

**INDORE SMART CITY DEVELOPMENT LIMITED, INDORE**



**EXPRESSION OF INTEREST**

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**Invitation for Expression of Interest  
for Implementation of Intelligent Street Poles  
on PPP-Model in Indore**

**07 Sept 2016**

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This EOI is one of the steps in the process of selection of an entity for the project of implementation of intelligent poles on PPP-model in whole or part of Indore City.

This EOI is not an agreement or an offer by the Authority to the Applicants or any other person. The purpose of this EOI is to provide interested parties with information that may be useful to them in the formulation of their Proposals pursuant to a specific Request For Proposal (RFP).

This EOI includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Project. It is not possible for the Authority, its employees or advisers to consider the objectives, technical expertise and particular needs of each Applicant who reads or uses this EOI. The assumptions, assessments, statements and information contained in this EOI, may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this EOI.

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The Authority, may in its absolute discretion, update, amend or supplement any information, objective, assessment or assumption contained in this EOI.

The issue of this EOI does not imply that the Authority is bound to select an Applicant for the project and the Authority reserves the right to terminate the process at any time without assigning any reasons whatsoever.

The Applicant shall bear all its costs associated with or relating to the participation in this process regardless of the conduct or outcome of the process.

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## Invitation for Expression of Interest for Implementation of Intelligent Street Poles on PPP-Model in Indore

### Introduction:

1. Indore Smart City Proposal (SCP) has been selected to implement the Area-Based Development (ABD) and Pan-city proposals by Government of India (GoI) under Smart City Mission (SCM). Indore SCP proposes several ICT based smart solutions in ABD and across pan-city providing various smart features / infrastructure in line with the SCM guidelines. Intelligent street pole project is part of the Smart City Project.
2. Indore Municipal Corporation invites Expression of Interest from interested firms / entities for Implementation of Intelligent Street Poles in Indore City under PPP model which will involve, but not limited to, Feasibility Study(ies), Design, Development, Implementation, Operation and Maintenance of fixtures, equipment and services related to Smart LED Street Lights, OFC Cable, Telecom Infrastructure, WiFi, City Surveillance, Command and Control Centre etc. in selected areas of Indore City under the Smart City project.
3. Interested applicants are requested to submit their responses in the formats under 'Forms'. They may also provide documents in support of their approach, achievements / claims and compliance to eligibility criteria.

### Key Events and Tentative Dates:

No.	Stage	Date / Time
1.	EOI Publication Date	07/09/2016
2.	EOI Submission Date	22/09/2016; 17:30 hrs
3.	Date(s) for Presentation of design, implementation, operation, maintenance and business model	26-28/09/2016
4.	Date(s) for Installation of 'Proof of Concept' and demonstration of functionalities / applications	05-20/10/2016
5.	Date(s) for Technical Discussions / Clarifications leading to Formulation of RFP	17-25/10/2016
6.	RFP Publication Date	25/10/2016
7.	Last date of Receipt of Tenders	25/11/2016

### The Objective

4. **Intelligent Street Pole Concept:** The intelligent street pole (popularly known as "smart pole") combine the capabilities of telecom connectivity and LED lighting in a "lighting-as-a-service" model for cities. It allows city authorities to offer space within their (connected) street-lighting poles to network service providers for telecom infrastructure. Owing to their "omni-presence", street-lighting poles also enable a role in city surveillance. For the same reason, some other functionalities / features / equipment can also be added which directly

or indirectly utilize the main capability of telecom connectivity, such as, environment monitor, power management, parking management, waste management, etc.

5. The mobile wireless 4G LTE infrastructure deployment on intelligent pole can result in improved data coverage and capacity for citizens so there are no more signal dropouts. This can vastly improve the telecom infrastructure of the city. LED street-lighting can generate energy savings of 50 to 70 percent, coupled with smart controls.
6. Advertisement, Bill-boards, Application Stations, EV charging are some other features that may be attached to the Intelligent Poles. Further, upon establishing connectivity from household connections to Central Command & Control Centre through optical fibre cable networks, Intelligent Poles have a role to play in operation and maintenance of urban infrastructure.
7. All these functionalities / features / equipment create a significant commercial potential for its implementer. Thus this project can result in a “win-win” situation for the citizens, government and businesses.
8. The successful applicant shall be solely and exclusively responsible to design, implement and maintain on a BOOT model the project and to provide the services which would be defined in the RFP.
9. The successful applicant shall have the exclusive right to use the assets (which will be specified in the RFP document) in ISCDL area to create infrastructure to enable multiple digital services based on Wi-Fi/2G/3G/4G to be utilized by all/multiple service providers having valid license from Department of Telecom (DoT) on non-discriminatory basis. For this purpose the successful applicant will be allowed to lay dedicated optical fiber cable along the alignment and ROW which will be granted free of cost after due approval by the competent authorities.

### The Process:

10. For evolving the best techno-economically feasible solution allowing non-proprietary functionalities / features / equipment / technology, it is essential to identify all system components, their operational requirements as well as capabilities, their mutual compatibility / interoperability, and formulating the minimum essential specifications, ISCDL has planned to invite an open and interactive participation of all solution providers.
11. It is envisaged that consortium of businesses in communication technology, lighting technology, operation & maintenance service providers, advertisement & publicity houses, and others will emerge to meet the long term objectives of this project.
12. ISCDL will receive EOIs from full / part solution providers (“applicant”) who will participate in technical discussions with ISCDL, demonstrate their solutions / capabilities / functionalities / features through installation of a ‘**Proof-of-Concept**’ (PoC). This PoC shall comprise a minimum of one smart pole and two LED street-light poles, to be installed at a **predefined location** by each applicant for live demonstration. The demonstration/ presentation should provide a representative solution to integrate various features / aspects / functionalities / applications of the project as per the objective(s) set above.

13. ISCDL shall facilitate ground space for installation of Gateway, Switches, Routers etc. and power requirement to each applicant during the entire period of PoC. Any Civil/Electrical work required will be the responsibility of the applicant. OFC connectivity may not be available at the time of PoC. If this is essential for any applicant, ISCDL may consider providing suitable location(s) for their PoC. The applicants may organize demonstrations “on-site” through use of RF / WiFi / Cloud and local display media.
14. For Wi-Fi services to Citizens / Visitors, the applicants have to provide the statistics of the number of persons connected online on each hotspot, duration of the Wi-Fi usage, data downloaded, etc. If free Wi-Fi services will be denied to any person, the online statistics of such cases will also be provided by the applicant.
15. Based on the learnings of the PoC; final specifications of the project will be drawn up for city-wide implementation. The applicants shall involve in formulation of technical specifications of various system components for long term sustainable implementation of the project, which shall be compiled in the RFP document.
16. The applicants shall also provide their inputs for identification and quantification of revenue streams, making their own assessments of revenue potential. Details, as necessary, may be shared with ISCDL for suitable incorporation in the RFP document.
17. The applicants will be invited to submit their technical and financial proposals in response to the RFP document, in the method to be described in the RFP document. After technical and financial evaluations, in the method to be described in the RFP document, ISCDL will identify the Most Preferred Partner for implementation of the project.
18. It is the responsibility of the applicants for the watch & ward, O & M, of the assets / services created for the PoC.
19. At the end of the PoC period, all facilities given to the applicants shall be terminated automatically.
20. During the presentation as well as PoC as per ‘Key Events and Tentative Dates’, each applicant shall discuss their recommendation of solution(s) for Indore Smart City and also exhibit their technical approach, methodology and work plan for the implementation of:
  - i. Smart Pole with LED Street Light
  - ii. WI-FI Services
  - iii. Optical Fiber Cable
  - iv. Surveillance
  - v. Environmental Sensors
  - vi. EV Charging Points
  - vii. Smart Bill Board
  - viii. SOS Application
  - ix. Mobile Application
  - x. Central Command and Control Centre
  - xi. Managing the Complete Network

along with discussion on (i) Efficiency, operability, maintainability of features involved, (ii) Collaboration model among all ecosystem stakeholders, (iii) Procurement & Financing Models.

21. All the information provided by the applicants, like the names of the clients, contract values or any proprietary information etc. will be treated as confidential information.

### Design Parameters:

22. Desired design parameters of the complete system are as below. The applicant should strive to exhibit most of these to confirm suitability of their products / services for the project. The design of the smart pole should be sleek and aesthetic. The frame should hide remote radio units and antennas inside the pole and macro radios, baseband units, transmission equipment, extra capacity, power, batteries and additional equipment underneath. All equipment being used should comply with relevant ISO standards. All equipment which are exposed to the environment should comply IP 64 standards or better.
- a. **Smart LED Lighting:** The smart LED lighting should provide energy saving of minimum 35%. The lighting should be anti-glare. The installation should comply with IP 66. The Lighting Operations Management software should be able to send commands to the smart street lighting system based on the data analytics to increase / decrease the luminosity as per the daylight and weather conditions, volume of population, traffic etc.
  - b. **Mobile / broadband Infrastructure:** Mobile / broadband infrastructure should be at least 4G LTE compliant and should be platform independent so that any mobile operator is able to rent space on the poles on non-discriminatory basis.
  - c. **Power Back-up:** There should be power back-up to ensure round-the-clock functioning. A minimum of six hours' power back-up should be ensured. The service provider should give a detailed breakdown of the power consumption of the equipment being used and accordingly work out 6 hour back-up.
  - d. **City Surveillance System:** This shall include observation by means of electronic equipment, namely, CCTV cameras, internet traffic, phone calls, etc.; analyze and assist in decision-making. The system shall manage video feeds for all CCTV systems required under this project through Video Management System (VMS) application. The camera should be IP 66 compliant. System should have Video Storage for 90 Days.
  - e. **Wi-Fi Hotspot services:** OFC (Optical fibre cable) backbone with 2GBps or more bandwidth should be provided. Customers should be able to get a minimum speed of 2 Mbps on their devices.
  - f. **Air Quality sensors:** Air quality sensors fitted on the smart pole will provide real time data to the CCCC for analysis and reporting.
  - g. **Security:** The physical and data security shall be the responsibility of the service provider. Cyber Security / ISO 27001 standards as applicable to Smart City project should be complied with.
  - h. **Central Command and Control centre (CCCC):** A CCCC facility is required to be set up by the service provider. The CCCC will acquire real time data and analyse and provide dashboard view of all reports necessary for monitoring and managing the smart pole infrastructure. Software requirement specifications shall be shared prior to installation. During the full-scale implementation, the selected service provider will set up the CCCC on a Tier-III ( or higher) data centre, and connect all

intelligent poles installed under this project by OFC. The specifications and the facilities of the CCCC shall be elaborated in the RFP document.

### Eligibility Criteria:

23. EOI of each Applicant shall be evaluated on the basis of the following Eligibility Criteria:

No.	Criteria	Specific Requirements	Documents Required
1.	Applicant Entity	Legal entities duly registered under the Companies Act 1956 / 2013, or, public / semi-public entities which are financially autonomous. Entities registered under equivalent law / act in foreign countries may participate. However, they will need to be registered in India, if selected for this project's implementation.	Certificate(s) of incorporation.
2.	General Requirement	Applicant/consortium should be: (i) Telecom Service Provider having valid UL(AS) / UASL from DoT, Gol for a period of last three years. <b>Or</b> (ii) Engaged in Supply, Installation, Commissioning and Operations & Maintenance Services of Wi-Fi / LED Lighting / CCTV / Telecom network projects for a period of last three years.	Self-attested certificates / registrations / copy of documents to establish the general requirement conditions to be enclosed.  MoU of the consortium clearly specifying the role and area of specialization of the individual partners should be submitted.
3.	Turnover	The applicant / lead partner in case of consortium, shall have Average Annual turnover of at least Rs. 500 Crores during the last three FYs ( 2013-14, 2014-15, 2015-16).	Certificate(s) from statutory auditors of the Applicant; Annual Audit Reports
4.	No Barring Certificate	Any entity which has been barred, by any public / semi-public agency / Central / State / Local Government, and the bar subsists as on the date of Application, would not be eligible, either individually or as member of a Consortium.	Undertaking by the authorized signatory as well as all members of consortium

24. Only the applicants who have submitted EOI will be allowed to respond to the RFP and submit their proposal for participation in the implementation of the project. New consortium partners may be allowed to participate in the revenue streams as identified in #6 above.

25. The applicants may associate with each-other to form consortium. However, any applicant can't be part of more than one consortium in the RFP stage.



## Forms:

## FORM 1: TECHNICAL CAPABILITY OF THE APPLICANT

<b>S. No.</b>	<b>Information</b>	<b>Response (with supporting documents to be attached)</b>
1	Name and address of the Applicant	
2	Name, Designation, Address and Contact Details of the person to whom all references can be made in connection with this EOI	
3	Legal Status	
4	Product(s) / Service(s) Offered	
5	Years in business.	
6	Number of similar projects executed	
7	Project Information – Name, Client, Scope, Technology used, Value, Start / End Dates, etc.	(repeat for each project as per information under (4))
8	Requirement to form any joint venture for providing any product / feature / service etc. under this project	Yes / No
9	If Yes for (8) above, define the product / feature / service etc.	
10	MoU with other agency(ies), if making a joint application	Attach

FORM 2: FINANCIAL CAPABILITY OF THE APPLICANT

(in Rs. Cr.)

<b>S. No.</b>	<b>Financial Year</b>	<b>Turn Over</b>
1	2013-14	
2	2014-15	
3	2015-16	