

EOI for Business Intelligence Tool for Analytics & Dashboard for Bus Operations in Delhi

Delhi Integrated Multi-Modal Transit System Ltd.,
8th Floor, Block - 1, Delhi Technology Park,
Shastri Park, Delhi 110 053, India

EOI No. **DIMTS/EOI/BI/2022/01**, Dated: **19th January 2022**.

Invitation for Expression of Interest (EOI) for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

Delhi Integrated Multi-Modal Transit System (DIMTS) Ltd, on behalf of Department of Transport (DoT), Government of NCT of Delhi (GNCTD), invites sealed Expression of Interest from agencies for Business Intelligence Tool for development of Analytics and Dashboard for Bus Operations of public bus fleet operated by DIMTS and DTC (Delhi Transport Corporation), in Delhi.

The EOI document containing the details of submission requirements, brief objective and scope of activities, terms and conditions, evaluation criteria etc. can be downloaded from the website of DoT <https://transport.delhi.gov.in/home/transport-department> as well as website of DIMTS <https://www.dimts.in/dimts-latest-tenders.aspx>

Further details, if any, may be obtained from manpreet.kapoor@dimts.in during working hours.

Last date for submission of EOIs is **02nd February 2022, 15:00** hrs. EOIs in sealed envelopes, marked '**Expression of Interest for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi.**' may be submitted at the below address:

Mr. Manpreet Kapoor,

General Manager, IT

Delhi Integrated Multi-Modal Transit System Ltd.,
8th Floor, Block - 1, Delhi Technology Park,
Shastri Park, Delhi 110 053, India

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Invitation for Expression of Interest for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

1. Background

Transport Department, Government of NCT of Delhi (GNCTD) operates over 6000 public transit buses (Number of buses can increase in future) under Cluster Scheme and DTC put together. To better manage and monitor the public transit system and in order to enhance the commuter experience these buses have been fitted with Global Positioning System / Vehicle Tracking Devices (GPS / VTD) and equipped with handheld Electronic Ticketing Machine (ETM) since 2010. Progressively with passage of time and keeping in view the safety and security of the commuters and government regulations from time to time the fleet has been further enhanced with Closed Circuit Television (CCTV) cameras and panic buttons. The real time data feed from these buses is being managed and monitored at the central command centre of DoT at ISBT Kashmiri Gate.

The ITMS (Intelligent Transport Management System) installed on these buses generates humongous amount of data in real time as well there is a large amount of history (past) data available on the servers amassed over previous years of operations, the GPS devices and ETM generate about 150 GB of transactional data every month. DoT is of the view that given the volume of real time data, the history data from past operations and amassing of the ticketing data as well there is a need to deploy a business intelligence tool which can analyse this data to provide dashboard view to management and project stakeholders and also provide various insights into the data on need based requirements.

Delhi Integrated Multi-Modal Transit System Ltd. (DIMTS) is a joint venture company of GNCTD and IDFC Foundation (a not-for-profit company of IDFC Ltd.), with 50% equity each. DIMTS, as Integrated Mechanism, is managing the operations of the cluster buses, for GNCTD.

Transport Department, GNCTD (DoT) has entrusted DIMTS to call this EOI and solicit the response from industry players for implementation of a Business Intelligence (BI) and Analytic system for Public Bus Operations in Delhi.

Through this expression of interest (EOI), DIMTS, on behalf of the Transport Department, GNCTD, seeks expressions of interest from agencies to provide the proposed Business Intelligence Tool for Analytics and Dashboard for Public Bus Operations in Delhi

2. Objectives

The objective of the initiative is to aid and assist DoT and other project stakeholders DTC, DIMTS and cluster buses concessionaires in monitoring and management of public transit bus operations in Delhi. The proposed Business Intelligence Tool will need to analyse real time as well as past data and provide a management dashboard view along with trend analysis and patterns on need based requirements.

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DIMTS, on behalf of DoT, through this EOI intends to shortlist agencies to invite proposals for implementation of Business Intelligence Tool for Analytics and Dashboard for Public Bus Operations in Delhi ('Project'). The detailed Project Scope and Key Terms are provided in Annexure 1.

3. Eligibility for EOIs

- i. The applicant should be a company registered under the Indian Companies Act 1956 / 2013 or a partnership firm registered under the Indian Partnership Act 1932 or the Indian Limited Liability Act 2008.
- ii. The applicant should have minimum average annual turnover of Rs. one (1) crore during last three financial years.
- iii. The applicant should have positive net worth as on end of last financial year.
- iv. The applicant should have successfully completed at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization / PSU in India.
- v. The applicant should be an OEM (Original Equipment Manufacturer) of the proposed BI Tool or an authorized channel partner of the OEM of the BI Tool.
- vi. The proposed Business Intelligence Tool for analytics and dashboard for public bus operations in Delhi should be part of the Leaders segment by Gartner in any of the last three years.
- vii. The applicant should not have been blacklisted / debarred by any Government Entity or PSU in India as on date of submission of EOI.

4. Submission of EOI

The applicants need to submit their Expressions of Interest in sealed envelopes, in the format and manner specified in this document.

The following documents need to be enclosed with the EOI:

- i. Letter for Expression of Interest as per format 1
- ii. Copy of Registration Certificate, GST Certificate, PAN certificate of the applicant.
- iii. Organisational details as per format 2
- iv. Work order / agreement and client certificate / self-certificate indicating successful completion of at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization (as per format 4).

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- v. Copies of audited balance sheets for last 3 financial years or CA certificate evidencing annual turnover and net-worth.
- vi. Undertaking for being OEM of the proposed BI Tool or letter of authorization from the OEM of BI Tool proposed.
- vii. Self-certified relevant extract of the Gartner report indicating that the proposed Business Intelligence tool is part of the Leaders segment in any of the last 3 years
- viii. Details of the proposed BI tool including but not limited to the following:
 - a. BI Tool features and functionalities
 - b. Technical specifications
 - c. Proposed license schema options (core based, user based etc.) keeping in view the data and user requirements of DoT.
 - d. Hardware and Bandwidth requirement for hosting the BI Tool (on premise data centre as well as on cloud)
- ix. Approach for Requirement Gathering, Design, Customization and Implementation of the BI Tool along with proposed milestone based timelines.
- x. Plan for Knowledge Transfer, Training and Handover of the system.
- xi. Roles and Responsibility matrix along with task level breakdown
- xii. Approach note on how the proposed BI Tool will help DoT in achieving the project objectives.

Refer format 3 on technical submissions as well for point no. ix to xiii above.

5. Evaluation of EOIs

DIMTS will evaluate the EOIs received on the following criteria:

Sl. No.	Parameter	Marks
1	Experience of the agency in implementation Business Intelligence Tool for Analytics and Dashboard	15
2	Deployment of the proposed BI tool in transit domain in India or abroad, by the Applicant or any other partner of the OEM	20
3	Features and functionality of the proposed BI tool along with associated technical specifications, license schema, bandwidth requirement and hardware requirement for hosting the system	30
4	Approach for Requirement Gathering, Design, Customization and Implementation of the BI tool along with milestone based timelines.	15

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Sl. No.	Parameter	Marks
5	Proposed Knowledge Transfer, Training and Handover Plan	10
6	<ul style="list-style-type: none">i. Approach note on the BI Tool achieving the project objectives.ii. Roles and Responsibility matrix along with task level breakdown	10

The Applicants will be required to make a presentation before DIMTS/DoT covering all the above parameters, at a date and time intimated by DIMTS. The written submissions as well as presentation by the Applicants shall be taken into consideration in evaluation of EOIs.

The Applicants, scoring at least seventy (70) marks in evaluation shall only be eligible for next stage i.e. issuance of Request for Proposal by DIMTS.

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6. Terms of EOI

- i. DIMTS reserves the right to accept or reject any EOI or to annul the EOI process, at any time without any liability or any obligation for such acceptance/ rejection or annulment without assigning any reasons thereof.
- ii. The Expressions of Interest by the Applicants shall be valid for a period of 180 days initially which may be extended further if required by DIMTS.
- iii. This EOI is not an offer and is issued by DIMTS with no commitment. DIMTS reserves the right to withdraw EOI and/ or modify any part thereof at any stage. DIMTS further reserves the right to disqualify any Applicant, should it be so necessary at any stage.
- iv. The Expressions of Interest are being invited by DIMTS on behalf of Transport Department, GNCTD. The payment for the BI Tool shall be made by DIMTS after receiving funds from DoT.

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Annexure 1

Project Scope and Key Terms

The scope of the Project and key terms for the engagement of the Agency to implement the Business Intelligence (BI) Tool for Analytics and Dashboard for Bus Operations in Delhi are provided below:

1. DIMTS on behalf of DoT, shall appoint an Agency to implement the Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi, on the terms as specified in this document and the request for proposal (RFP) issued by DIMTS subsequently.
2. The appointed agency will need to design, develop and implement the BI tool keeping in view the requirements specified by DIMTS in consultation with DoT and DTC (other agency operating the buses in Delhi).
3. As a part of the system design the appointed agency will need to study the existing ITMS system deployed and identify the various dashboard view, data trends and insights and Key Performance Indices in consultation with DoT and its associate project stakeholder like DTC, DIMTS and cluster bus concessionaires.
4. The system requirements so identified at S. No. 3 will then be developed and implemented by the appointed agency.
5. The proposed BI tool is expected to be deployed within 6 months of the appointment of the agency.
6. The appointed agency will carry out training, knowledge transfer and handholding to the team members of various project stakeholders post successful deployment of the system.
7. The trained team members should be able to create KPI's, report and dashboard views based on the requirements of the project stakeholders from time to time. The appointed agency may decide upon the time duration for training of the team members based on the above expected outcome.
8. Post successful deployment of the system the appointed agency is expected to provide solution maintenance and support services for a period of 3 years which would include deployment of upgraded version of the tool if any during the contract period.
9. The appointed agency will need to provide the license to use the BI Tool to DoT and other project stakeholders (DIMTS, DTC and Cluster Bus concessionaire) during the implementation and well as support period of the contract.
10. The proposed hardware specifications and the associated bandwidth for the deployment and seamless functioning of BI tool will need to be provided for by the appointed agency.
11. The appointed agency will need to work out the technical specifications of the BI tool based on the system requirements as firmed up in consultation with DoT and its associated stakeholders (DIMTS, DTC and Cluster Bus concessionaire).

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12. The appointed agency will also need to compute the requirement of no. of core licenses / user licenses and concurrent user licenses based on the licensing policy of the proposed BI tool, keeping the system requirement in view.
13. DoT/DIMTS will provide the list of KPI's to be monitored through the BI Tool. Minimum requirements/an indicative but not exhaustive list of proposed KPI's is placed at Annexure 2. However the KPI's will need to be firmed up during the system requirement study at S. No. 4 above.
14. The proposed BI tool should have capability to provide role based access and view to various project stakeholders at appropriate levels within drill down capabilities
15. The appointed agency will need to collate data coming from GPS devices, handheld ETM's, system alarms and alerts, various master tables (fleet, drivers, conductors, schedules, tips, routes, bus stops etc.) and daily performance reports, from individual systems.
16. The proposed BI tool should be highly scalable keeping in view the future requirements of DoT/DIMTS and expansion in size of bus fleet. The proposed size of bus fleet in Delhi for public transit is 11,000. Hence the system should be able to scale to support this many number of buses operating in Delhi, in future.
17. The appointed agency should ensure that proposed deployment architecture of the BI tool is in high availability mode with built in redundancy. It is envisaged that the proposed BI tool deployment will have an high uptime of 99.9%
18. The proposed BI tool should be deployment agnostic i.e. can be deployed on-premises, on any private / public cloud without imposing any feature restrictions.
19. The proposed BI tool should be capable of sharing reports and other data, as requested by any research or educational institute or any other agency, directly from the system. The data sharing would be done after due approval from DoT/DIMTS.
20. The proposed BI tool should have the following indicative features
 - a. Allow users to capture and export the current display through electronic reports and in different printer formats, including support of office suite of app's (e.g. excel, word, etc.)
 - b. Have a default configuration and landing page for each user or user
 - c. Allow multiple visual elements to be laid out on the same display.
 - d. Have the ability to display dashboards and reports using different visual elements including charts, maps, calendars, gauges, images, tables, visual and textual lists, and alerts as follows:
 - e. All visual elements shall have editable titles, labels, legends, axes, icons, and colours, where applicable.
 - f. Interactive visualization component shall display the overall aggregate status of a DoT's/DIMTS' KPI with proper colour coding (green, yellow, red, or as defined by DoT/DIMTS preferences).

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- g. It should allow the user to drill down and switch between different KPIs (e.g. KPI for utilization, average vehicle duration, etc.)
- h. Display clickable contextual information related to the metrics being viewed and allows the user to drilldown on contextual information as required.
- i. Different types of charts should be supported such as Bar Charts, Histograms, Line Charts, Heat Maps, Pie Charts, Grids, Radar Charts, Scatter Plots, and Doughnut Charts etc.
- j. Maps shall have GIS Maps extension to allow plotting different mark base and spatial map layers and allow the user to zoom and pan freely through the map, and be able to present heat map visualizations on GIS map data.
- k. Calendars shall allow the user to intuitively navigate through calendar fields, such as day, month, and year.
- l. Visual and textual lists shall allow the user to scroll through all of the available list items with smooth scrolling.
- m. Allow the user to choose the proper visual element required to display the required KPI data and allow the user to easily switch between alternative visual elements.
- n. Have view-management tools, allowing the user to move, reorder, enlarge, shrink, open, and close visual elements with intuitive interaction.
- o. Allow the user to create a new visual element based on the available visual element types and customize an existing visual element with an easy to use graphical interface.
- p. Allow the user to save any customization done on a visual element.
- q. Automatically update the parameters and filters of the displayed data when the user drills down through visual elements and update the other visual elements accordingly.
- r. Also, enable selection of filters through the visual elements and propagate selection to all visual elements in the dashboard.
- s. Allow the user to filter and sort the presented data based on number of attributes including the time period or on multiple attributes simultaneously.
- t. Allow the user to search through visual elements that display numerous data entries such as tables and lists.
- u. Allow the user to save the current filter and selection of parameters
- v. Understand different types of structured data including numbers, percentages, fractions, general text, coordinates, and objects.
- w. Run mathematical, statistical, and analytical operations on available data
- x. Compute trends and projections from data based on available historical data and based on data from external systems to enable informed decision making.

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Annexure 2

Minimum System Requirement Specifications for development of Dashboard] for real time monitoring of City Bus Operation in Delhi and performance of services based on historic data for Monthly/Quarterly/ Yearly

Sources of input (both for DTC & Cluster buses in Delhi)

- 1) Integration with GPS based Automatic Vehicle Location data with refresh rate/polling cycle of 10 seconds from each bus (integrated with server of TCIL/MAPL, set up for Transport Department, Govt. of NCT of Delhi at Command & Control Centre, 4th Floor, Kashmere Gate)
- 2) Electronic Ticketing Machines (ETMs) based automatic fare collection system application data (integrated with server set up M/s Aurionpro Solutions Ltd. for Transport Department, Govt. of NCT of Delhi at Operations Control Centre, 1st Kashmere Gate)

System Requirement Specifications/Parameters

- A) Fleet Performance of City Bus Operation in Delhi
- B) Service Quality
- C) Capacity availability vs. utilization on each route
- D) Productivity of DTC & Cluster Buses
- E) Data Analytics on different parameters
- F) Financial Performance (Monthly, Quarterly & Financial Year-wise of buses]
- G) Panic Button

The details of requirements are as under:

A) Fleet performance of City Bus Operation in Delhi

a) Fleet Utilization

Description	DTC	Cluster	Total
Fleet Held			
Schedule Fleet			
Actual Fleet on road			
Fleet Utilization			

- Drill down upto depot/Cluster level.
- Data should be available for current day, progressive during the month, comparative data with previous month, historic data of previous F.Y. vs Current F.Y – Depot-wise/Cluster-wise/Concessionaire Company-wise, DTC vs Cluster, consolidated for Delhi.

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- Breakdown of AC-CNG, AC-Electric & Non-AC-CNG buses also required.

b) Route Performance

Description	Total		
	DTC Routes	Cluster Routes	Common Routes
No. of City Routes operated			
No. of NCR Routes operated			

- Drill down at route level with route structure, time table, whether served by AC-CNG, AC-Electric & Non-AC-CNG Bus, First trip time with node, last trip time with node, Peak hour peak direction (PHPD), Frequency – peak/off peak/inter peak, fare stage bus stop, category of routes (Trunk, Primary, Secondary etc.).

c) Service Trips

Description	DTC	Cluster	Total
Service Trips			
Actual Trips			
Operational Efficiency			
Trip Cancellation with reason – Breakdown, No Bus, No Driver, No Conductor etc.			

- Drill down upto depot/Cluster level.
- Data should be available for current day, progressive during the month, comparative data with previous month, historic data of previous F.Y. vs Current F.Y – Depot-wise/Cluster-wise/Concessionaire Company-wise, DTC vs Cluster, consolidated for Delhi.
- Breakdown of AC-CNG, AC-Electric & Non-AC-CNG buses also required.

B) Service Quality

Description	DTC	Cluster	Total
Schedule Adherence – On-time			
Wait time (Actual) Morning Peak/EV Peak			
Skipped bus top (fare stages)			
Early Departure trips			
Over-speed cases			
Traffic Jam – Stretch-wise/Route-wise with trend for a month			

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- Drill down at depot level, Cluster/Concessionaire Company level, bus/duty level, driver level with previous history etc.
- Analytics for Speed profile, dangerous case history – repeated case history of driver/bus.
- Route-wise reliability DTC vs Cluster etc.

C) Capacity Availability Vs. Utilization on each route:

Ridership	DTC	Cluster	Total
Total Ridership			
Ridership per day			
Ridership per bus per day			
Ridership – Route wise [Peak Hour and non-peak hour)			
Analytics for over-utilization/un-utilization of buses deployed on each route in peak hour peak direction on week days, monthly trend etc.			

- Drill down at depot level, Cluster/Concessionaire Company level, bus/duty level, driver level with previous history etc.
- Analytics for Speed profile, dangerous case history – repeated case history of driver/bus.
- Route-wise reliability DTC vs Cluster etc.

D) Productivity of DTC and Cluster Buses:

Description	DTC	Cluster	Total
1. Scheduled KMs			
2. Actual KMs			
3. Vehicle Utilization KM per bus per day			

- Drill down upto depot/Cluster level (route-wise).
- Data should be available for current day, progressive during the month, comparative data with previous month, historic data of previous F.Y. vs Current F.Y – Depot-wise/Cluster-wise/Concessionaire Company-wise, DTC vs Cluster, consolidated for Delhi.
- Lost kilometrage due to Breakdown, traffic jam etc. of DTC & Cluster buses also required.

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E) Data Analytics for the following points:

- Comparative performance trend (KPIs) of different agency, different operators [Concessionaire] under Cluster Scheme with graphical representation.
- Economic feasibility analysis of a new route through statistical simulation approach.
- Passenger Information about availability & reliability of route-wise service [Agency-wise, consolidate] with graphical representation.
- Overtaking of buses on the same route
- Bunching of bus on the same route/alignment
- Analysis of genuine traffic jam on different days
- Trend for identification and perennial problem of traffic jam on a particular stretch.
- Identification of genuine traffic jam on a route resulting in non-adherence of time schedule
- Identification of cases of non-adherence of time-table willfully by the driver
- Identification of cases of non-adherence of minimum service gaps at the node points of routes.
- Identification of necessary compliance
- Analysis of authorized and non-authorized route diversion with bus number and trip number as an exception report.
- Driver-wise/duty-wise analysis of bus stop skipped both for DTC and Cluster
- Driver-wise/duty-wise analysis of over-speeding both for DTC and Cluster

F) Financial Performance [Monthly, Quarterly & Yearly of buses]

Revenue*	DTC	Cluster	Total
Traffic Revenue			

* Breakup of Revenue per KM, per day, per bus per day, weekly (weekdays & weekend separately), monthly, yearly (Calendar & Financial).

Expenditure**	DTC	Cluster	Total
Gross Cost			
Operating Cost			
Fixed Cost (Capital)			

** Breakup of Cost per KM, per day, per bus per day, weekly (weekdays & weekend separately), monthly, yearly (Calendar & Financial).

Gap***	DTC	Cluster	Total
Total Gap			
Operating Gap			

*** Breakup of Gap per KM, per day, per bus per day, weekly (weekdays & weekend separately), monthly, yearly (Calendar & Financial).

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Breakup at Cluster, Depot and Route Level (AC-CNG, AC-Electric & Non-AC-CNG).

G) Panic Button

Description	DTC	Cluster	Total
Total incidence of panic button			
No. of false panic button incidence			
No. of panic button alert received at CCC*			
No. of panic button alert received at CCC [Category-3: genuine cases referred to Delhi Police, Dial 112**]			

* CCC is Command and Control Centre

** Drill down for details

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Format 1

Letter for Expression of Interest for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

Date: _____

To

The MD & CEO ,
Delhi Integrated Multi-Modal Transit System Ltd.,
8th Floor, Block - 1, Delhi Technology Park,
Shastri Park, Delhi 110 053, India

Reference EOI No. _____, **Dated** _____

Subject: EOI for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

Sir,

With reference to your EOI document dated, I/we, having examined the same and understood its contents, hereby submit my/our Expression of Interest for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi.

I/ We acknowledge the right of DIMTS to reject our EOI without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

I/ We declare that:

- a. I/ We have examined and have no reservations to the EOI document, including any Addendum issued by the DIMTS;
- b. I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, in respect of any tender or request for proposal issued by or any agreement entered into with DIMTS or DoT or any other public sector enterprise or any government, Central or State; and
- c. I/ We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf has engaged or will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

I/ We understand that you may cancel the EOI process at any time and that you are not bound to accept any EOI that you may receive, without incurring any liability to the Applicants.

I/We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by DIMTS in

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connection with the selection of the Agency, or in connection with the EOI Process itself, in respect of the above mentioned Project and the terms and implementation thereof.

I/We shall keep this EOI valid for 180 (one hundred and eighty) days from the last date of submission of EOIs specified in the EOI document and may extend the same on the request of DIMTS.

I/ We agree and undertake to abide by all the terms and conditions of the EOI document.

Yours faithfully,

(Signature of Authorized Signatory)

Name, title and address

For and on behalf of

Name and Seal of Applicant Organisation

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Format 2

Organisational Details of the Applicant

1. Details of Applicant

- (a) Name
- (b) Type of Organisation
- (c) Address of the registered office
- (d) Date of registration/incorporation

2. Brief description of the Applicant including details of its main lines of activities/ business, promoters/ directors of company etc.

3. Annual Turnover of the Applicant during last three financial years and Net-worth as on the last day of the last Financial Year

Sl. No.	Parameter	Value
1	Annual Turnover Year _____	
2	Annual Turnover Year _____	
3	Annual Turnover Year _____	
4	Average Annual Turnover during last three Financial Years	
5	Net-worth as on _____	

(Applicant need to enclose audited balance sheets for last three years or a certificate from a Chartered Accountant certifying the above details.)

4. Details of individual/s who will serve as the point of contact / communication with the DIMTS:

- (a) Name :
- (b) Designation :
- (c) Organisation :
- (d) Address :
- (e) Telephone Number :
- (f) E-Mail Address :
- (g) Mobile Number :

5. Details of Authorised Signatory of the Applicant:

- (a) Name :

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- (b) Designation :
- (c) Organisation :
- (d) Address :
- (e) Telephone Number :
- (f) E-Mail Address :
- (g) Mobile Number :

Notes:

Documentary proof of registration/ incorporation, Memorandum and Articles of Association (as applicable), GST certificate, PAN certificate, audited balance sheet / CA certificate need to be furnished by the Applicant.

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Format 3

Technical Submissions

Sl. No.	Parameter	Submissions
1	Experience of the agency in implementation Business Intelligence Tool for Analytics and Dashboard	Project Experience sheets as per Format 4.
2	Deployment of the proposed BI tool in transit domain in India or abroad, by the Applicant or any other partner of the OEM	Certificate by OEM supported with project details.
3	Features and functionality of the proposed BI tool along with associated technical specifications, license schema, bandwidth requirement and hardware requirement for hosting the system	BI Tool data sheet and write ups.
4	Approach for Requirement Gathering, Design, Customization and Implementation of the BI Tool along with milestone based timelines.	Write ups
5	Proposed Knowledge Transfer, Training and Handover Plan	Write ups
6	Approach note on the BI Tool achieving the project objectives.	Write ups

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Format 4

Project Data Sheet

Sl. No.	Items	Details
1.	Name of the project	
2.	Client Details	
3.	Whether client is a Govt. / PSU entity.	
4.	Scope of the project	
5.	Duration of the project (start date and date of completion of project)	
6.	No. of Users	
7.	Hosting Model (Cloud / on premise)	
8.	Product version of the BI tool implemented	
9.	Main features of BI tool implemented.	
10.	Contract Value	

Note: Copies of work order / agreement and client certificate / self-certificate indicating successful completion need to be attached.

Response to Additional Queries received towards the Expression of Interest (EOI) for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
1	Page 4	Section 4, clause viii.b	Details of the proposed BI tool including but not limited to the following: a. BI Tool features and functionalities b. Technical specifications	What all to be given under these technical specifications ?	The technical specifications need to include the technical details of the proposed BI tool such as databases supported, development platforms supported, embeddability, security, architecture, no. users supported, data processing capability etc.
2	Page 8	Annexure 1, sub clause 15	The appointed agency will need to collate data coming from GPS devices, handheld ETM's, system alarms and alerts, various master tables (fleet, drivers, conductors, schedules, tips, routes, bus stops etc.) and daily performance reports, from individual systems.	Is there a central database that stores data from EMT, GPS and other mentioned sources ?	No, there is no central database for the applications. The individual application have their respective database.
3	Page 8	Annexure 1, sub clause 17	The appointed agency should ensure that proposed deployment architecture of the BI tool is in high availability mode with built in redundancy. It is envisaged that the proposed BI tool deployment will have an high uptime of 99.99%	Define redundancy in operational efficiency ?	Redundancy in operational efficiency has not been sought, may kindly read the relevant clause
4	Page 8	Annexure 1, sub clause 19	The proposed BI tool should be capable of sharing reports and other data, as requested by any research or educational institute or any other agency, directly from the system. The data sharing would be done after due approval from DoT/DIMTS	What all content of a report is to be shared ? Tabular data/Visual charts - Pls mention all	Any existing system report, customized report or report generated from the proposed BI report based on data points available in the system will form a part and parcel of this requirement
5	Page 8	Annexure 1, sub clause 19	The proposed BI tool should be capable of sharing reports and other data, as requested by any research or educational institute or any other agency, directly from the system. The data sharing would be done after due approval from DoT/DIMTS	How is the above data to be shared ? via email ?	Through an API based interface, email, export to excel/pdf etc.
6	Page 9	Annexure 1, sub clause 20.m	Allow the user to choose the proper visual element required to display the required KPI data and allow the user to easily switch between alternative visual elements.	What does alternating visuals mean ?	Alternating visuals means presentation of a specific data set in multiple visual forms (such as different charts, data table etc.), which can be changed on a click.
7	Page 9	Annexure C, sub clause 20.w	Run mathematical, statistical, and analytical operations on available data	What is meant by application of statistical operations on data ?	Use statistical analysis to uncover patterns and trend by looking at say mean, standard deviation, regression etc. to name a few
8	Page 10	Annexure 2, sub clause 1	Integration with GPS based Automatic Vehicle Location data with refresh rate/polling cycle of 10 seconds from each bus (integrated with server of TCIL/MAPL, set up for Transport Department, Govt. of NCT of Delhi at Command & Control Centre, 4th Floor, Kashmere Gate)	Does a centralize database exists to store all this bus data every 10 seconds ?	This data is available in the respective application database.
9	Page 10	Annexure 2, sub clause 2	Electronic Ticketing Machines (ETMs) based automatic fare collection system application data (integrated with server set up M/s Aurionpro Solutions Ltd. for Transport Department, Govt. of NCT of Delhi at Operations Control Centre, 1st Kashmere Gate)	Does a centralize database exists to store the ETM data ?	This data is available in the respective application database.

Response to Additional Queries recieved towards the Expression of Interest (EOI) for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
10	Page 10	Annexure 2, sub clause 2	Electronic Ticketing Machines (ETMs) based automatic fare collection system application data (integrated with server set up M/s Aurionpro Solutions Ltd. for Transport Department, Govt. of NCT of Delhi at Operations Control Centre, 1st Kashmere Gate)	What is the type of database for ETM ? (SQL, cloud etc.) if any ?	The information will be detailed at the RFP stage
11	Page 19	Format 3, point 3	BI Tool data sheet and write ups.	What is meant by BI tool data sheet ?	In case, the proposed BI tool has a standard datasheet, detailing its features, specifications etc., the same may be shared.
12	Not Applicable	General	Not Applicable	What is the total user base for BI ?	The information will be detailed at the RFP stage
13	Not Applicable	General	Not Applicable	How many users will create/work on reports ?	The information will be detailed at the RFP stage
14	Not Applicable	General	Not Applicable	How many users will simply view dashboards ?	The information will be detailed at the RFP stage
15	Not Applicable	General	Not Applicable	What is the database that stores data from all the systems (EMT, Buses, GPS etc.)?	The information will be detailed at the RFP stage
16	Not Applicable	General	Not Applicable	What is the total size of database (past data included) ?	The information will be detailed at the RFP stage
17	Not Applicable	General	Not Applicable	Is this database onprem/cloud ?	The information will be detailed at the RFP stage
18	Not Applicable	General	Not Applicable	How is data transferred from devices (EMT, GPS etc.) into database ?	The information will be detailed at the RFP stage
19	Page 8	Annexure 1, sub clause 18	The proposed BI tool should be deployment agnostic i.e. can be deployed on-premises, on any private / public cloud without imposing any feature restrictions.	What premise does DIMTS prefer for BI deployment ? cloud or on prem ?	The information will be detailed at the RFP stage

Response to Queries received towards the Expression of Interest (EOI) for Business Intelligence Tool for Analytics and Dashboard for Bus Operations in Delhi

SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
1	Page 3	Section 3. iv	The applicant should have successfully completed at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization / PSU in India	Requesting to change the clause to any BI tool experience instead of proposed one	Please refer to amendment to the Eol document in this regard
2	Page 3	Section 3.v	The applicant should be an OEM (Original Equipment Manufacturer) of the proposed BI Tool or an authorized channel partner of the OEM of the BI Tool	Requesting to make OEM Authorization Form (Manufacturer Authorization Form) signed by the authorized signatory of OEM (to resell its licenses and use the tool for implementation and support of the project), sufficient to meet the clause, as this is a standard form across all the industry.	Please refer to amendment to the Eol document in this regard
3	Page 4	Section 5. SI No.2	Deployment of the proposed BI tool in transit domain in India or abroad, by the Applicant or any other partner of the OEM	Requesting to allow experience in public sector as well	No Change
4	Page 1		Last date for submission of EOIs is 02nd February 2022	We are requesting to kindly extend the date of bid submission by two weeks as we are yet to get clarity on certain points(rebid response) and post that we will initiate internal approvals.	Please refer to amendment to the Eol document in this regard
5	Page 3	Section 3	General Query	We would like to request you to please confirm is Joint Venture / Consortium of two firms are allowed to bid in this tender? If not, we request you to kindly allow Joint Venture / Consortium to enhance qualification in this tender	No Change
6	N.A	N.A	General Query	We would want to know if this a close bid or open bid and if this is close, who all are invited.	Last para of Section 5 of the Eol be referred to in this regard.
7	Page 5	N.A	The Applicants, scoring at least seventy (70) marks in evaluation shall only be eligible for next stage i.e. issuance of Request for Proposal by DIMTS.	The evaluation basis for the vendor invited is on L1 basis or QCBS	Last para of Section 5 of the Eol be referred to in this regard.
8	Page 3	Section 3, ii	The applicant should have minimum average annual turnover of Rs. one (1) crore during last three financial years.	Eligibility for EOI has a point – “The applicant should have minimum average annual turnover of Rs. one (1) crore during last three financial years” – can we discuss more around this.	Please refer to amendment to the Eol document in this regard
9	Page 3	Section 3	General Query	If you could include the condition for the participants – the participating vendor should be CMMI level 3 or above.	No Change
10	N.A.	N.A.	General Query	Also we would like more information around the current IT Landscape.	The requirements of the BI tool have been specified in the Annexure II of the Eol document. The proposed BI tool should be compatible with various IT platforms including but not limited to MySQL, MSSQL, Oracle, Postgre etc. and developmental platform DoTNet, PHP and Java, also please refer the amendment of the Eol document

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
11	Page 1		Last date for submission of EOIs is 02nd February 2022	<p>We would request you to please extend the date for Bid submission from 2nd Feb 2022 to 11th of Feb 2022.</p> <p>We need this extension so as to provide the best possible technical and commercial solution for your requirement.</p>	Please refer to amendment to the EOI document in this regard
12	Page 3	Section 3, ii	The applicant should have minimum average annual turnover of Rs. one (1) crore during last three financial years.	The clauses that wants the bidder to have 3 years in existence and have a avg turnover are becoming difficult to comply. We have been in operations for 2 years and will complete 3 years by this March. And our Avg turnover for the last 2 years would be in the range of 70L.	No change
13	N/A	N/A	Not mentioned in RFP	Please specify if Estimated Commercial needs to be submitted or there is requirement to submit only technical expression of Interest without Commercial Estimate	No, estimated commercials have been sought in the EOI document
14	Page 3	Section 3.ii.	The applicant should have minimum average annual turnover of Rs. one (1) crore during last three financial years.	There is very less room for error in a project of this nature, that can set precedence for future innovation and technology advancement in citizen and multimodal transit services of a country. The applicant should be capable of executing projects of similar financial value for better financial strength of applicant. This will ensure that the applicant is financially viable to execute the project for the entire contract period of 3 years with adequate, stable and effective quality workforce deployment. Any delay due to lack of capital, financial upheaval or insolvency can cause reputational loss & irrevocable damage to the initiative in the future, hence, ideally it is recommended to be addressed at the start.	Please refer to amendment to the EOI document in this regard
15	Page 3	Section 3.iv.	The applicant should have successfully completed at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization / PSU in India.	Department of Transport is endeavouring to be pioneer in India as the first State Government Department to take on initiative of empowering data driven decision making to improve commuter experience with data aggregation real time. Hence it is imperative that the applicant organization must be able to exhibit the required in-house capabilities in terms of resources, assets, capacity planning, and proven execution of similar scale in any industry. To this effect we request that the projects executed by the applicant should be of related scale financially.	Please refer to amendment to the EOI document in this regard

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
16	Page 4	Section 3.v.	The applicant should be an OEM (Original Equipment Manufacturer) of the proposed BI Tool or an authorized channel partner of the OEM of the BI Tool.	All BI Tool vendors have levels of channel partnership and generally they are for reselling licenses, we request the department to include a minimum level of partnership as the scale of the project is huge and the ability of the partner will determine the success of the project as per the need of the department.	Please refer to amendment to the EOI document in this regard
17	Page 4	Section 3.vii.	The proposed Business Intelligence Tool for analytics and dashboard for public bus operations in Delhi should be part of the Leaders segment by Gartner in any of the last three years.	There is a lot of competition among the BI vendors which only improves the quality of the products. A consistent leader should be preferred given the magnitude of data and the wide application of the need of the BI tool. Product selected will not be possible to be changed during the next three to five years thus DIMTS should opt for a BI Tool which has been a consistent leader in the last three years of the Gartner's quadrant for BI tools.	No Change
18	N/A	Proposed	Additional Eligibility Criteria for EOI	Since the project is focussed on the National Capital Region of Delhi, it is recommended that the applicant should have resources based in Delhi NCR and has operations in the same.	No Change
19	N/A	Proposed	Additional Eligibility Criteria for EOI	We recommend that the applicant should have experience in analysis services or similar projects in the city of Delhi and Government of Delhi NCT which would help to evaluate applicants who understand the citizen services or similar environment at Delhi better.	No Change
20	N/A	Proposed	Additional Eligibility Criteria for EOI	Given the magnitude of the project it is suggested that the following eligibility criteria be added for better delivery of the project. Adequate, stable and effective quality workforce deployment warrants that the applicant must be adequately staffed.	No Change
21	N/A	Proposed	Additional Eligibility Criteria for EOI	The applicant must ensure that their workforce is adequately skilled and have pre-requisite knowledge of tool with required certifications completed so that only quality, certified and specialised skilled workforce is deployed	No Change

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
22	N/A	Proposed	Additional Eligibility Criteria for EOI	With the need of consolidation of data from DTC, and other concessionaires & other stakeholders such as Auriopro hence there will be need to create a data warehouse to consolidate all data management before reporting hence creation of data warehouse would need pre-requisite data warehousing exposure. The solution has been asked to be deployment agnostic so the applicant should have experience of working with on-premise as well as be a MEITY empanelled Cloud Provider or an authorized partner for the same and should have executed executed projects for the same.	No Change
23	N/A	Proposed	Additional Eligibility Criteria for EOI	As per GFR guidelines the applicant should not be subjected to any legal action for any cause in any legal jurisdiction in the last five years.	No change
24	N/A	Proposed	Additional Eligibility Criteria for EOI	We also recommend ISO9001:2015, ISO 20000, and ISO 27001. The applicant development processes and resources will be touching sensitive citizen data and ridership data with a few occasions' citizen identity and PII information. As per Global Standards such processes must be covered by minimum of ISO27001 & ISO 9001.	No Change

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
25	N/A	Proposed	Additional Eligibility Criteria for EOI	The project that DIMTS is building on behalf of DoT (Department of Transport), Government of NCT has full potential not only to be at par to similar scale and quality as to other nations such as UK (United Kingdom) & Singapore but also potential to exceed and establish a new global benchmark. Hence CMMi Level 3 must be considered as mandatory requirement to this prestigious project . The project requires expertise in highly specialized skills (AI, ML, Analytics, BI, and application Integration & specialized agile development). Organizations that have CMMI certifications (Capability Maturity Model Integration) have undergone the stringent assessment of streamlines processes that encourage productivity, promote efficient behaviour to mitigate the risks of software development and service execution. By Definition CMMI (Capability Maturity Model Integration) is a process and behavioural model that assists organizations to streamline their processes efficiently and encourage productivity, promote efficient behaviour to decrease risk in software, product and service development.	No Change
26	N/A	Proposed	Additional Eligibility Criteria for EOI	Support for the project maybe required at any hour of the day thus it is requested that DIMTS requests that the applicant has a functional 24*7 support with a dedicated toll free number for providing technical support.	No Change
27	N/A	Proposed	Additional Eligibility Criteria for EOI	Support for the project maybe required at any hour of the day thus it is requested that DIMTS requests that the applicant has a back to back contract with the OEM to solve critical issues in time.	No Change
28	Page 7	Annexure 1, point 6	Annexure 1 Project Scope and Key Terms: The appointed agency will carry out training, knowledge transfer and handholding to the team members of various project stakeholders post successful deployment of the system	Please specify the number of team members who will need training, knowledge transfer and handholding	This would be shared at RFP stage
29	Page 7	Annexure 1, point 7	Annexure 1 Project Scope and Key Terms: The trained team members should be able to create KPI's, report and dashboard views based on the requirements of the project stakeholders from time to time. The appointed agency may decide upon the time duration for training of the team members based on the above expected outcome.	Please specify the number of team members who will be creating KPIs, Dashboard & reports views and approx. time Duration of training and handholding required.	This would be shared at RFP stage

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
30	Page 8	Annexure 1, point 17	The appointed agency should ensure that proposed deployment architecture of the BI tool is in high availability mode with built in redundancy. It is envisaged that the proposed BI tool deployment will have an high uptime of 99.9%	Apart from high availability, disaster recovery of the solution should also be factored by the applicant for site level outages. It is recommended that DR is at least 100 KMs away from the Datacentre site. It is also suggested that the DC or DR be MEITY empanelled for compliance.	This would be shared at RFP stage
31	Page 8	Annexure 1, point 18	The proposed BI tool should be deployment agnostic i.e. can be deployed on-premises, on any private / public cloud without imposing any feature restrictions.	Most of the new innovations in BI including Auto ML, Predictive Analytics, Route Optimization with ML, Bot for Data etc. are features which all OEMs provide only Cloud option thus will urge the department to look at BI on Cloud with Data warehouse on premise in a Hybrid model.	No Change
32	Page 3	Section 4	Technical Submission of EOI	As per suggestion in SNo of 6-15 relevant certifications and documents must be added to the Technical Submission of EOI	No Change
33	Page 7	Annexure 1	Annexure 1 Project Scope and Key Terms: The proposed hardware specifications and the associated bandwidth for the deployment and seamless functioning of BI tool will need to be provided for by the appointed agency.	Please clarify if DIMTS has a 'Always On' setup for the data warehouse or it is in the scope of the applicant	The scope will be detailed at the RFP stage
34	N/A	Annexure 1	Annexure 1 Project Scope and Key Terms:	The real time analytics and dashboard alerts and notification will help officers in DOT, DIMTS, DTC and other concessionaires GDNCT to take actions in real time	The scope will be detailed at the RFP stage
35	Page 8	Annexure 1	Point 14. Annexure 1 Project Scope and Key Terms: The proposed BI tool should have capability to provide role based access and view to various project stakeholders at appropriate levels within drill down capabilities	The proposed BI tool should also have capability to give users by answers queries using natural language and getting a visual response back	No Change
36	N/A	Annexure 1	Additional Project Scope	There is need to specify the additional capability needed from improvising the current Intelligent Transit management system just from Business intelligence & Analytics perspective by adding more intuitive functionality using Artificial intelligence, Machine learning , outlier detection & Advanced Analytics such as predictive analytics & diagnostic analytics capabilities	No Change
37	N/A	Annexure 1	Additional Project Scope	Seamless integration with excel, word, PowerPoint for ease of users to export data seamlessly	No Change
38	N/A	Annexure 1	Additional Project Scope	The BI tool must have a native capability of viewing of reports and dashboard on native Mobile application as well as embedding of dashboard on various intranet and public website for consumption of commuters	No Change

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SL No.	RFP Page No	Section No	EOI Clause	Query	DIMTS Response
39	N/A	Annexure 1	Additional Project Scope	The BI tool must have self service capability for users for better and simple manageability at user end. It must also have additional cognitive functionality such as (Voice, vision, speech, for ease of users	No Change
40	N/A	Annexure 2	Additional Project Scope	For Ease of users and to enhance the quality of BI reports; the BI tool must have capabilities to automated insight suggestions and auto-generating analytics as well as help users to explore conversational and visual analytics	No Change
41	Page 3	Section 3. iv	The applicant should have successfully completed at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization / PSU in India	The present clause restricts the participant in the EOI for company like us who has executed multiple AI Projects. Our submission is to please remove this clause and allow those firms also who has executed projects of another BI tool. So that maximum participation will be there in EOI.	Please refer to amendment to the Eoi document in this regard
42	Page 4	Section 3.vii.	The proposed Business Intelligence Tool for analytics and dashboard for public bus operations in Delhi should be part of the Leaders segment by Gartner in any of the last three years.	Our submission is that please consider "Visionary Segment" by Gartner also, so that other qualified Solution also participate in the EOI.	No Change
43	Page 1		Last date for submission of EOIs is 02nd February 2022	I only just received your EOI for BI. The deadline is Feb 2nd, and that is just too tight for us now. What do you advise us to do?	Please refer to amendment to the Eoi document in this regard
44	Page 3	Section 3. iv	The applicant should have successfully completed at least 2 projects during last 5 years involving implementation of the BI Tool (same BI Tool as proposed by the Applicant) out of which at least one project should be for a Government Organization / PSU in India	Requesting to change the clause to any BI tool experience instead of proposed one	Please refer to amendment to the Eoi document in this regard
45	Page 1		Last date for submission of EOIs is 02nd February 2022	We are requesting to kindly extend the date of bid submission by two weeks as we are yet to get clarity on certain points(rebid response) and post that we will initiate internal approvals.	Please refer to amendment to the Eoi document in this regard