



RAILTEL CORPORATION OF INDIA LTD.
(A Govt. of India Enterprise)

**Plot No 143, Sector 44,
Institutional Area,
Opposite to Gold Souk,
Gurgaon, Haryana 122003**

**Expression of Interest for Identification of potential partners for
Setup and Maintenance of Railway Display Network at 2000+ Stations**

No: RailTel/EOI/CO/DNM/2015-16/RDN/314

Table of Contents

1	Notice.....	5
1.1	Purpose.....	5
1.2	Terms of Reference.....	6
2	Introduction.....	7
3	Railway Display Network.....	8
3.1	Key Expectations from RDN.....	8
3.1.1	Train Information.....	8
3.1.2	Social Messages.....	8
3.1.3	Disaster Management.....	9
3.2	Number of Locations and Sizing Assumptions.....	9
3.3	Target Audience for RDN.....	9
3.4	Revenue Generation Potential for RDN.....	9
3.5	RDN Ecosystem.....	10
3.5.1	RailTel managed Components.....	10
3.5.2	Partner managed Components.....	10
3.5.3	Components Managed Jointly by RailTel and Partner.....	11
3.5.4	Other Players.....	11
3.6	Rollout Period.....	12
3.7	Proposed Business Operation Structure of RDN.....	12
3.8	Expected Financial Models.....	12
4	Overview of Business Model.....	13
4.1	Revenue Assumptions.....	13
4.1.1	Utilization of available Inventory.....	13
4.1.2	Differential Pricing based on Timeslots.....	13
4.2	Expense Assumptions.....	13
4.2.1	Setup of Head Office.....	13
4.2.2	Setup of NOC.....	13
4.2.3	DC and DR Setup.....	14
4.2.4	Node Cost.....	14
4.2.5	People Cost.....	14
5	Scope of Work.....	15
5.1	Build.....	15
5.1.1	Setup at Node.....	15
5.1.2	Setup at NOC, DC and DR.....	15
5.2	Own.....	15
5.2.1	Infrastructure at Node.....	15

5.2.2	Infrastructure at NOC, DC and DR	15
5.3	Operate	15
5.3.1	Project Duration	15
5.3.2	Technology Operation	15
5.3.3	Sales Operations.....	16
5.4	Definition of Commercial Model.....	16
5.5	Exit Management	17
6	Solution Assessment Process	18
6.1	Eligibility Criteria	18
6.2	Overall Solution Assessment.....	18
6.2.1	Company Profile	19
6.2.2	Solution Presentation.....	20
6.2.3	Application Walkthrough	20
6.2.4	Commercial Model Business Proposed	20
6.2.5	Manufacturing Location for Digital Display Screens / Systems	21
6.2.6	Manufacturing Location for Display Controllers	21
6.2.7	NOC (DC & DR) establishing and running experience.....	21
7	Bidding Terms and Conditions.....	22
7.1	Consortium Bids	22
7.2	Proof of Concept (POC)	22
7.2.1	Reference Site Visit.....	22
7.2.2	Scope of Proof of Concept.....	22
7.2.3	Objectives of Conducting POC	23
7.3	Earnest Money Deposit	24
7.4	Pre-bid Meeting	24
7.4.1	Pre-Bid Query Format	25
7.5	Guideline for Preparation of Response to this EOI.....	25
7.6	Amendment to the Information Document.....	25
7.7	Confidentiality	25
7.8	Jurisdiction	26
7.9	Force Majeure Clause.....	26
7.10	Other Terms and Conditions.....	26
7.11	Disclaimer and Disclosures	27
8	Key Solution Requirements	28
8.1	Display Screen Requirements.....	28
8.1.1	Supply of Nodes.....	28
8.1.2	Installation of Nodes.....	28

8.1.3	Maintenance of Nodes	28
8.1.4	Functional & Technical Specifications for Nodes.....	29
8.2	CDP and Auction Engine Requirements	32
8.2.1	Supply of CDP and Auction Engine.....	32
8.2.2	Installation of Content Delivery Platform.....	32
8.2.3	Maintenance of Content Delivery Platform	32
8.2.4	Functional & Technical Specifications for the Solution.....	32
9	Bidder's Response	34
10	Formats for submitting the proposal	36
10.1	Company Details.....	36
10.2	Solution Overview	36
10.3	Commercial Business Model	37
11	Annexures.....	38
11.1	Annexure-I: Mumbai-Ahmedabad Section.....	38
11.2	Annexure-II: Allahabad-Manikpur Section.....	40

1 Notice

1.1 Purpose

- a. RailTel Corporation of India Ltd. (hereafter referred to as RailTel) invite Expression of Interest (hereafter referred to as EOI) from interested and eligible participants (hereafter referred to as Partner) for supporting RailTel in planning, deployment, rollout and management of Railway Display Network for a period of at least 5 years.
- b. This EOI document is neither an offer letter nor a legal contract, but an invitation for expression of interest.
- c. No contractual obligation on behalf of the RailTel whatsoever shall arise from this EOI process unless and until a formal contract is signed and executed by duly authorized officers of RailTel and the bidder.
- d. RailTel may modify any/ all of the terms of this EOI giving due notification through RailTel's website and shall be entitled if necessary to invite 'Request for Proposal' (RFP) only from select eligible bidders based upon transparently laid out norms set out in this document. The proposed RFP will provide the detailed scope of the envisaged RDN initiative.
- e. RailTel will not be liable for any costs incurred by the bidder in the preparation of the response to this EOI. The preparation of Partner's proposal will be made without obligation by the RailTel to acquire any of the items included in the Partner's product, or to select any Partner's proposal, or to discuss the reasons why the Partner's proposal is accepted or rejected.
- f. The due date for submission of the expression of interest is Dec 29, 2015 03:00 PM. Due to the critical nature of the project for RailTel, RailTel does not expect any extension on the submission deadline.
- g. Based on the eligibility criteria mentioned in Section 6.1, the qualified Partners would be shortlisted and would be advised within a period of ten business days from the date of finalization of shortlisted vendors.
- h. Intellectual Property Rights for all major modules / products developed specifically for RailTel/ RDN project will rest solely with RailTel. This is a mandatory requirement and will form a part of the final contract between the Partner and RailTel.
- i. All EOIs should be submitted in a sealed envelope, super scribed as "Expression of Interest for Identification of potential partners for Setup and Maintenance of Railway Display Network at 2000+ Stations " and addressed to:
 - Contact : Mr. A K Sablania
 - Position : Group General Manager/DNM
 - Email : rdn@railtelindia.com
 - Telephone : +91 124 2714000, Extn. 2251
 - Fax : +91 124 4236084

1.2 Terms of Reference

Tender Reference	Expression of Interest for identification of potential partners for setup and maintenance of Railway Display Network at 2000+ Stations
Purpose	For shortlisting interested partners for supporting RailTel in planning, deployment, rollout and management of Railway Display Network for a period of at least 5 years.
Downloading of EoI from RailTel's website	24 th Nov 2015
Last date of submission of EOI	29 th Dec 2015 by 3:00 PM
Opening of EOI documents	29 th Dec 2015 at 3:30 PM
Number of copies to be submitted	2 (1 Hardcopy + 1 Soft Copy)
Earnest Money Deposit (Refundable for non-successful participants)	INR 1,00,000/- (Rupees One Lakh Only)
EOI Fee	INR 5,000/- (Rupees Five Thousand Only)

2 Introduction

- b. RailTel Corporation of India Limited, a Public Sector Undertaking under the Ministry of Railways, Govt. of India, and a national telecom service provider having NLD, IP2 and ISP licenses and IP1 registration, have built nation-wide optical fiber network. RailTel's objective is to create a nation-wide broadband telecom and multimedia network.
- c. RailTel has created countrywide state of the art backbone optical transport network using latest technology. More than 400 cities covering over 45,000 RKMs across the country are connected on the network with multiple STM-16 (n x 2.5 Gbps) connectivity. RailTel has also implemented ultra-high capacity network to provide 400 Gbps which is further upgradable to 800 Gbps in future.
- d. The whole network is managed by centralized network management system (NMS) and backup facilities located across India. RailTel has got unique advantage to offer the best quality service (QoS) from a single unified network with PAN India presence. This state of art network enables point and click provisioning of the bandwidth and other services from anywhere to anywhere in the country. It enables provisioning of traffic in any granularity from 2 Mbps to multiple of Gbps (n x Gbps) on its country wide strong backbone network. Generally at the stations for the purpose of the said network, 100 Mbps or 1 Gbps drops will be provided.
- e. RailTel wishes to utilize its backbone optical transport network to provide a centralized information dissemination platform that would be providing contextual information that is customized to individual screen level across 2175 stations across India. This information dissemination platform is called Railway Display Network (hereafter referred to as RDN).

3 Railway Display Network

- a. In Railway Budget 2015, Ministry of Railways has announced the introduction of a centrally managed Railway Display Network at over 2000 railway stations across India in the next 2 years. RailTel will implement and manage the mentioned RDN network.
- b. Along with train information, it is proposed to display advertisement and social messages on the display screens. RailTel envisages to generate revenue by displaying contextualized advertisements for pre-agreed duration and frequency. RDN is expected to be built and operated on a self-sustainable model with no capital investment by Indian Railways or RailTel.
- c. The information to be displayed on RDN can be broadly classified into following categories:
 - 1 Railway information e.g. train arrival, departure & other passenger associated services information
 - 2 Revenue generation content e.g. advertisements, social messages
 - 3 Display of non-revenue information like disaster management messages etc.,
- d. The railway information would be contextual information to the railway passengers and would be dynamic content generated through analytics on raw feeds or direct display of feeds.

3.1 Key Expectations from RDN

The envisaged RDN solution is of prime importance to the railways as it has the potential of centrally managing the information dissemination to the people standing at the railway station. Key benefits expected from RDN to Indian Railways are as follows:

3.1.1 Train Information

- a. Integration of the existing rail passenger associated information at railway stations across India
- b. RDN will have central as well as screen level display capabilities with real time feeds to provide an option of giving customized information directly to the relevant set of passengers e.g. charting information.
- c. Information related to arrivals, departures and running status of trains including expected delays and other relevant information like platform numbers, coach guidance, RAC Confirmation, etc.
- d. Information pertaining to passenger comfort, amenities and passenger safety messages
- e. Disaster relief updates in case of emergencies to all concerned
- f. Relevant information for and from various departments of Indian Railways
- g. Catering & related services information along with menu pricing for items being sold on platforms

3.1.2 Social Messages

- a. Various social messages related to government campaigns, schemes and initiatives like Beti Bachao, Swachh Bharat, Pulse Polio etc. can be broadcast to create awareness for social issues.
- b. Tourist Information with Places of Interest, Department of Tourism Assistance Centre, Government of India Approved Tour Operators, Approved Taxis and other tourist amenities such as Hotels, lodges, tours, etc.
- c. Broadcast key messages including speeches of designated offices such as office of Honorable President, Prime Minister or any other office as deemed necessary by RailTel.
- d. RDN should be capable of social media integration for real time direct information distribution from major sources like twitter handle/ Facebook posts of Prime Minister Office, Railway Ministry, Railway Zones, or any other source as deemed appropriate by relevant authority.

3.1.3 Disaster Management

- a. In case of any emergency situation like train accident, agitation etc., RDN can be used to flash emergency messages, diverted routes, cancelled or regulated trains information, Control Centre details etc.
- b. Audio-Video messages would also be broadcast in case of emergency
- c. Conduct safety counseling for passengers, visitors as well as staff in situations of emergency.
- d. Conduct Safety drills and mock emergency situation handling scenarios

3.2 Number of Locations and Sizing Assumptions

- a. RailTel is aiming to deploy the RDN at 2175 stations across the five categories as defined by Indian Railways.
- b. The number of stations covered in each of these categories is as follows:
 - Category 'A1' : 75
 - Category 'A' : 332
 - Category 'B' : 302
 - Category 'C' : 483
 - Category 'D' : 983
- c. Average number of platforms at each of these stations is as follows:
 - Category 'A1' : 12
 - Category 'A' : 8
 - Category 'B' : 5
 - Category 'C' : 4
 - Category 'D' : 2
- d. On average RailTel is aiming to deploy 10 display screens per platform. However large screens are to be deployed in main entrance, Concourse area and Foot over Bridges etc. The number and type of display screens/systems to be deployed at each station may be decided based on the revenue generation potential of particular station. So the total number of display screens to be deployed is expected to be approximately 89,640 over a period of 2 years.
- e. The rollout of the screens is expected to be in two phases. The first phase is expected to cover Category 'A1', Category 'A' and Category 'C' stations. Phase two would cover the remaining stations subject to revalidation of the business model.

3.3 Target Audience for RDN

- a. RDN network is expected to be deployed at all the platforms of the top 2175 stations of the country. The target audience for RDN is the captive viewers at these platforms including railway passengers, people coming to receive/ drop others, other people providing various services at these stations etc.
- b. The current passenger traffic across India is approximately 10.925 Billion per year and as per the Eleventh Plan it is expected to grow at a CAGR of 5.5%.

3.4 Revenue Generation Potential for RDN

- a. RailTel expects RDN to be a self-sustaining model. RailTel expects to generate revenues by optimally using the display screens installed at the platforms of the identified stations for displaying contextual advertisements.

- b. RailTel expects to display contextual advertisements for 30% - 50% of the time during the operational hours of each station/ platform or the allotment of time can also be increased to 100% where the digital display screen/system is duplicated alongside the one to be used exclusively for Passenger Information System or other railway specific information as is done in international airports and railway stations. By suitably designing physical slicing of the display screen (like L-shape, bottom segment or any other administrator configurable display segments), 100% advertising space in the allotted slot can also be ensured. In all cases it should be ensured that there is no cluttering of information relating to passenger information, passenger amenities and vital information.
- c. The standard advertisement unit for contextual advertisement will be 10 second slot per screen.
- d. RailTel along with the selected partner would jointly decide on the model for advertisement slot selling.
- e. Deployment of suitable different display technologies can also be resorted to for enabling flexible sizes, shapes and formats for exclusive advertisement purpose like columns, pillars, arches...etc for maximizing the revenue generation, with the approval of the competent authorities – within the network under centralized control.

3.5 RDN Ecosystem

3.5.1 RailTel managed Components

- a. Real Estate
 - RailTel has the access to the identified list of stations and platforms (covered and uncovered platforms) where the display screens for RDN can be deployed.
 - Assistance in availability of permission for installation of display units, power etc.
 - Assistance in arrangement of space, power and connectivity for the display screens and their associated devices if any.
 - Providing the access to standard railway feeds like NTES, PRS, SIMRAN whichever applicable for obtaining information related to Passenger Amenity and associated services.
 - Site for hosting the head office/ NOC Centre
- b. Network Backbone
 - RailTel has a nationwide network backbone which would be used for providing network connectivity at all the identified stations.
- c. DC/ DR Hosting Services
 - RailTel will provide access to its DC and DR for hosting the required solution.

3.5.2 Partner managed Components

- a. Display Screens
 - RDN expects information dissemination through display screens of various sizes from 40” to 240”, pixel pitches ranging from about 0.5mm to 16mm with LCD display backlit LED and True LED pixel displays with different shapes, sizes and formats installed at various locations of the railway stations (suspended from roof-top/ pole mounted/wall-mounted / with suitable structure). Day-light visible display screens are to be placed in both covered and un-covered platforms. The number of screens required at each stations/ platform is mentioned in section 3.2 Number of Locations.
 - Partner is required to take all necessary approvals and manage all necessary documentation (including way bills/ permits etc.) required for installation of the necessary equipment at the stations.

- Partner is expected to propose any innovative display technologies of different sizes / formats / shapes including naked eye 3D displays and holograms coupled with interactive services which can offer better amenities for passengers and generate more revenue.
- The minimum expectations regarding the screens to be displayed are mentioned in 8.1 Display Screen Requirements.
- b. Content Delivery Platform and Auction Engine
 - Content Delivery Platform (CDP) is an important component of proposed RDN. It would enable the operations team to deliver, manage and monitor the contextualized content at the screen level as well national level.
 - The broad expected capabilities of the Content Delivery Platform are mentioned in 8.2 CDP and Auction Engine Requirements.
 - Auction Engine is expected to be a part of the proposed solution to enable the Partner to sell the available advertisement inventory to various bidders through an online platform and in a transparent manner.
- c. Sale and Management of advertisement slots
 - Advertisements can be in form of video advertisements, logos (at various places on the screen), fixed messages (on half of the screen, in L-Shaped banner etc.)
 - Partner is required to manage the available advertisement slots across all locations.
 - The available slots can be sold to advertisers in bucketed groups at screen, platform, station, city, zone or nation.
 - Partner is also required to propose any other innovative grouping of advertisement space based on the market requirements

3.5.3 Components Managed Jointly by RailTel and Partner

- a. Setup of NOC
 - NOC would be the centralized command center to monitor and manage each of the display screens across all platforms and stations across the country.
- b. Deployment of relevant resources
 - RailTel and its selected partner would deploy their team members at NOC/ Command Centre for management and monitoring the routine BAU operations of RDN.
 - RailTel would be deploying the overall project in-charge and operations lead for RDN
- c. Performance Monitoring and Operations Management
 - Monitoring and management of display screens would include pushing the relevant content at various screens based on the pre-defined rules as well as monitoring of uptimes and display logs for the information displayed at various screens.

3.5.4 Other Players

- a. Advertisers
 - These would be the end publishers/ intermediaries who would be purchasing the available time slots for displaying the advertisements (across all stations, any specific station or at an identified screen on any given platform of the station).
 - Channel Aggregator/ Advertisers would be responsible for content delivery to RailTel (and its partner) for the advertisements to be displayed through RDN.
- b. Content Developers
 - These include the media houses that create the content for the advertisers. This pre generated content would be used by the advertisers for displaying.

c. Regulators

- These would include relevant authorities from RailTel and Indian Railway, who would be monitoring the displayed information for compliance to the various guidelines released by I&B Ministry and other relevant regulators/ government agencies.

3.6 Rollout Period

RailTel has envisioned an incremental approach for rollout of RDN with the broad sequence of rollout being Category 'A1' stations followed by Category 'A' stations, then Category 'C' Stations. Post initial rollout, the business case would be revisited before the rollout of remaining stations in Category 'B' and Category 'D'. RailTel expects the rollout of Category 'A1', 'A' and 'C' stations within one year from date of confirmation of the contract. The subsequent rollout duration can be mutually decided by RailTel and the selected partner.

3.7 Proposed Business Operation Structure of RDN

- a. The envisaged RDN network would work on broad 6 levels as defined below:
 - Screen
 - Platform
 - Station
 - City
 - Zone
 - Nation
- b. RDN, with the help of proposed Content Delivery Platform, should have an ability to push customized content through dedicated intranet network at any of the above six levels or their combinations as per the business requirements of the RailTel team.
- c. Proposed platform is also expected to monitor, schedule and trigger these screens at all of the above mentioned six levels.
- d. The complete operations of RDN would be monitored centrally through a NOC/ Command Centre. The NOC would be located at RailTel's premise.
- e. All the relevant details/ content of RDN would be managed through hosted applications that would be hosted at RailTel's Data Centre and Disaster Recovery Centre.

3.8 Expected Financial Models

- a. The Partner is required to propose the preferred financial model for the partnership with RailTel for RDN initiative.
- b. RailTel is expecting a revenue share model
 - The partners would deploy the proposed solution including the display screens and application platform and would also be involved in the sales of the available inventory. The partner would share the revenue earned during a given month with RailTel
 - The partner is expected to suggest the potential financial model for RDN, based on the inputs from the partner along with RailTel's internal assessment, RailTel would decide on the final financial model to be deployed for the project execution which ensures the adequate returns on investments to the Partners and RailTel.

4 Overview of Business Model

4.1 Revenue Assumptions

4.1.1 Utilization of available Inventory

- a. As per RailTel, Category 'A1' (Major Stations on Long Distance Route) and Category 'C' (Stations for Sub-urban rail network including Mumbai, Chennai and Kolkata) stations would have highest utilizations among the identified five categories.
- b. The utilization of subsequent categories (Category 'A', Category 'B' and Category 'D') would be lower than the higher categories.
- c. RailTel has assumed differential utilization for each of the categories with year on year increase in the utilization of available advertisement slots.
- d. RailTel has assumed 50% of utilization in the first year for Category 'A1' and Category 'C' Stations (based on the current utilization levels at the existing stations)

4.1.2 Differential Pricing based on Timeslots

- a. RailTel has assumed differential base pricing at each category of the stations.
- b. The available time slot of 24 hours is divided into five categories, namely:
 - Peak
 - Heavy
 - Medium
 - Low
 - Closed
- c. These time slots are based on the factors like:
 - Number of trains originating/ terminating at the stations
 - Type of trains originating/ terminating at the stations
 - Number of trains halting at the stations
 - Type of trains halting at the stations

4.2 Expense Assumptions

4.2.1 Setup of Head Office

- a. Set up of Head Office including seating, communication device, laptops/ desktops etc.
- b. Operational costs for Head Office including electricity, administrative costs etc.
- c. Network connectivity to Head Office from DC/ DR.
- d. Power cost for the infrastructure installed at Head Office

4.2.2 Setup of NOC

- a. Procurement and installation of monitoring screens
- b. Setup up of Head Office including seating, communication device, laptops/ desktops etc.
- c. Operational and maintenance costs for Head Office including electricity, administrative costs etc.
- d. Network connectivity to NOC from DC/ DR
- e. Power cost for the infrastructure installed at NOC

4.2.3 DC and DR Setup

- a. One time hosting of servers at DC and DR
- b. Recurring rental cost for DC and DR hosting
- c. Hardware required for hosting the application stack at DC and DR
- d. Implementation of required applications including the following:
 - CDP and Auction Engine
 - GIS
 - EMS
 - Security infrastructure
 - Anti-Virus Application
 - OS and DB licenses for the infrastructure
 - Other required applications
- e. Hardware and Application Support Cost (AMC and ATS)

4.2.4 Node Cost

- a. Cost for hosting display screens / systems
 - Large screens in Concourse areas and Foot over Bridges (as per site requirements)
 - Display screens of various sizes from 40” to 240”, pixel pitches ranging from 0.5mm to 16mm with LCD display backlit LED and True LED pixel displays with different shapes, sizes and formats installed at various locations of railway stations (suspended from roof-top/ pole mounted/wall-mounted / with suitable structure).
 - The size, shape and format of the display screens/systems depend on category of stations and expected utilization.
- b. Display Controller with embedded OS for digital displays (e.g. EDGE box/ STB box/ Thin Client/ Media Player/ etc.) for implementation of controlling software and other relevant applications/ storage drive for delivery of the solution along with the standard required copper / fiber / wireless communication interfaces.
- c. Installation cost (including cabling and suitable display screen structure)
- d. Power consumption for the display screens
- e. Bandwidth cost for communicating with the nodes for scheduling and triggering

4.2.5 People Cost

- a. Salary Cost for the key personnel for the project including:
 - RDN In charge
 - Operations Lead
 - Operation Team
 - Application and Solution Support Team
- b. Salary Increments for the team

5 Scope of Work

RailTel is expecting the partner to support the RDN initiative through a Build, Own and Operate model. The scope of work for the partner would broadly include the following key activities:

5.1 Build

5.1.1 Setup at Node

- a. Delivery of display screens at the identified railway stations
- b. Installation of display screens (suspended from the roof) along with the required one time setup at the covered platforms.
- c. Installation of display screens (pole mounted & structure mounted) along with the required one time setup at the uncovered platforms.
- d. Installation of display screens (wall mounted & structure mounted) at main entrances, inside waiting halls, food plazas, foot over bridge, concourse and other outdoor areas, as permitted by Railways
- e. Arrangement for power source from the station for setup of video display screens
- f. Setup of display controller along with the display screens

5.1.2 Setup at NOC, DC and DR

- a. Setup of NOC including installation of monitoring screens
- b. Installation of all relevant applications as mentioned in Section 4.2.3
- c. Procurement of hardware required for setup of application infrastructure
- d. Installation of hardware (servers, switches, routers, firewall etc.) at DC and DR

5.2 Own

5.2.1 Infrastructure at Node

- a. Display screens installed at identified railway stations
- b. Equipment including controller installed along with the display screens

5.2.2 Infrastructure at NOC, DC and DR

- a. Monitoring equipment and applications installed for remote monitoring the operations at various display screens installed at identified stations
- b. IT infrastructure (including but not limited to servers, switches, routers, storage devices like NAS and SAN etc.) installed for operations of RDN

5.3 Operate

5.3.1 Project Duration

The intended duration of the project is of 5 years. The duration can be extended twice for a duration of 2 year each at sole discretion of RailTel.

5.3.2 Technology Operation

5.3.2.1 *SLA based monitoring of services*

- a. Monitoring of applications installed for RDN
- b. Monitoring of hardware deployed for RDN

5.3.2.2 Deployment of resources

- a. Deployment of helpdesk for supporting online/real time sale of available advertisement inventory
- b. Deployment of staff for managing the NOC and RDN operations

5.3.3 Sales Operations

5.3.3.1 Selling advertising inventory

- a. Development of advertising models for various potential advertisers
- b. Definition of the rack rate and discount factors for advertisement slots
- c. Definition of multiple rack rates and discount factors to suite operational needs at different categories as mentioned in Section 3.7 Proposed Business Operation Structure of RDN
- d. Deployment of resources for online / real time sale of available advertisement inventory

5.3.3.2 Maintaining the advertising inventory

- a. Deployment of helpdesk for supporting sale of available advertisement inventory
- b. Maintaining the entire process for running the advertisements and managing the revenue generation
- c. Sharing of revenue with RailTel based on the contractual requirements.

5.3.3.3 Payment and reconciliation process

- a. Secure Payment Gateway integration for collecting payments from advertisers
- b. Verification of all Ad types played using as run logs / proof of play
- c. Complete audit log of all the information added/modified/deleted by users should be available along with timestamps and IP address details thereof.

5.3.3.4 No impact on passenger comfort with respect to information dissemination

- a. Irrespective of the technology deployed and solution proposed, the existing level of service and passenger comfort should not be diminished with respect to information dissemination at any point at any station.

5.4 Definition of Commercial Model

- a. The partner is required to provide a detailed commercial model for a duration of 5 years.
- b. The bidder is required to provide the commercial model that would be proposed to RailTel on “Revenue Share” model (Sharing of revenue percentage with RailTel on a defined percentage basis with a defined minimum payout commitment made by the partner). Railway Board has indicated, there shall be a 25% revenue share to Indian Railways out of the total earned income of the said project. This doesn’t include RailTel share.
- c. The commercial model should objectively highlight the incoming revenue streams and projected payouts
- d. Detailed cost and revenue side assumptions made by the partner
- e. The partner shall also propose the functional model for financial payouts (Income distribution, transactions, collections and payouts, timelines etc.)
- f. Collection Arrangement of Earnings:- The proposed bidder will create a platform for the collection of earnings out of the project at its own cost. The platform will be made in consultation with RailTel and will be subject to the examination of RailTel/ Indian Railways.

- g. Key objectives of RailTel from the commercial model to be prepared by the Partner are as follows:
- Maximize the value and revenue potential for RailTel
 - Committed revenue for RailTel
 - Transparency in the proposed business model
 - Predictability in the inflows for RailTel

5.5 Exit Management

Following is an indicative exit management scope that the partner shall be liable to perform upon expiry of the contract or in the event of pre-mature termination of the contract by either parties:

- a. The partner shall provide the necessary transition for a period of 3 months. During the transition period, the partner shall support an orderly and controlled change of responsibility for the provision of the services to a new partner/RailTel, with minimum disruption to the ongoing services. However, this period of transition could vary depending on the requirements, and the same shall be communicated to the partner in due course.
- b. During transition phase, the partner shall not change or remove their key resources at any locations, to enable the successful transition.
- c. At the beginning of the contract, RailTel and the partner shall mutually decide on the asset inventory, required for successful provisioning of RDN. The ownership of the assets (including soft and hard components) shall be transferred to RailTel, in case of expiry or termination of contract by either parties. In addition, any information/ data gathered or generated by the partner, during the term of the contract shall be deemed to be the property of RailTel and the same shall be handed over to RailTel, in native format at the time of expiry or termination of the contract.
- d. At the end of contract period, the partner shall transfer ownership of existing soft and hard assets at Re. 1/- per equipment to RailTel. In case of termination of contract before the expiry period, straight-line depreciation method (such that at 5 years from the date of installation the cost of the item would be become Re. 1/-) shall be applied to determine RailTel's payout for obtaining ownership of such assets.
- e. In case RailTel decides to withdraw any services/components from the partner's scope of work during the contract period, the partner shall facilitate the same.
- f. In case RailTel observes partner's lack of willingness to manage the in-scope work, RailTel shall have the discretion to impose penalties and deduct the amount, which RailTel shall deem appropriate, from the performance bank guarantee.

6 Solution Assessment Process

6.1 Eligibility Criteria

The consortium partners may apply for this EOI subject to the below mentioned eligibility conditions

S. No.	Pre-Qualification Criteria	Documentary Evidence Required
1	The lead consortium partner should be the owner of IPR for the equipment and software or should be its authorized representatives of such OEM.	Certification in support of owning the product or equipment or authorization certificate.
2	The lead consortium partner should have an annual turnover of at least INR 100 Crore for each year in the last 3 years (FY 2014 – 15, FY 2013 – 14 and FY 2012 - 13) as per the consolidated financial statements.	Copy of audited relevant financial statements for the entity or its global entity for the last 3 years
3	The lead consortium partner should have a positive net worth of minimum INR 100 Crore in the last 3 years (FY 2014-15, 2013-14 and 2012-13)	Copy of audited profit and loss statement for last 3 years
4	Lead consortium partner should be income – tax assessee having filed its income tax return for last 3 financial years.	Statement of Income Tax Return for last 3 years
5	Lead consortium partner should be an authorized dealer having VAT/Sales Tax registration.	Sales Tax/VAT Registration certificate / copies
6	None of the consortium partners should have been blacklisted by any of the Central/State Governments/PSUs for the past 5 years in this line of business.	Self-Declaration from each of the consortium partners

6.2 Overall Solution Assessment

- The bids of only the eligible partners would be evaluated for their solution capabilities.
- The bid evaluation will be done on a total score of 200. The proposal evaluation will be based on the evaluation matrix consisting of the following parameters:

S. No.	Evaluation Parameter	Score
6.2.1	Company Profile / Consortium profile	95
6.2.2	Solution Presentation	20
6.2.3	Application Walkthrough	20
6.2.4	Proposed Commercial Business Model	25
6.2.5	Manufacturing Location for display screens/systems	15
6.2.6	Manufacturing Location for display controllers with BIS registration	15
6.2.7	NOC (DC & DR) establishing and running experience in similar Display or Telecom network	10
	Total	200

6.2.1 Company Profile

S. No.	Company/Consortium Profile	Score	Max Score	Documentary Evidence Required
A	Digital Display Screen Deployment (in last 10 years)			
	More than 5000 screens Or More than 20000 sft digital display area deployed in public space*	20	20	Confirmation from client on letter head confirming deployment
	Between 2000 and 4999 screens Or Between 8000 sft and 19999 sft digital display area deployed in public space*	15		
	Between 500 and 1999 screens Or Between 2000 sft and 7999 sft digital display area deployed in public space*	10		
B	Content Delivery Platform Deployment (in last 10 years)			
	Managing more than 3000 independent digital screens or 12000 sft digital display area	15	15	Confirmation from client on Letter head confirming deployment.
	Managing between 1000 and 2999 independent digital screens or between 4000 and 11999 sft digital display area	10		
	Managing between 200 and 999 independent digital screens or between 800 and 3999 sft digital display area	5		
C	Advertisement Sales Experience (in last 10 years)			
	Managing advertisement sales for more than 3000 independent digital screens or 12000 sft digital display area	15	15	Confirmation from client on letter head confirming sales
	Managing advertisement sales for between 1000 and 2999 independent digital screens or between 4000 and 11999 sft digital display area	10		
	Managing advertisement sales for between 200 and 999 independent digital screens or between 800 and 3999 sft digital display area	5		
D	Experience with Railways and other Government Sector Clients (in last 5 years)			
	Projects completed with Indian Railways in at least 5 zones	15	15	Confirmation from Indian Railways/Government Sector Clients on letter head confirming projects completed
	Projects completed with Indian Railways in at least 2 zones or More than 10 projects completed with any other Government Sector Clients	10		
	Project completed with Indian Railways in at least 1 zone or More than 5 projects completed with any other Government Sector Clients	5		
E	No. of Technical Support/Delivery Offices in Different States of India			
	Office in more than 30 (in every state/UT)	15	15	Self-Declaration
	Between 16 to 30	10		

S. No.	Company/Consortium Profile	Score	Max Score	Documentary Evidence Required
	Between 1 to 15	5		
F	No. of Field Engineers Across Offices			
	More than 200	15	15	Self-Declaration
	Between 101 to 200	10		
	Between 1 to 100	5		

*Public Space include those sites where the screens deployed are in continuous use (365 x 24 x 7) and also includes areas such as main entrances, Railway Waiting Halls, Food Plazas, Foot Over Bridge, Concourse and other outdoor areas, as permitted by Railways.

It shall not be necessary that all members of consortium satisfy the eligibility criteria laid out in 6.2.1. It will be sufficient if any member of the consortium individually or all the members collectively, satisfy the eligibility criteria.

6.2.2 Solution Presentation

Partner is required to provide a detailed presentation to RailTel containing at least the following:

- Specifications of the proposed screens to be deployed
- Functionalities of the proposed CDP and Auction Engine platform
- Minimum Technical Specifications of the proposed solution
- Remote Monitoring Capabilities of the solution
- Application Architecture and System Design
- Proposed rollout plan
- Maintenance and Support locations in India
- Sales and Distribution Channel capabilities
- Commercial Model proposed by the partner

6.2.3 Application Walkthrough

RailTel and its consultants will have a detailed Product Walkthrough through the infrastructure hosted at the Partner's location. Product Walkthrough would be done on the areas highlighted in the EOI in Section 8.2 CDP and Auction Engine Requirements.

6.2.4 Commercial Model Business Proposed

- a. Partner is required to share the proposed commercial model for the RDN initiative as per details provided in Section 5.4
- b. Partner is also required to share the revenue model that they propose for RailTel including the projected revenues for RailTel.
- c. The partner shall also propose the functional model for financial payouts (Income distribution, transactions, collections and payouts, timelines etc.)
- d. RailTel would evaluate the commercial model based on the factors including:
 - Projected revenue forecasts
 - Committed revenue for RailTel
 - Projected cost heads
 - Completeness of assumptions made for the commercial model

6.2.5 Manufacturing Location for Digital Display Screens / Systems

Criteria	Score
Manufacturing Location for digital display screens / systems	
India	15
Outside India	0

The display screen manufacturer is required to provide confirmation in this regard along with the address of the manufacturing plant to be used for production of the in scope display screens.

6.2.6 Manufacturing Location for Display Controllers

Criteria	Score
Manufacturing Location for digital display controllers	
India	15
Outside India	0

The display control manufacturer is required to provide confirmation in this regard along with the address of the manufacturing plant to be used for production of the in scope display controllers with valid BIS licence/registration by the time of implementation

6.2.7 NOC (DC & DR) establishing and running experience

The bidder is required to provide Work-Orders/ Self-declaration certificate with the details of the experience (Scale, Period, etc) for NOC (DC & DR) establishing and running experience in similar Display or Telecom Network

7 Bidding Terms and Conditions

7.1 Consortium Bids

Bidding through a Consortium is allowed. Bids submitted by Consortium shall comply with the following:

- a. In case of a bid by a Consortium, not more than three partners shall be permitted. The bid should clearly identify the lead bidder among the consortium partners. An undertaking from all the consortium partners should be submitted defining the lead bidder and authorizing the authorized signatory from lead bidder to submit the proposal and interact with RailTel for this EOI.
- b. The bid shall be signed by a duly authorized signatory of the lead bidder on behalf of the consortium.
- c. The bid shall provide details about the members and composition of the Consortium and shall provide all information necessary to satisfy RailTel that at least one member of the Consortium individually or all the members collectively fulfill the experience criteria as laid out in this document.
- d. The member-in-charge shall be authorized to incur liabilities and receive instructions for and on behalf of all the members of the Consortium and the entire execution of the contract, including payment.
- e. All the members of the Consortium shall be liable jointly and severally for the performance of the work in accordance with terms laid out in this document and a relevant statement to this effect shall be deemed to be included in the authorization by legally authorized signatory for the member.
- f. The Consortium should submit a copy of the agreement entered into by the members governing the performance of the work without limiting in any manner the obligation or joint and several liabilities of the members towards RailTel.
- g. After the submission of bid, Consortium shall not be permitted to split up without prior written consent of RailTel. Such agreement shall be subject to RailTel's satisfaction to ensure that the work will be carried out to the required standard.
- h. If the Consortium bidder fail to satisfy any of the above conditions their bid will be liable for rejection

7.2 Proof of Concept (POC)

RailTel shall carry out the POC with a maximum of top 4 respondents, post evaluation of EOI based on sole discretion of RailTel. However, based on EOI response, RailTel may allot more than one section to an eligible participant for carrying out the POC.

7.2.1 Reference Site Visit

RailTel may decide to visit the reference sites as provided by the respondent as part of the Solution overview and success stories. The cost of travel would be borne by RailTel, however the respondent is required to arrange for the permissions and walkthrough of the site at the mutually agreed dates.

7.2.2 Scope of Proof of Concept

- a. Proof of concept for purpose of this EOI is defined as demonstration of capabilities for a centrally managed Railway Display Network, to prove the idea and feasibility as envisioned by RailTel
- b. The scope of work for POC shall be as mentioned in Section 3.1 and 3.4 of this EOI

- c. RailTel has identified the following sections, where the proof of concept shall be carried out:
 - a) Mumbai- Ahmedabad Section (Station details in Section 11.1- Annexure I)
 - b) Allahabad- Manikpur Section (Five contiguous stations on non- RE section) (Station details in Section 11.2- Annexure-II)

The list of stations is tentative, the final stations for POC in both the sections will be decided/confirmed at due-course of the tender process and/or Pre-Bid stage
- d. The selected partner is required to engage with existing deployment so as to ensure:

The existing commercial arrangements, centralized and division wise, shall either get a part of new RDN system on mutual agreed basis, or,

to get satisfactory closure of all the existing commercial arrangements, centralized and division wise, extant as on that date with various advertising agencies in coordination with the railway authorities, to ensure that there is no clash of commercial interests of all concerned until the completion of the existing contracts. RailTel will also facilitate the process.
- e. The POC is to be executed within a period of 3 months from notification of such request to the identified partner.
- f. The partners selected to perform the POC shall have to execute the POC for a period of further 6 months till the date of conclusion of project.
- g. Content required for successful execution of POC (Train Information, Advertisements etc.) will be provided by RailTel. However, the Partner will be involved in the process of booking Commercial Advertisements and other revenue generation activities during this period so as to enable the partner to assess the revenue and cost projections for the RDN project. RailTel will be responsible for obtaining the copyrights for non-commercial content (other than railway information), to be displayed on RDN.
- h. RailTel reserves the right to award the above sections to the Partners who conducts the POC at the given section/s, even if he is not selected as the successful Partner to implement the whole project.
- i. RailTel and its authorized representatives shall witness the POC results and shall submit a report to the Management against the same.
- j. The Bidder shall bear all the costs of implementing the POC (including electricity charges at the stations) and would also be responsible for making the demonstration to RailTel and Railway authorities. 230V electricity will be made available at the stations
- k. At the end of POC, the bidder shall submit and present learnings and outcomes of the POC to RailTel in form of a detailed report, within a period of 1 month from the date of conclusion of POC. Bank guarantee will only be refunded on receipt and presentation of the report.

7.2.3 Objectives of Conducting POC

- a. Get a clarity on the design of the RDN solution, before publishing of the RFP document
- b. Provide an opportunity for alternative solutions by encouraging innovations facilitated by interactions with RailTel
- c. Clarify users' understanding of the RDN model and various process flows in the same
- d. Verify the adequacy of specifications for the solution proposed for RDN
- e. Obtain user acceptance of processes which shall be adapted for RDN
- f. Validate revenue and cost projections for the RDN project
- g. Understand the preferred commercial model of the interested parties
- h. Understand the resource requirements for the RDN project

- i. Verify the functionality of the CDP software to check its alignment with RailTel's vision of CDP's capabilities
- j. Identify and address obstacles or roadblocks for the full scale implementation of RDN

7.3 Earnest Money Deposit

- a. The lead consortium partner shall furnish a sum of INR 1,00,000/- (INR One Lakhs only) as earnest money in favor of RailTel Corporation of India Limited, payable at New Delhi
- b. The EOI not accompanied by Earnest Money will be summarily rejected.
- c. The applicants shall hold the offer open till such date as specified in this EOI. It being understood that after submitting the response to this EOI, it will not back-out from their offer or modify the terms and conditions thereof. If the applicant fails to observe or comply with the foregoing stipulation, the aforesaid amount deposited as Earnest Money shall be liable to be forfeited by RailTel.
- d. The Earnest Money receipt shall be incorporated in the original copy of the EOI document. The Earnest Money should be furnished in the form of an Account Payee Demand Draft in favor of RailTel Corporation of India Limited, payable at New Delhi from a Nationalized Bank or a schedule Commercial Bank operating in India.
- e. The earnest money of unsuccessful applicant will be returned within reasonable time to the applicant however RailTel shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the above stipulation to keep offer open for the period specified in the EOI documents or to the Earnest Money while in their possession nor be liable to pay interest thereon.
- f. On receipt of Letter of Invitation for POC from RailTel, the applicant shall, within a period of 15 days, submit the security deposit of INR 5,00,000 (INR Five Lakhs Only) per section in the form of Bank Guarantee from a scheduled commercial bank for the duration of POC or extended period, if any, in favor of RailTel Corporation of India Limited. On receipt of BG, EMD will be refunded without any interest. In case any selected bidder fails to submit the security deposit within 15 days of receipt of communication from RailTel, the offer would be treated as non-responsive and the bidder's Earnest Money will be forfeited.
- g. Bank guarantee will be returned to applicants after the POC, within reasonable time. RailTel reserves the right to deduct from bank guarantee, an amount which it deems fit, to cover for damages caused by the applicant during the POC.
- h. In case of POC leading to award contract, bank guarantee will be adjusted towards security deposit as decided in RFP.

7.4 Pre-bid Meeting

- a. For clarification of doubts of the prospective partners on issues related to this EoI, RailTel shall hold a Pre-Bid Meeting. The pre-bid meeting shall be conducted on 10.12.2015 from 3:00 PM – 4:00 PM at RailTel Corporate Office, Gurgaon
- b. For any clarification with respect to this EoI, prospective partners may send an email to rdn@railtelindia.com. The format to be used for seeking clarification is mentioned in section 7.4.1. It may be noted that all queries, clarifications, questions etc., relating to this EoI, technical or otherwise, must be in writing only and should be to the designated e-mail ID as stated earlier. Written requests for clarification may be submitted to RailTel at least 2 days prior to pre-bid meeting and clarifications for such queries shall be provided by RailTel or its representative in the meeting. It may be noted that no queries of any prospective partner shall be entertained after the last date for submission of queries via e-mail.

- c. Only three authorized representatives of each bidders (including consortium partners) shall be allowed to attend the meeting.

7.4.1 Pre-Bid Query Format

- a. If partner, desiring to respond this EoI, requires any clarifications on the points mentioned in the EoI, it shall communicate with RailTel using the following format in a Microsoft Excel sheet (xls/xlsx format).
- b. All questions received at least two days before the pre-bid meeting will be formally responded to and questions/points of clarification and the responses will be circulated to all participating partner if required.
- c. The source (identity) of the partner seeking points of clarification shall not be revealed.
- d. Alternatively, RailTel may at its discretion, answer all such queries in the Pre-bid meeting.

Section Number	Page Number	Point Number	Original Clause	Query

Bidder is also required to provide the following details in the e-mail:

- Name of the bidder
- Name, contact number and email id of the contact person

7.5 Guideline for Preparation of Response to this EOI

Applicants are requested to follow the below guidelines while preparing their responses to EOI.

- a. Section 9- “Bidder’s Response” and format as provided in Section 10 “Formats for submitting the proposal”. Any EOI not found responsive to the details mentioned in this document will be rejected.
- b. The applicant is requested to review the response before submission as the submitted response shall be considered final and revisions may not be permitted, unless such revision is requested in writing by RailTel.

7.6 Amendment to the Information Document

RailTel may, for any reason, whether at their own initiative or in response to a clarification requested by an interested applicant, modify this document through amendment. In such case, the following rules will apply:

- a. Any amendment shall be issued in writing through addenda.
- b. Addenda shall be posted only on RailTel’s website. Any such modification will overrule the original version and previously modified version.
- c. RailTel, at its discretion, may extend the deadline for submission of EOI, after considering the materiality of the amendment.

7.7 Confidentiality

- a. The empaneled Business Partner and their personnel will not, either during the term or after expiration of this contract, disclose any proprietary or confidential information relating to the

services, contract or business or operations of RailTel or its clients without the prior written consent of RailTel.

7.8 Jurisdiction

- a. The parties through respective signatories shall settle any dispute or disagreement with respect to performance, non-performance or defective performance of respective obligation amicably. In the event of disputes remaining unresolved, the parties shall refer the matter to a single arbitrator under arbitration law that may be applicable, whose appointment shall be done by Chairman and Managing Director, RailTel Corporation of India Limited. The place of arbitration shall be New Delhi and the language used shall be English.

7.9 Force Majeure Clause

- a. If at any time, during the continuance of this EOI and any subsequent agreement (hereafter referred to as contract), the performance, in whole or part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, Fires, Floods, Earthquakes, explosions, strikes, epidemics, quarantine restrictions, lockouts, any statute, statutory rules/ regulations, order of requisitions issued by any Government Department or Competent Authority or acts of God (here-in-after referred to as event) then provided notice of the happening of any such event is given by either party to the other within twenty one days from the date of occurrence thereof, neither party shall, by reason of such event, be entitled to terminate this Contract nor shall either party have any claim for damage against the other in respect of such non- performance or delay in performance, and the obligations under the Contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, PROVIDED FURTHER that if the performance in whole or part of any obligation under this Contract is prevented or delayed by reason of any such event beyond a period as mutually agreed to by RailTel and the Contractor after any event or 60 days in the absence of such an agreement whichever is more, either party may at its option terminate the Contract provided also that if the contract is so terminated under this clause RailTel may at the time of such termination take over from the Contractor at prices as provided for in the contract, all works executed or works under execution.

7.10 Other Terms and Conditions

- a. RailTel will enter into an agreement, incorporating technical specifications, financial conditions, service levels and related terms and conditions. The bidder needs to sign an NDA with RailTel as per RailTel's policy.
- b. RailTel reserves the right to accept or reject any or all application(s) without assigning any reason whatsoever. RailTel's decision in this regard shall be binding and final.
- c. If any of the information, furnished by the applicant, is found incorrect at a later stage, he shall be liable to be barred from participating in current and subsequent stages/ process of this initiative. RailTel reserves the right to verify the particulars furnished by the applicant independently.
- d. The applicant after submitting the response to this EOI, agrees with RailTel for honoring all aspects of fair trade practices.
- e. The applicant shall bear all costs associated with the preparation and submission of the response to this EOI.
- f. The selected partner is required to engage with existing deployment so as to ensure:
The existing commercial arrangements, centralized and division wise, shall either get a part of new RDN system on mutual agreed basis, or,

to get satisfactory closure of all the existing commercial arrangements, centralized and division wise, extant as on that date with various advertising agencies in coordination with the railway authorities, to ensure that there is no clash of commercial interests of all concerned until the completion of the existing contracts. RailTel will also facilitate the process.

7.11 Disclaimer and Disclosures

- a. This EOI is not an offer to enter into a contract. This EOI is a description of RailTel's objectives and requirements articulated in a structured manner to enable RailTel to evaluate all the responses received and make an informed decision.
- b. RailTel makes no commitments, implied or otherwise, that the issuance of this EOI, the bidder's preparation and submission of a response and subsequent evaluation of the bidder's response can result in a business transaction with the bidder or any other participant, even if all the requirements in the EOI are met
- c. RailTel reserves the right to accept or reject any responses, in whole or in part, and to enter into discussions and/or negotiations with any one or more prospective service providers at the same time and/or at any time, and to terminate negotiations at any time without incurring any liability
- d. In no event can RailTel, its affiliates or any third party including the consultant for the project have any liability for any direct, indirect, special, punitive, consequential or any other damages (including, without limitation, lost profits) relating to the subject matter of this EOI or to awarding (or not awarding) any contract to any entity
- e. By participating in this EOI process, the bidder agrees to be bound by each of the terms and conditions set forth under "Disclaimer and Disclosures."
- f. The proposal in response to the EOI should be signed and submitted by a person duly authorized to bind the bidding company to the details submitted in the proposal in response to the EOI. The signatory should give a declaration and through authenticated documentary evidence establish that he/she is empowered by the competent authority to sign the necessary documents and bind the bidding. All pages of the tender documents except brochures if any are to be signed by the authorized signatory.

8 Key Solution Requirements

All the equipment to be proposed for this initiative should comply with the specifications defined by Research Designs and Standards Organization for the relevant sections as defined in the document “RDSO Specification for True Colour Video-Cum-Train Information Display System” SPECIFICATION No.: RDSO/SPN/TC/67/2012, Revision 3.0.

The solution requirements provided below are indicative requirements aligned to the project vision and in case of any deviation from the above mentioned specifications the specifications provided by RDSO would prevail.

8.1 Display Screen Requirements

8.1.1 Supply of Nodes

- a. The successful bidder shall be responsible for supplying the industrial grade display screens for the RDN project
- b. The successful bidder shall also supply the media player or the thin client for accessing, scheduling and triggering the display screens from a remote central location
- c. Any software (with genuine enterprise licenses) required to be installed on the media player/thin client for successful operation of RDN shall also be supplied as part of this EOI
- d. All types of cables, enclosures & mounting accessories required for installing the display screens on roof tops, walls etc. and interfacing media player/thin client to display screen shall be supplied
- e. The indoor and outdoor display screens/systems being proposed are to be of BIS registered products, by the time of implementation.
- f. The display controllers with embedded operating system are to be of BIS registered products, by the time of implementation.

8.1.2 Installation of Nodes

- a. The successful bidder shall install the Display Screens and Media Player/Thin Client at all the locations that shall be communicated to the successful bidder in due course
- b. Any cost incurred for mounting or installing the display screens shall be incurred by the successful bidder
- c. It shall be the responsibility of the successful bidder to adhere to the implementation plan, which will be shared by RailTel
- d. The successful bidder shall maintain installation records (in hardcopy & softcopy), details of all the items supplied and installed by him and the same shall be submitted to RailTel along with the installation report

8.1.3 Maintenance of Nodes

- a. All hardware components (Display Screens, Display Controllers and Media Player/Thin Client) should have minimum warranty of 5 years. Warranty/AMC to be provided in case of extension of the duration of contract
- b. All display screens/Display controllers that shall be installed at the railway station/ platforms should have an insurance cover for a period of 5 years starting from the date of installation. Insurance to be provided in case of extension of duration of contract

8.1.4 Functional & Technical Specifications for Nodes

A : LCD Display (Backlit LED) [40" to 80"]

S No.	Parameter	Specification	Minimum Requirement
1	Display Unit	Screen Size	About 40" to 80" as per site requirement / category of station
		Resolution	Full HD 1920 x 1080
		Aspect Ratio	16:9 or 4:3
		Brightness	More than 350 cd/m ²
		Contrast Ratio	4,000:1
		Response Time	8ms
		Orientation	Landscape/Portrait
		Display Color	16.7M
		Weight	About 25Kg to 90Kg
		Digital Input	HDMI, DVI-D
		Digital Output	DVI-D
		Analog Input	VGA 15-pin D-sub, 5 BNC (RGBHV, DVD/HD or Video), S-Video, BNC Composite
		Analog Output	BNC Composite
		Audio Input	RCA Audio, Stereo Mini-Jack (2), HDMI Audio
		Audio Output	Stereo Mini-Jack, External Speaker Jack
		External Control Input	RS-232C, LAN, IR Remote, DDC/CI
		External Control Output	RS-232C, IR Remote
3	Power	Power Supply	AC 100 - 240V~ (+/- 10%), 50/60Hz
		Power Consumption (On Mode)	About 100W to 500W
4	Environmental Conditions	Operating Temperature	0-45 °C
		Operating Humidity	20-80%
		Operation Location	Semi Outdoor/ Covered Outdoor Location
5	Display Controller	Display Quality	full HD 1080p video output with capabilities for 3D graphics and animations
		Redundancy in connectivity	Fiber / Wire / Wireless network access
		Internal Storage	Should support SD Card or internal SATA HDD for storage of content
		Remote Purge	Purge Functions with custom definable rules (pushed remotely) to maintain optimum local storage space on the device
		Remote Controlling	Display settings including screen brightness, contrast, etc. should be controlled remotely from NOC

B : True LED Pixel Display-Indoor (50" to 120")

S No.	Parameter	Specification	Minimum Requirement
1	Display Unit	Screen Size	50 inch to 120 inch
		Pixel Pitch	About 2mm to 6mm
		Resolution	About 480 x 360 to 1024x768 (or any specific resolution as per site requirement)
		Aspect Ratio	16:9 or 4:3 or any aspect ratio as per specific requirement
		Brightness	About 700 to 2000 cd/m ²
		Viewing Angle	Horizontal 160° Vertical 140°
		Contrast Ratio	3000:1
		Driving mode	Constant Current
		Colour Calibration and Brightness uniformity	Color calibration with brightness uniformity with > 97%
		Refresh Rate	1000Hz to 2000Hz
		Display Color	68.7 Billion
		Weight of 50" to 120" modules	20Kgs to 150Kgs
		Digital Input	HDMI, DVI-D, USB
		Analog Input	VGA 15-pin
		Audio Input	RCA Audio, Stereo Mini-Jack (2), HDMI Audio
		Audio Output	Stereo Mini-Jack, External Speaker Jack
3	Power	Power Supply	AC 100 - 240V~ (+/- 10%), 50/60Hz
		Average Power Consumption from 50" to 120" module	About 125W to 900W
4	Environmental Conditions	Operating Temperature	0-50 °C
		Operating Humidity	0-90%
		Operation Location	Indoor / Semi Outdoor/ Covered Outdoor Location
5	Display Controller (with embedded OS for Digital Signage)	Display Quality	full HD 1080p video output (BIS Registration should be obtained before installation)
		Internal Storage	Should support SD Card or internal SATA HDD for storage of content

C : True LED Pixel Display-Outdoor (80 inch to 240 inch)*

S No.	Parameter	Specification	Minimum Requirement
1	Display Unit	Screen Size	80 inch to 240 inch
		Pixel Pitch	6mm to 16mm
		Resolution	About 320 x 180 to 960x540 (or any specific resolution as per site requirement)
		Aspect Ratio	16:9 or 4:3 or any aspect ratio as per specific requirement
		Brightness	5500 cd/m ²
		Viewing Angle	Horizontal 160° Vertical 120°
		Contrast Ratio	3000:1
		Driving mode	Constant Current
		Colour Calibration and Brightness uniformity	Color calibration with brightness uniformity with > 97%
		Refresh Rate	3600 Hz
		Display Color	281 Trillion shades
		Weight of 80" to 240" modules	60Kg to 600Kgs
		Digital Input	HDMI, DVI-D, USB
		Analog Input	VGA 15-pin
		Audio Input	RCA Audio, Stereo Mini-Jack (2), HDMI Audio
		Audio Output	Stereo Mini-Jack, External Speaker Jack
3	Power	Power Supply	AC 100 - 240V~ (+/- 10%), 50/60Hz
		Average Power Consumption from 80" to 240" module	About 300W to 1800W
4	Environmental Conditions	Operating Temperature	0-50 °C
		Operating Humidity	0-90%
		Operation Location and protection	Semi outdoor and outdoor (protection level IP65, front and rear)
5	Display Controller (with embedded OS for Digital Signage)	Display Quality	full HD 1080p video output (BIS Registration should be obtained before installation)
		Internal Storage	Should support SD Card or internal SATA HDD for storage of content

*At Concourse and Foot over Bridges, the dimensions of display boards will be as per site conditions.

8.2 CDP and Auction Engine Requirements

8.2.1 Supply of CDP and Auction Engine

- a. The successful bidder shall be responsible for supplying the Content Delivery Platform and Auction Engine required for successful operations of RDN
- b. The said Content Delivery Platform should be able to access, schedule and trigger the display screens from a remote central location
- c. Any software (with genuine enterprise licenses) required for successful operation of CDP shall also be supplied as part of this EOI
- d. Any hardware, cable and networking equipment etc. required for installing the Content Delivery Platform shall be supplied as part of this EOI

8.2.2 Installation of Content Delivery Platform

- a. The successful bidder shall install the Content Delivery Platform at a central location that shall be communicated to the successful bidder in due course
- b. Any cost incurred for installing the Content Delivery Platform shall be incurred by the successful bidder
- c. It shall be the responsibility of the successful bidder to adhere to the implementation plan, which will be shared by RailTel
- d. The successful bidder shall maintain installation records (in hardcopy & softcopy), details of all the items supplied and installed by him and the same shall be submitted to RailTel along with the installation report

8.2.3 Maintenance of Content Delivery Platform

- a. All hardware components required for Content Delivery Platform should have minimum warranty of 5 years. Warranty/AMC to be provided in case of extension of the duration of contract
- b. All software components required for Content Delivery Platform should have minimum warranty of 5 years. Warranty/AMC to be provided in case of extension of the duration of contract

8.2.4 Functional & Technical Specifications for the Solution

S No.	Parameter	Requirement
1	CDP Capabilities	Should be modular in nature with an option of expansion of display nodes and addition of various advertising modules in future as needed
		Should be scalable for future requirements
		Should be able to track individual uptimes of the nodes across stations
		Should be able to maintain logs/audit trails of the advertisements and content displayed with timestamp
		Should be able to monitor, schedule and trigger individual display screens from a central location (at NOC)
		Should have a reporting, monitoring and a billing module as part of the solution (either as part of the solution or interfaced with the relevant modules)
		Should be able to interface with an analytical tool

S No.	Parameter	Requirement
		Should have capability to push different content (complete or partial) at different nodes.
		a. Complete content: displaying different station/ platform/ node specific message at each of the node
		b. Partial content: Same message being published across all nodes followed by Station/ platform/ Node specific content (e.g. contact information of nearest GRP picket) as part of the same message
		Should support rule based information dissemination (e.g. at the arrival of some specific train/ time of day etc.)
		Should be able to display advertisements through multiple display options e.g.
		a. Split Screen
		b. Banner
		c. L – Shaped advertisements
		d. Logo Display
		e. Screen Border etc.
		Should have integration capabilities with various social media platforms e.g.
		a. Identified/ Approved pages on Facebook
		b. Identified/ Approved handles on Twitter
		c. Identified/ Approved channels on YouTube
		d. Any other platform as identified by RailTel in due course
		Should have reconciliation capabilities to reconcile and report relevant information like
		a. Slots sold vs. advertisements displayed
		b. Uptime of the screens during display period
		c. Content displayed at the screen at any given time etc.
		Possibility of Real time content aggregation for various content types including audio, video, graphics, text scroll, etc.
		Should have ability to preview and approve content before its display on the screens by authorized user
		Capability to allot time slots for specified displays either on fixed time or variable time basis depending on overriding priorities.
		Display content should cover all regional Indian languages in addition to English. Typically in each railway station, other than images, the content should be displayed in regional language, Hindi and English.
		Should be able to deliver and store the content locally at display screens to reduce the bandwidth requirement
2		Should have a reverse auction engine either of its own or as a separate module which can be fully interfaced with the CDP

S No.	Parameter	Requirement
	Aggregation and reverse auction Platform	Auction engine should have capability to allow users to perform auctions for pre-defined screen packages (single screen/ all screens of platform/ all screens of station/ group of stations etc.) as defined by RailTel
		Should have ability to show available slots for auction with a drill down to node level.
		Should have reporting and monitoring capabilities with all the necessary analytical tools
		Should be accessible over the web from an App or a Browser by authorized user with log history
3	Application Management	Centralized management of application and operations from a central location (NOC)
		Dashboards relevant for RDN operations for defined levels (including station/ city/ zone/ region/ central)
4	Security	Should be compliant to ISO and other equivalent standards
		Security devices should be installed at MZ and DMZ environments
		Solution should have necessary routine compliances to ensure that required security standards are consistently met. like VAPT, Network Security etc.
		Should be resistant to DDOS attacks
5	Business Resilience	RTO: 15 Minutes RPO: 0 Minutes
		Solution should have 100% redundancy
		Should support Database replication

9 Bidder's Response

- In case of consortium bid, the proposal should clearly indicate the role of each of the consortium partner.
- A vendor can only bid with a single CDP and Auction Engine Platform for the EOI. Bids from the same vendor proposing multiple CDP and Auction Engine Platform will not be considered
- It is the responsibility of the prime vendor to integrate the proposed network and the CDP and Auction Engine Platform
- RailTel will interface / communicate only with the authorized lead consortium partner for all requirements and other project management activities.
- All partners are expected to provide information about their company and product in the format provided in Section 10.1 of the EOI.
- RailTel requires the bidders to respond in the following sequence: (Include required documents under specific sections as per the EOI)
 - Company & Product Information
 - Solution Overview including approach (Refer Section 10.2)
 - The bidder should provide an Excel sheet indicating the gap/availability on the functional requirements (mentioned in Section 8 Key Solution Requirements) in the proposed CDP and Auction Engine Platform.
 - Client Reference and case studies

- g. The bidder must ensure that the response to the EOI shall be as concise as possible (excluding the documentary evidence required).
- h. The proposal in response to the EOI should be signed and submitted by a person duly authorized to bind the bidding company to the details submitted in the proposal in response to the EOI. The signatory should give a declaration and through authenticated documentary evidence establish that he/she is empowered by the competent authority to sign the necessary documents and bind the bidding. All pages of the tender documents except brochures if any are to be signed by the authorized signatory.
- i. The bidder must submit a hard copy and a soft copy (on a CD-ROM) of the proposal in a single sealed envelope at the specified address within the prescribed closure time. Soft copy must be provided in two formats- i) Pdf and ii) Editable Word
- j. All queries must be addressed by email only. Telephonic queries will not be entertained.
- k. All replied queries would be periodically updated on the RailTel's website.

- CDP and Auction Engine Platform
- Proposed site for Site Visit
- Expectations from RailTel in terms of solution requirements and commercial assumptions

10.3 Commercial Business Model

- a. Partner is required to submit the detailed commercial business model as defined in section 5.4 Definition of Commercial Model in a MS Excel format. The commercial model should be developed considering the following objectives of RailTel from the project:
 - Maximize the value and revenue potential for RailTel
 - Committed revenue for RailTel
 - Transparency in the proposed business model
 - Predictability in the inflows for RailTel

11 Annexures

11.1 Annexure-I: Mumbai-Ahmedabad Section

1. Churchgate
2. Mumbai Central
3. Dadar
4. Bandra Terminus
5. Andheri
6. Borivali
7. Vasai Road
8. Virar
9. Vaitarna
10. Saphale
11. Kelve Road
12. Palghar
13. Boisar
14. Vangaon
15. Dahanu Road
16. Gholvad
17. Umbargam Road
18. Sanjan
19. Bhilad
20. Karambeli
21. Vapi
22. Bagwada
23. Udvarda
24. Pardi
25. Atul
26. Valsad
27. Dungri
28. Jora-Vasan
29. Bilimora
30. Amalsad
31. Ancheli
32. Vedchha
33. Navsari
34. Maroli

35. Sachin
36. Bhestan
37. Udhna
38. Surat
39. Utran
40. Kosad
41. Gothangam
42. Sayan
43. Khudsad
44. Kim
45. Kosamba
46. Hathuran
47. Panoli
48. Ankleshwar
49. Bharuch
50. Nabipur
51. Varediya
52. Palej
53. Miyagam Karjan
54. Itola
55. Vishvamitri
56. Vadodara
57. Bajwa
58. Ranoli
59. Nandesari
60. Vasad
61. Adas Road
62. Vadod
63. Anand
64. Kanjari Boriyav
65. Utarsanda
66. Nadiad
67. Gothaj
68. Mhmdvd Kheda Road
69. Nenpur
70. Kanil
71. Barejadi

- 72. Geratpur
- 73. Vatva
- 74. Maninagar
- 75. Ahmedabad

11.2 Annexure-II: Allahabad-Manikpur Section

- 1. Allahabad
- 2. Naini
- 3. Iradatganj
- 4. Jasra
- 5. Madaraha
- 6. Lohgara
- 7. Shankargarh
- 8. Majhiari
- 9. Bargarh
- 10. Kataiya Dandi
- 11. Dabhaura
- 12. Panhai
- 13. Manikpur