%–95% RH non-condensing
		Storage Humidity (Rh)	5%–95% RH
17	Compliance	Storage System is compliant with IPv6	Yes
18	Power	Standby power consumption of System in Watt	25.7 W
19	Scope of Supply / Work	Scope of Supply (It includes installation, commissioning & integration together with all necessary software to make the system fully functional as intended.)	Includes hardware, installation, commissioning & integration
20	- Proposed NAS system should have the capability to tier data to an Object Storage or Cloud natively. - Solution should have capability for ensuring the integrity of files/data/volume from Day-1		

The solution shall provide a scalable Network Attached Storage (NAS) system for centralized storage of CCTV video feeds. The NAS shall be connected to the ICCC network through 1 Gbps network switches (or higher, as per design) and shall support continuous 24×7 video recording. The NAS shall be configured with sufficient storage capacity based on the number of cameras, resolution, frame rate, compression format, and required video retention period. The NAS shall use surveillance-grade, enterprise-class HDDs optimized for high write workloads and support RAID protection to ensure fault tolerance.

12) Infrastructure Specifications (Client Workstation)

SN	Parameter	Specification
1	Processor	13th Gen i5
2	Memory	16 GB DDR4 (2 × 8 GB), expandable, dual slots
3	Storage	1 TB NVMe SSD
4	Display	27" FHD (1920 × 1080), IPS, anti-glare, 300 nits brightness
5	Graphics	Integrated GPU
6	Connectivity	LAN (1 Gbps), Wi-Fi 6, Bluetooth 5.3
7	Ports	USB-C, USB 3.0, USB 2.0, HDMI-out, RJ45, Audio Combo
8	Camera & Audio	1080p FHD IR webcam with mic, dual speakers
9	Power Supply	90W AC Adapter, Energy Efficient
10	Operating System	Windows 11/Linux

The workstation shall be designed for continuous 24×7 operation in an ICCC environment. It shall be equipped with sufficient processing power (multi-core CPU), memory, storage, and graphics capability to support applications such as video monitoring, analytics, and command-and-control software. The workstation shall support multiple high-resolution display outputs for video walls/operator consoles and be compatible with the ICCC's central software platforms.

13) Infrastructure Specifications (IP Joystick)

SN	Parameter	Specification
1	Interface & Protocol	Network / Serial Communication
2	Communication Baud Rate	2400 – 115200 bps
3	Control Input	4D Joystick (direction + zoom)
4	Display	LCD Screen
5	Power Supply	DC 12V ±10%
6	Power Consumption	≤ 6W
7	Operating Temperature	-10°C to +50°C
8	Operating Humidity	≤ 90% RH (non-condensing)

The IP joystick shall be designed for seamless control of PTZ cameras and integrated with the ICCC's Video Management System (VMS) over standard IP protocols.

14) Infrastructure Specifications (Video Wall)

SN	Parameter	Specification
1	Pixel Pitch	2.5
2	Pixel Density	160000 pixels/m ²
3	Brightness	600 nits
4	Viewing Angle	160° (H) / 160° (V)
5	Operating Temperature	-10°C to +45°C
6	Dimension	72"(4*4)
7	Max. Power Consumption(W/Unit)	90W
8	Operating Power Source	180-240V AC 50/60 HZ

The video wall shall be designed for continuous 24×7 operation in an ICCC environment and capable of displaying CCTV feeds, dashboards, maps, and application data from multiple sources simultaneously. The video wall shall support modular, seamless display panels with high resolution and brightness suitable for control room conditions, ensuring wide viewing angles and uniform colour reproduction. The system shall support centralized control and integration with the ICCC's Video Management System (VMS), network, and visualization platforms.

15) Infrastructure Specifications (8 Port POE Switch)

SN	Switch Type-A(POE): Minimum Specifications
1	Should have minimum 8 GE ports.
2	Should have minimum 2 nos. SFP based 1 GE ports.
3	Should have at least 20 Gbps switching fabric.
4	Should support port Trunking of at least 2 nos. 1GE ports.
5	Should support 802.3af and 802.3at
6	Should support PoE of 8 ports.
7	Switch should support IEEE 802.3ad, IEEE 802.3az standards
8	Should support transceiver Digital Diagnostic Monitoring for optical ports.
9	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
10	Should support for 802.3x flow control.
11	Should support at least 8000 entries in the MAC table.
12	Should support vlan range 1-4000 and at least 32 active VLANs.
13	Should support jumbo frame (9000 Byte or above)
14	Should support LLDP or similar functionality.
15	Should support port mirroring.

SN	Switch Type-A(POE): Minimum Specifications
16	Switch should support IPv6.
17	Should support 802.1D spanning tree control/RSTP support and MSTP Support
18	Should support spanning-tree portfast for fast convergence or similar functionality.
19	Should support spanning-tree root guard or similar functionality.
20	Should support spanning-tree bpd guard, bpd filter or similar functionality.
21	Should support DHCP snooping
22	Should support ITU-T G.8032 Ethernet Ring Protection designed for loop protection and fast convergence times (sub 50 ms) in ring topologies
23	Should support IGMP v1/v2/v3 and IGMP Snooping
24	Should support security features Broadcast, Multicast and Unicast Storm Control
25	Should support security features DoS Attack Prevention
26	Should support management features SNMP, Syslog, NTP, RADIUS
27	Should support Layer 2 QoS
28	Should support Strict Priority Queue, Weighted Round Robin (WRR), Rate Limiting (Bandwidth Control) or equivalent
29	Should run on AC supply (with external adaptors if required)
30	Switch should comply to Operating Temperature range 0°C to 50 °C
31	All accessories required for 19" rack mounting should be supplied.

16) Infrastructure Specifications (24 Port POE Switch)

SN	Parameter	Specification
1	Ports	24 × RJ45 (10/100/1000 Mbps), 4 × SFP
2	Switching Capacity	>=56 Gbps (non-blocking)
3	Forwarding Rate	>=83.33 Mpps
4	Power Input	100–240 V AC, 50/60 Hz
5	Power Consumption	9 W (idle), up to 330 W (max)
6	PoE Support	IEEE 802.3af/at, 30 W per port, 300 W budget
7	Operating Temperature	0 °C to +50 °C
8	Operating Humidity	10% to 90% (non-condensing)

17) Infrastructure Specifications (9U Rack)

SN	Parameter	Specification
1	Rack Type	Floor Mount, General Electronics
2	Size (Usable Units)	9U (Standard 19" width)
3	Dimensions (mm)	Minimum 600 (W) × 600 (D) × ~597 (H)
4	Construction	Welded steel frame, powder coated
5	Front Door	Lockable toughened glass
6	Rear Door	Lockable steel door
7	Load Capacity	Up to 150 kg (static)
8	Mounting	Casters (2 with brake, 2 without brake)

18) Infrastructure Specifications (16U Rack)

SN	Parameter	Specification
1	Rack Type	Floor Mount, General Electronics
2	Size (Usable Units)	16U (Standard 19" width) or better
3	Dimensions (mm)	Minimum 600 (W) × 600 (D) × ~952 (H)
4	Construction	Welded steel frame, powder coated

SN	Parameter	Specification
5	Front Door	Lockable toughened glass
6	Rear Door	Lockable steel door
7	Load Capacity	Up to 150 kg (static)
8	Mounting	Casters (2 with brake, 2 without brake)

19) Infrastructure Specifications (NVR)

SN	Parameter	Specification	Specification	Specification
1	IP Camera Input	32 channels	64 channels	16 channels
2	Video Compression	H.265, H.264, MJPEG	H.265, H.264+, H.264, MJPEG	H.265, H.264+, H.264, MJPEG
3	Max. Resolution	Up to 16 MP	Up to 32 MP	Up to 12 MP
4	Bandwidth	256 Mbps (AI off), 180 Mbps (AI on)	384 Mbps (AI off), 200 Mbps (AI on)	While AI Disabled: 160 Mbps (incoming, recording) 80 Mbps outgoing While AI on: 80 Mbps (incoming, recording) 60 Mbps outgoing
5	Storage	4 SATA, up to 16 TB each, RAID 0/1/5/6/10	8 SATA, up to 20 TB each, RAID 0/1/5/6/10	2 SATA, up to 20 TB each, RAID 0/1/5/6/10
6	Interfaces	HDMI, VGA, USB, SATA Port, RS232/485	HDMI, VGA, USB, eSATA, RS232/RS485	HDMI, VGA, USB, RJ45
7	Power Supply	100–240 V AC, 50/60 Hz	100–240 V AC, 50/60 Hz	12V DC, 4A
8	Power Consumption	≤ 10 W (without HDD)	≤ 13 W (without HDD)	≤ 10 W (without HDD)
9	Operating Temperature	-10 °C to +55 °C	-10 °C to +55 °C	-10 °C to +55 °C

The NVR solution shall be configurable to support the full camera feed capacity of the designated location, with adequate processing, storage to ensure uninterrupted recording and monitoring. The NVR sizing shall be carried out based on the number of cameras, resolution, frame rate, compression standard, and retention period required for the site.

20) Infrastructure Specifications (Wireless Tx Equipment)

SN	Parameter	Specification (P2P)
1	Interface	1 × 10/100 Mbps Shielded Ethernet Port
2	Wireless Standard	802.11n (2×2 MIMO)
3	Antenna	Built-in 23 dBi
4	Wireless Speed	≥ 300 Mbps (40MHz, Dynamic)
5	Power Supply	Passive PoE (24V,0.5A Max)
6	Power Consumption	≤ 7.41 W
7	Protection	15 kV ESD, 6 kV Lightning
8	IP rating	IP65
9	Frequency	5.15~5.85GHz

The Wireless device shall be capable of wirelessly transmitting data from the field location to the ICCC over a secure and reliable wireless link. The field device shall be fully compatible and interoperable

with the corresponding wireless device at the ICCC end, ensuring seamless connectivity. The device shall support the bandwidth, latency, and QoS requirements of the designated applications.

21) Infrastructure Specifications (Wireless Rx Equipment)

SN	Parameter	Specification (P to MP)
1	Interface	1 10/100Mbps Shielded Ethernet Port
2	Wireless Standard	802.11a/n (with Pharos MAXtream disabled)
3	Antenna	Built-in 13dBi 2x2 Dual-polarized Directional Antenna
4	Wireless Speed	≥ 300 Mbps (40MHz, Dynamic)
5	Power Supply	Passive PoE Adapter (24V 0.5A)
6	Power Consumption	≤ 9.8 W
7	Protection	15 kV ESD, 6 kV Lightning
8	IP rating	IPX5
9	Frequency	5.15~5.85GHz

The Wireless device shall be capable of wirelessly transmitting data from the field location to the ICCC over a secure and reliable wireless link. The field device shall be fully compatible and interoperable with the corresponding wireless device at the ICCC end, ensuring seamless connectivity. The device shall support the bandwidth, latency, and QoS requirements of the designated applications.

22) Infrastructure Specifications (Power Adapter)

SN	Parameter	Specification
1	Input Voltage	100–240 V AC, 50/60 Hz
2	Output Voltage	12 V DC
3	Output Current	Up to 5 A
4	Rated Power	≤ 60 W
5	Connector Size	5.5 mm $\times$ 2.5 mm (compatible with 5.5 $\times$ 2.1 mm)
6	Power Protection	Over-voltage, overload, thermal, short-circuit
7	Usage/Application	CCTV, routers, speakers, small electronics
8	Safety Features	Low energy consumption, surge & spike protection

23) Infrastructure Specifications (GPS Tracker)

SN	Parameter	Specification
1	Connectivity	4G CAT1 with fallback to 2G
2	Motion Sensor	6-Axis Accelerometer + Gyroscope
3	External Memory	32 MB
4	Battery	1500 mAh (up to 8+ hours backup)
5	Bluetooth	BLE 5.1
6	Indicators	4 LEDs (LTE, GPS, Power, BLE)
7	Operating Voltage	8–90 V (Max. 100 V)
8	GNSS Support	GPS (L1), GLONASS, Galileo, IRNSS
9	Interfaces	RS232, USB/TTL, eSIM (dual profile), Digital Inputs (DI), SOS input
10	Antennas	Internal GPS and LTE antennas
11	Operational Temp.	-10 °C to +75 °C
12	Storage Temp.	-20 °C to +85 °C
13	Humidity Tolerance	95% RH at 50 °C
14	IP Rating	IP67
15	Installation Accessories	Included

24) Infrastructure Specifications (1 kVA, 10 kVA and 30 kVA UPS)

SN	Parameter	1 kVA	10 kVA
1	Power Rating	1000 VA / 800 W	10,000 VA / 9000 W
2	Input Voltage Range	110–300 V AC	110–275 V AC
3	Input Frequency	45–55 Hz / 54–66 Hz	45–55 Hz / 54–66 Hz
4	Output Voltage	220 V AC	208V / 220V / 230V / 240V
5	Output Waveform	Pure Sine Wave	Pure Sine Wave
6	Output Power Factor	0.8	≥ 0.9
7	Battery Voltage	36 V DC (3 × 12V)	288 V DC
8	Battery Type	SMF	SMF
9	Protection	Automatic Bypass, Over-voltage Cut-off	Overload, Short-circuit, Surge
10	Operating Temperature	0 °C to 45 °C	0 °C to 40 °C
11	Communication Ports	RS232, USB	RS232, USB
12	Number of Batteries	3 (42 AH Each)	16 (100 AH Each)
13	Battery Internal/External	External	External

SN	Parameter	30 kVA
1	Power Rating	30,000 VA / 27,000 W
2	Input Voltage Range	380–415 V AC
3	Input Frequency	50–60 Hz
4	Output Voltage	380-415 V
5	Output Power Factor	0.9
6	Battery Voltage	400 V DC (nominal)
7	Battery Type	SMF
8	Operating Temperature	0 °C to 40 °C
9	Communication Ports	RS232, USB
10	Number of Batteries	36 (65 AH Each)
11	Battery Internal/External	External

The 30KVA UPS system shall be designed to provide continuous, clean, and reliable power backup for ICCV servers, storage, networking, video walls, and operator consoles. The UPS shall ensure protection from power failures, surges, sags, and harmonics. The system shall include battery backup capacity to support ICCV critical loads for the required backup duration.

25) Infrastructure Specifications (Solar Panel)

Controller

SN	Parameter	Specification
1	Power	150 W
2	Charge Controller Type	PWM
3	Rated Voltage	24 VDC
4	Capacity	10 Amp
5	Phase	Single Phase
6	Load Type	AC

Panel

SN	Parameter	Specification
1	Model Type	Mono Perc
2	Busbar	12BB
3	Rating (Wp)	125
4	Volt	12V
5	Dimension (mm)	1010 × 665 × 35

Battery

SN	Parameter	Specification
1	Type	12V 100AH Inverter Battery
2	Product Dimensions	27 × 18 × 21 cm
3	Weight	10 kg
4	Batteries Required	1 × 12V Battery
5	Compatible Devices	UPS Inverter
6	Mounting Hardware	1 × 12V 100AH Battery
7	Battery Capacity	100 Ah

The solar panels shall be high-efficiency, weatherproof photovoltaic (PV) modules designed for outdoor 24×7 operation. The panels shall be sized to generate sufficient power to support the connected ICCC field equipment (e.g., CCTV cameras, edge computing device) along with the required battery charging capacity. The panels shall be resistant to dust, rain, UV exposure, and high temperatures.

26) Infrastructure Specifications (Edge)

SN	Parameter	Specification
1	AI Performance	40 TOPS
2	GPU	1024-core NVIDIA Ampere architecture GPU with 32 tensor cores
3	Max GPU Freq.	625 MHz
4	CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU (1.5MB L2 + 4MB L3)
5	CPU Max Freq.	1.5 GHz
6	Memory	8GB 128-bit LPDDR5, 68 GB/s
7	Storage	Supports external NVMe
8	Camera	Up to 4 cameras (8 via virtual channels), 8 MIPI CSI-2 lanes, D-PHY 2.1 (up to 20 Gbps)
9	Video Encode	1080p30 supported by 1–2 CPU cores
10	Video Decode	1x 4K60 (H.265), 2x 4K30 (H.265), 5x 1080p60 (H.265), 11x 1080p30 (H.265)
11	USB	3x USB 3.2 Gen2 (10 Gbps), 3x USB 2.0
12	Networking	1x GbE
13	Display	1x 4K30 multi-mode DP 1.2 (+MST)/eDP 1.4/HDMI 1.4
14	Power	Input Voltage: 5V – 20V; Module Power: 7W – 15W

27) Infrastructure Specifications (GSM)

SN	Parameter	Specification
1	Sub-6G Bands	n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79
2	LTE-FDD	B1, B2, B3, B4, B5, B8, B19

SN	Parameter	Specification
3	LTE-TDD	B34, B38, B39, B40, B41, B42, B43, B48
4	WCDMA	B1, B2, B4, B5, B8, B19
5	GNSS	GPS, GLONASS, Beidou, Galileo, QZSS
6	Data Rate (Sub-6G)	SA: 2.4 Gbps (DL) / 900 Mbps (UL) NSA: 3.4 Gbps (DL) / 550 Mbps (UL)
7	Data Rate (LTE)	1.6 Gbps (DL) / 200 Mbps (UL)
8	Data Rate (HSPA)	42 Mbps (DL) / 5.76 Mbps (UL)
9	SIM Card	1.8V / 3.0V
10	Power Supply	5V 3A
11	Antenna Connector	4 × IPEX-4 connector
12	Module Dimensions	52.0 × 30.0 × 2.3 mm

28) Infrastructure Specifications (Workstation with Wide view)

SN	Parameter	Specification
1	Monitor Type	Curved Ultrawide Display
2	Processor	Intel Core i3 (12th Gen)
3	RAM	8 GB
4	Storage	512 GB HDD
5	Graphics	Intel UHD Graphics 730 or Equivalent
6	Operating System	Windows 11 Home or Higher
7	Screen Size	34 inches
8	Display Resolution	3440 x 1440 pixels
9	Aspect Ratio	21:9 (Ultrawide)
10	Panel Type	Curved LCD
11	HDR Support	HDR10
12	USB Ports	4 x USB 2.0
13	Connectivity	Wi-Fi + Bluetooth
14	Audio Output	Dual Speakers + Headphone Jack
15	Monitor Adjustability	Tilt

29) Infrastructure Specifications (VC Unit)

SN	Parameter	Specification
1	Camera	Dual 4K 70 and 120-degree HFOV
2	Microphone pickup range	Up to 25 ft./7.6 m
3	Expansion microphones supported	Yes
4	Speakers	Two-way stereo with bass ports
5	Device mode for USB connection to laptop	Yes
6	Standards-based (H.323 and SIP) video	In-built

30) Infrastructure Specifications (War Room LED)

SN	Parameter	Specifications
1	Display Resolution	3840 × 2160 (4K UHD)
2	Brightness	350–500 cd/m ²
3	Touch Points	Up to 40
4	Touch Accuracy	1 mm

SN	Parameter	Specifications
5	Response Time	First Point < 2 ms
6	Front Speakers	2 × 20 W
7	Supporting Operating System	Android, Optional Windows OPS, Mac, Linux
8	CPU/GPU	Same
9	RAM / Storage	4GB RAM / 32 GB ROM
10	Connectivity	HDMI, USB 3.0, LAN, Wi-Fi, Bluetooth
11	Lifespan	Up to 60,000 hours
12	Power Supply	100–240 V AC, 50/60 Hz
13	Operating Temperature	0 °C to 40 °C
14	Dimension	75"

31) Infrastructure Specifications (Integrated Building Management System)

SN	Parameters	Specifications
1	BMS System	i7 Processor, 500GB Hard Disk, 16GB RAM, 24-inch Monitor, Keyboard and Mouse, Antivirus Software
2	BMS Software Features	Integrated workflow with one user interface Information sharing between fire, access control, video surveillance, HVAC. Remote access via web client (fire read only) Remote notification of events via e-mail, SMS and pagers
3	Modbus to BACnet/IP Integrator	For 3rd Party Equipment Integration with BMS Software
4	Cable	2C x 1.5 Sqmm Shielded Cable, Unarmored
5	Conduit	25mm PVC Conduit
6	Network Cable	CAT 6 Cable
7	Network Switch	8 Port

32) Infrastructure Specifications (Access Control System)

SN	Parameter	Specification
1	Fingerprints Capacity	800
2	Fingerprint Sensor	500 DPI Optical Sensor
3	Card Reader	Yes
4	Communication	TCP/IP, USB Host
5	Operating Temp	0 - 40 Degrees C
6	Power Supply	12 V DC, 1.5 A

33) Infrastructure Specifications (Fire Alarm System)

SN	Parameter	Specification
1	Display	16×2 Char LCD Screen
2	Control Keys	Silence Buzzer, Reset, Evacuate
3	Indicators	Fire, Fault, Power, System Fault
4	Operating Voltage	230V AC ±20%
5	Operating Temp.	0°C to 49°C
6	Humidity	5% to 95% RH, non-condensing
7	Standby Battery	2×12V (2.8–7Ah)

34) Infrastructure Specifications (Smoke Detector System)

SN	Parameter	Specification
1	Type	Photoelectric Smoke Detector
2	Operating Voltage	8–30 VDC
3	Standby Current	50 μ A @ 24VDC
4	Alarm Current	80 mA @ 24VDC
5	Operating Temp.	–30°C to +70°C
6	Humidity	0–95% RH, non-condensing

35) Infrastructure Specifications (Gas Suppression System)

Features of Gas Suppression system & its fluid.

SN	Parameter	Specification
1	Chemical Formula	$\text{CF}_3\text{CF}_2\text{C}(\text{O})\text{CF}(\text{CF}_3)_2$
2	Molecular Weight	316.04
3	Boiling Point	49.2°C
4	Freezing Point	–108°C
5	Density (Liquid)	1.60 g/ml
6	Vapor Pressure	0.404 bar
7	Operating Use Range	Class A, B, C Fire Suppression
8	Environmental Impact	Ozone Depletion Potential ODP: 0, Global Warming Potential IPCC: <1, Lifetime ~5 days

36) Infrastructure Specifications (Water Leakage Detection System)

SN	Parameter	Specification
1	Supply Voltage	230VAC $\pm$ 50Hz
2	Supply Current	50mA
3	Output	12A @ 250VAC
4	Response Time	<1 sec
5	Max. Cable Length	200 m with leader cable
6	Alarm Output	85 dB @ 10 cm
7	Operating Temp.	0°C to 40°C
8	Humidity	0–80% RH, non-condensing

37) Infrastructure Specifications (Fixed Dome Camera for indoor surveillance)

SN	Parameter	Specification
1	Image Sensor	1/2.8" 2MP CMOS
2	Resolution	1920×1080 @ 30 fps
3	Lens	3.6 mm (2.8 mm optional)
4	IR Range	30 m
5	Compression	H.265, H.264, MJPEG
6	Power Supply	12 VDC / PoE (802.3af)
7	Power Consumption	Max ~4.2 W
8	Operating Temp.	–40°C to +60°C
9	IP Rating	IP 67

38) Infrastructure Specifications (HVAC system)

SN	Parameter	Specifications
1	Nominal cooling capacity	132000Btu/Hr , 38.7KW
2	Actual Capacity	Minimum 90%
3	Nominal total Input Power(capacity)	14600 W
4	Running Current	23 A
4	Power Source	415/3/50 V/Ph/HZ
6	Control-Operation	Wired Control
7	Air Flow- High	4400 cfm
8	Air Flow- Medium	3850 cfm
9	Air Flow-Low	3330 cfm
10	Static Pressure-High	60 Pa
11	Sound Pressure Level	54 DbA

39) Infrastructure Specifications (1G Switch)

SN	Switch Type-B: Minimum Specifications
1	Should have minimum 24x100/1000 RJ45 ports.
2	Should have minimum 4 nos. SFP based ports (1G)
3	Should have at least 56 Gbps switching fabric.
4	Should have at least 40 Mpps forwarding rate (with 64 Bytes).
5	Switch should support IEEE 802.3ad, IEEE 802.3az standards.
6	Should support transceiver Digital Diagnostic Monitoring for optical ports.
7	Should support for 802.3x flow control.
8	Should support at least 16000 entries in the MAC table.
9	Should support vlan range 1-4000 and at least 256 active VLANs.
10	Should support jumbo frame (9000 Byte or above).
11	Should support Port-based VLAN, 802.1Q Tagged VLAN.
12	Should support LLDP or similar functionality.
13	Should support port mirroring.
14	Switch should support IPv6.
15	Should support 802.1D spanning tree control/RSTP support and MSTP Support.
16	Should support spanning-tree portfast for fast convergence or similar functionality.
17	Should support spanning-tree root guard or similar functionality.
18	Should support spanning-tree bpdu guard, bpdu filter or similar functionality.
19	Should support IGMP v1/v2/v3 and IGMP Snooping.
20	Should support security features Broadcast, Multicast and Unicast Storm Control.
21	Should support security features DoS Attack Prevention.
22	Should support console port and ssh v2 based management.
23	Should support management features SNMP, Syslog, NTP, RADIUS.
24	Should support Layer 2 QoS.
25	Should support Strict Priority Queue, Weighted Round Robin (WRR), Rate Limiting (Bandwidth Control) or equivalent
26	Should have redundant AC Power Supply 100 to 240 V with 50 to 60 Hz.
27	Switch should comply to Operating Temperature range 0°C to 50 °C.
28	All accessories required for 19" rack mounting should be supplied.

40) Infrastructure Specifications (10G Switch)

SN	Switch Type-C: Minimum Specifications
1	Should have minimum 12GbE + 12 SFP ports.
2	Should have minimum 4x1/10G SFP+ based ports.
3	Should have at least 128 Gbps switching fabric.
4	Should have at least 80 Mpps forwarding rate (with 64 Bytes).
5	Switch should support IEEE 802.3ad, IEEE 802.3az standards
6	Should support transceiver Digital Diagnostic Monitoring for optical ports.
7	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.
8	Should support for 802.3x flow control.
9	Should support at least 16000 entries in the MAC table.
10	Should support vlan range 1-4000 and at least 256 active VLANs.
11	Should support jumbo frame (9000 Byte or above)
12	Should support Port-based VLAN, 802.1Q Tagged VLAN.
13	Should support LLDP or similar functionality.
14	Should support port mirroring.
15	Switch should support IPv6.
16	Should support 802.1D spanning tree control/RSTP support and MSTP Support
17	Should support spanning-tree portfast for fast convergence or similar functionality.
18	Should support spanning-tree root guard or similar functionality.
19	Should support spanning-tree bpdu guard, bpdu filter or similar functionality.
20	Should support DHCP snooping.
21	Should support ITU-T G.8032v2 Ethernet Ring Protection designed for loop protection and fast convergence times (sub 50 ms) in ring topologies
22	Should support virtual or dedicated stacking.
23	Should support IGMP v1/v2/v3 and IGMP Snooping.
24	Should support security features Broadcast, Multicast and Unicast Storm Control.
25	Should support security features DoS Attack Prevention.
26	Should support console port and ssh v2 based management.
27	Should support management features SNMP, Syslog, NTP, RADIUS
28	Should support Layer 2 QoS.
29	Should support Strict Priority Queue, Weighted Round Robin (WRR), Rate Limiting (Bandwidth Control) or equivalent
30	Should have redundant power, AC Supply 100 to 240 V AC with 50 to 60 Hz and DC Supply -48V without any external adaptors.
31	Switch should comply to Operating Temperature range 0°C to 50 °C.
32	All accessories required for 19" rack mounting should be supplied.

41) Digital Twin Prototype Specifications (Digital Twin Prototype Data Acquisition)

SN	Specification
1.	Lidar Sensor Used: 300–600 kHz pulse rate, 100–500 points/m ² density, up to 2 km range.
2.	Accuracy: Horizontal ±10–20 cm, Vertical ±5–10 cm.
3.	Camera Payload: RGB sensor for orthophotos & colored point cloud
4.	Centralized management for all domains
5.	GNSS/IMU: RTK/PPK correction for precise georeferencing.
6.	Distributed processing design
7.	Deliverables: LAS/LAZ files, DEM/DSM (GeoTIFF), Orthophotos, Volume Reports, CAD overlays.

42) Digital Twin Prototype Specifications (Hardware Requirements)

SN	Parameter	Specification
1	Processor	20C, 165W, 2.0 GHz
2	Memory	2 × 32 GB, 2Rx8 PC5-4800 16 Gb RDIMM
3	Storage	1.92 x 2 TB SSD
4	Drive Bay	2.5" SATA/SAS 8-Bay Backplane
5	RAID Controller	(Internal): 8 (RAID 9350-8i), (External): 8 (RAID 940-8e)
6	Management	XCC Platinum
7	Network Interface	OCP Card 57416, 2 × 10 Gb, 10GBASE-T
8	Power Supply	2 × 750W 230V/115V Pt PSU Gen2 v3
9	GPU	NVIDIA RTX 6000 Ada, 48 GB VRAM

43) Digital Twin Prototype Specifications (Digital Twin Software)

SN	Specification
1.	Data Integration: Ability to integrate with various data sources, such as sensors, IoT devices, and existing systems.
2.	Real-time Monitoring Integration: Integration with Real-time monitoring tools and visualization of the physical asset or process.
3.	Simulation and Modelling: Ability to create simulations and models of the physical asset or process.
4.	Visualization: 2D and 3D visualization capabilities to represent the physical asset or process.
5.	Scalability: Scalability to accommodate growing data volumes and complexity.
6.	Security: Robust security features to protect sensitive data and ensure integrity.
7.	Interoperability: Interoperability with other systems and platforms.
8.	Analytics and Reporting Integration: Integration capabilities with Advanced analytics and reporting tools to gain insights and make data-driven decisions.

Note: The technical specifications, design parameters, and solution details provided in this document are indicative and intended only to convey the minimum functional and performance requirements of the project. It shall be the sole responsibility of the bidder to carry out a detailed system study, design, engineering, and integration of all components to deliver a complete, functional, and end-to-end working solution that meets the overall objectives of the project. Any omission or discrepancy in the indicative specifications shall not absolve the bidder from ensuring successful implementation, commissioning, and performance of the solution in accordance with the intent of the scope of work.

Annexure 15: Pre – Contract Integrity Pact

Integrity Pact

(To be signed on Non-Judicial Stamp Paper of Rs. 100/-)

Integrity Pact against EoI No. _____ of RailTel Corporation of India Limited, hereinafter referred to as “The Principal” and M/s _____ the hereinafter referred to as “The Partner/ Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for EoI No. _____. The 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 tender process and the execution of the contract for compliance with the principles mentioned above.

The following eminent personalities have been appointed as Independent External Monitors (IEMs) by CVC for the period of three years w.e.f 25.09.2022, for effective implementation & monitoring of Integrity Pact.

NAME	CONTACT
Shri. Vinit Kumar Jayaswal	Add: E-34, Brahma Apartments, Plot-7, Sector-7, Dwarka, New Delhi-110075. E-Mail: gkvinit@gmail.com M.No. +91-9871893484
Shri. Punati Sridhar	Add: 8C, Block 4, 14-C Cross, MCHS, Colony, HSR 6th Sector, Bangaluru, 560102. E-Mail: poonatis@gmail.com M.No. +91-9448105097

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:

- No employee of the Principal, personally or through family members, will in connection with the tender 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.
- The Principal will during the tender process treat all Partner(s) with equity and reason. The Principal will in particular, before and during the tender 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.
- 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 tender 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 tender 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 tender 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. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" as annexed and marked as Annexure A.

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 tender 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 tender 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 tender 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 tender process.
2. If the partner makes incorrect statement on this subject, he can be disqualified from the tender 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 tender 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 provide 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 _____

Place _____

Date _____

Date _____

Witness 1:

Witness 2::

Annexure - A of 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 of INTEGRITY PACT

GUIDELINES ON BANNING OF BUSINESS DEALINGS CONTENTS

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 Dealing
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 Willful 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 along with 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 misbehaviour 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) Forex one rating the Agency if the charges are not established.
- b) For removing the Agency from the list of approved Suppliers/ Contactors, 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.

*****End of Documentation*****