



**EXPRESSION OF INTEREST NOTIFICATION FROM
EMERGING TECHNOLOGY DIVISION, K-DISC
[Ref No: 672/2022/K-DISC dated 22/05/2024]**

**Project Name: INDOOR NAVIGATION SYSTEM IN
HOSPITALS FOR THE PUBLIC TO TRACK AND USE**



KERALA DEVELOPMENT AND INNOVATION STRATEGIC COUNCIL

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Expression of Interest notification for the project- Indoor Navigation System in Hospitals for the Public to Track and Use at Government Medical College Hospital, Thrissur

1. INTRODUCTION

Kerala Development and Innovation Strategic Council (K-DISC) is the strategic think-tank advisory body of the Government of Kerala, formulating plans reflecting the latest in technology, product and process innovations for the development of the State. It seeks to address the challenges of providing holistic health care, employment, social security, infrastructure, food and nutrition security with a pro-poor bias, gender justice and inclusion of outliers, within severe fiscal constraints.

The Emerging Technology Division of K-DISC has been championing several Emerging Technology Projects for various Departments in the Government of Kerala, with cutting edge future technologies like Blockchain, Distributed Ledger, Big Data Analytics, Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), Robotics etc. One of K-DISC's mission is to coherently work with the Government Departments in identifying potential areas for improving efficiency, process improvements and promoting innovation, by architecting and implementing Emerging Technology based solutions with suitable providers of such products/solutions, and hand-holding the Government through piloting these solutions.

The objective of this Expression of Interest (EoI) is to identify a qualified Technology Partner (a Startup registered under Kerala Startup Mission) who can deliver a comprehensive solution for this project.

Brief description of the project:

The project aims to provide an indoor navigation system that can be used to create an enhanced, digitized hospital experience benefiting hospital visitors and employees. Patients and guests can often find themselves lost within a hospital and need to rely on up-to-date maps to navigate through the hospital complex. The proposed system should be a contactless and safe solution for visitors to find their way through the building with minimum hassle. This will also help employees focus on their core duties and improve productivity.

2. TERMS OF REFERENCE

Any startup registered under Kerala Startup Mission can apply for the EoI process. However, the startup should have relevant experience and expertise in the requirements mentioned in the document.

The following are the terms of reference for the EoI: -

1. The startup should be registered with Kerala Startup Mission as a startup and is currently holding the start-up status, valid for at least 2 years from the date of EoI response.

2. The startup should have previous implementation experience in developing a similar solution in Government or Private Sector or have developed a working prototype of a similar solution.
3. The startup should have a successful completion certificate (End User Certificate) from the customer as proof of above (2) or should have obtained relevant patent certificate.
4. The startup should have sufficient dedicated manpower to lead both development and deployment within the time frame mentioned in the project proposal (Brief CVs to be attached).
5. The startup should be willing to place their domain resources and technical resources at the implementation site for smooth project implementation, when required.
6. The providers should be willing to collaborate with K-DISC and other stakeholders to develop and deliver the project that meet the specific needs of the K-DISC.
7. The startup should be willing to comply with the terms and conditions of K-DISC and provide regular updates on the progress of the project.

3. SELECTION PROCESS

The selection of the Technology partner will be a Quality Cost Based Selection (QCBS) process which consists of the following six steps:

STEP 1: Submission of Expression of Interest (Eoi)

The Kerala Startup Mission (KSUM) will issue an Expression of Interest (Eoi) to startups based on the requirement document submitted by K-DISC (Annexure 1). Interested Startups can express their interest through KSUM website.

STEP 2: Project requirements clarification meeting and Eoi Response Sheet submission

An online meeting will be convened by KSUM with the startups who have expressed their interest in Step 1. Startups can clarify any relevant doubts regarding the project requirement document (Annexure 1). Interested startups can submit duly filled Eoi response sheet (Annexure 2), along with all necessary supporting documents within the specified time.

STEP 3: Shortlisting of Startups for submission of Technical Proposal

In the third step, K-DISC shall shortlist the startups based on the submitted Eoi response sheet. The criteria for shortlisting are as follows:

1. Must be registered with KSUM as a startup and currently holding startup status valid for at least 2 years (proofs must be provided).
2. Should possess a successful completion certificate from a customer as evidence of the implementation experience in relevant technology or should have relevant patent certificate (proofs must be provided).
3. Must have an adequate workforce capable of leading both development and deployment within the timeframe specified in the project proposal (brief CVs of Key personnels should be included).

STEP 4: Submission of Technical Proposal

The shortlisted startups will be notified by KSUM to submit a technical proposal within a specified time. A standard template for submitting the technical proposal will be provided. Note

that the technical proposal should be comprehensive and adhere to the standard template provided. No further chances will be given to update the proposal, once submitted.

STEP 5: Presentation / Demonstration by Startup and Technical Evaluation

The startups should provide a presentation on the technical proposal and if required a demonstration needs to be conducted. The technical proposals will undergo QCBS evaluation and will be assessed and scored based on the following criteria.

Sl. No	Criteria	Max. Mark
1	Project objective and scope covered	20
2	Proposed architecture and its Innovativeness as per the submitted project proposal	15
3	Availability of demonstrable solution with startup and product demonstration	15
4	Application flexibility	10
5	Application scalability	10
6	Timeline proposed for Project implementation	10
7	Completeness of Technical Proposal (Clarity of technical approach, Architecture diagrams, Project schedule/Gantt chart, compliance with proposal requirement)	20
	Total	100

Table 1

*Cut off mark for qualification shall be 60%

STEP 6: Submission of Financial Proposal and Evaluation

Startups who have qualified the cut off for technical evaluation shall be called for submitting financial proposal through KSUM. Startups will have to submit the financial proposal in the standard template provided by K-DISC. The financial proposal should be complete in all aspects and should cover the scale of the project and be reasonably quoted. The financial proposal should meet the terms and conditions of K-DISC detailed in the Terms and Conditions section in the proposal template.

KSUM will convene a financial bid meeting to evaluate the financial proposal. The evaluation will be completed using QCBS framework, with 70% weightage given to technical aspects and 30% weightage given to financials.

4. GUIDELINES FOR EOI RESPONSE SHEET

4.1. Organization Particulars

1. Name of the Project for which Eoi Response is submitted: [Name of the K- DISC project for which Eoi is notified]
2. Name of the Startup: [Name of the startup submitting Eoi response sheet]
3. Legal Name: [Name of the startup as registered with the relevant authority]
4. Legal Status: [Indicate the legal structure of the startup, such as a partnership, company, etc.]

5. Registration Number: [Provide the unique registration number assigned to the startup by the relevant authority if any (CIN)]
6. Date of Registration: [Indicate the date when the startup was registered with the relevant authority]
7. KSUM Unique ID: [Provide the KSUM Unique ID]
8. KSUM Startup Certificate Expiration Date: [Provide the validity date of KSUM Startup Certificate]
9. Registered Address: [Provide the complete postal address of the startup's registered office]
10. Website: [Website of the organization]
11. Full name of the contact person: [Provide the designation of the startup's main contact person]
12. Designation of the contact person: [Provide the full name of the startup's main contact person]
13. Contact Mobile Phone Number: [Provide the mobile phone number the startup's main contact person]
14. Contact e-mail id: [Provide the email address for the startup's main contact person].

4.2. Organizational Capabilities

1. Introduction: [Provide a brief introduction to the startup, highlighting its key characteristics and purpose. This may include the startup's name, year of establishment, and core business activities. Be concise but descriptive (Word Limit- 150)]
2. Key products or services: [Provide an overview of the services offered by the startup, highlighting its key areas of expertise and its value proposition. This should describe the specific services that the startup offers and how they align with the objectives of the tender. Be sure to highlight any relevant experience or success stories related to similar projects ((Word Limit- 250)]

4.3. Organizational structure and capacity

1. Total number of Employees: [Provide the number of employees in the organization]
2. Details of the key personnels in the technical & management team: [Provide required information on the table with short CV of the employees] (Add rows on the table as required)
 - A. Name: [Provide the name of the key team member]
 - B. Designation: [Provide designation of the team member]
 - C. Skill Set: [Provide his/her relevant skill sets]

If shortlisted for submitting the technical proposal, the startup must provide the detailed CV

4.4. Previous implementation experience

[Provide a brief of the relevant and recent project experience that are similar in scope and complexity to the current requirement, in the Government Sector. Please attach the experience certificate from customer for each of the customer]

- A. Customer: [Provide name of the customer]
- B. Customer Category: [Mention “Government” or “Private” accordingly]
- C. Location: [Mention “Inside Kerala” or “Outside” accordingly]
- D. Start Date: [Provide project started date]
- E. End Date: [Provide project completed date]
- F. Project Brief: [Provide a brief of the project including the size, objective, and outcomes of each project in 100 words]
- G. Scope of the Project: [Provide scope of the project in 150 words]
- H. Is the implemented project currently being used: [Provide “Yes” or “No” accordingly]
- I. Address of the customer: [Address of the customer where the project is implemented]
- J. Name of the person to be contacted: [Provide the name of an authorized person from the client/customer company, to be contacted]
- K. Designation of the person to be contacted: [Provide the designation of the authorized person from the client/customer company, to be contacted, if required]
- L. Contact Number: [Add contact number of the authorized person from the client/customer company to be contacted]
- M. Email address: [Add email id of the authorized person from the client/customer company to be contacted]
- N. Experience Certificate from customer attached: [Provide “Yes” or “No” accordingly, experience certificate from customer should be attached with EoI Response sheet]

4.5. Certifications

Certifications received: [Mention any relevant certifications such as regulatory approvals/ accreditations / Quality Management Frameworks/ Patents that your Startup / product or solution has Obtained.]

- A. Name of Certification: [Provide the name of the certification that the startup has obtained]
- B. Issuing Body: [Provide the name of the startup that issued the

- certification]
- C. Certification Number: [Provide the unique identification number assigned to the certification]
- D. Date of Issue: [Indicate the date when the certification was issued]
- E. Expiration Date: [Indicate the date when the certification will expire]
- F. Certification attached: [Provide “Yes” or “No” accordingly, listed certifications should be attached with EoI Response sheet]

The Potential Applicants should carefully review the Project Requirement Document (Annexure 1), Notification for the EoI and criteria set by the K-DISC before submitting their EoI Response sheet. The applicants should express their interest in the project within the specified deadline through Kerala Startup Mission.

Annexures

Annexure 1- Project Requirement Document

Annexure 2- EoI Response Sheet Template

5. GENERAL TERMS

By submitting an EoI for the project Indoor Navigation System in Hospitals for the Public to Track and Use, the startup acknowledges and agree to comply with the below specified period of completion, make all reasonable efforts to ensure timely delivery of the project, adhere to the specified payment terms and milestones-based payment schedule, and be bound by the terms of the separate Confidentiality and Non-Disclosure Agreement (NDA) to be executed with K-DISC.

5.1. Period Of Completion

The bidder acknowledges and agrees that the period of completion for the project- Indoor Navigation System in Hospitals for the Public to Track and Use shall be maximum one year from the date of contract execution. The period of completion includes all phases of the project, including but not limited to design, development, implementation, testing, training, and handover.

The bidder shall provide a detailed project timeline and schedule as part of its submission, outlining key milestones, deliverables, and estimated timelines for each phase of the project. Any proposed deviations from the agreed-upon timeline shall be subject to approval by the Emerging Technology Division of K-DISC.

Failure to adhere to the agreed-upon period of completion may result in penalties, liquidated damages, or termination of the contract, at the discretion of K-DISC.

5.2. Payment Terms

1. The Payment for the Project shall be released based on the Milestone Achievements, the specific milestones and associated payment release shall be detailed and executed through an Agreement between the Parties
2. Technology partner shall submit utilization certificate in the prescribed format along with the expenditure statement signed by the Head of the institution from the second instalment. Utilization Certificate along with the audited expenditure statement duly signed by both the Chartered Accountant and Head of the institution is compulsory for above Rs. 5 Lakhs.

3. Technology partner shall submit a Bank Guarantee worth 5% of the total amount, for warranty, and a warranty agreement shall be signed with the K-DISC. The final payment based on the completion of last milestone shall be released only after signing the warranty agreement.
4. A final audited utilization certificate for the entire project cost shall be submitted to K-DISC at the end of the project.

5.3. Confidentiality and Non-Disclosure Agreement (NDA) Execution

1. **Confidential Information:** The term "Confidential Information" shall include all information, data, documents, materials, or other proprietary information provided by either party to the other party in connection with the EoI process, including but not limited to project plans, technical specifications, financial information, and business strategies.
2. **Non-Disclosure Obligation:** The bidder agrees to treat all Confidential Information received from the Emerging Technology Division of K-DISC as strictly confidential and shall not disclose, divulge, or communicate any Confidential Information to any third party without the prior written consent of K-DISC.
3. **Use of Confidential Information:** The bidder agrees to use the Confidential Information solely for the purpose of evaluating and preparing its submission for the project- Indoor Navigation System in Hospitals for the Public to Track and Use and shall not use the Confidential Information for any other purpose without the prior written consent of K-DISC.
4. **Protection of Confidential Information:** The bidder agrees to implement reasonable measures to protect the confidentiality and security of the Confidential Information, including but not limited to restricting access to Confidential Information to authorized personnel only and preventing unauthorized access, use, or disclosure of Confidential Information.
5. **Non-Compete Obligation:** The bidder agrees that during the EoI process and for a period of five years following the submission of its EoI, it shall not directly or indirectly engage in any activities or business ventures that compete with the objectives of the project- Indoor Navigation System in Hospitals for the Public to Track and Use without the prior written consent of K-DISC.
6. **Survival of Obligations:** The obligations of confidentiality, non-disclosure, and non-compete shall survive the conclusion or termination of the EoI process and shall remain in full force and effect for a period of 5 years specified herein.
7. **Governing Law and Jurisdiction:** This Confidentiality and Non-Disclosure Agreement shall be governed by and construed in accordance with the laws of India, and any disputes arising out of or in connection with this Agreement shall be subject to the exclusive jurisdiction of the courts of Thiruvananthapuram

6. TERMS OF AGREEMENT

An agreement shall be signed between K-DISC (Client) and the selected Technology Partner after receiving due approvals. The Technology Partner is required to adhere to the following key terms of the agreement, along with any other terms specified.

6.1. Termination of Contract

- a) Either Party may terminate the Agreement by giving notice in writing to the other Party if,
 - i. the other Party materially breaches the Agreement and does not remedy the breach within 15 (fifteen) days of receipt of such written notice, or
 - ii. the other Party is or appears likely to be unable to pay its debts or become insolvent, or
 - iii. breaches any applicable law or regulation for the time being in force.

- b) Upon expiration/termination of the Agreement, the Technology Partner shall promptly deliver/return without any pre-condition to Client all documents, data, source code and other information acquired by them from the Client. If Client is desirous of getting any further documents, data prepared/generated/ developed by the Technology Partner pursuant to the Agreement or any Scope of Work, such documents/ data should be provided to Client after settling the payment dues, as per the agreed project milestones. The Technology Partner shall ensure Services to Client, for a reasonable period, to ensure a smooth transition.
- c) Upon early termination of the Agreement, the settlement shall be made after deducting any payments or other charges due from the client, as completed by Technology Partner and accepted by the Client, in accordance with payment milestone, to the Technology Partner under any of the clauses of the agreement.
- d) Termination based on non-delivery of products/services is not permitted, except in cases where Liquidated Damages (LD) and compensation are explicitly outlined as in clauses 5.2 below.

6.2. Liquidated Damage

The period of completion of the work, stipulated in the contract, is the essence of the contract. If the Technology Partner fails to complete the work within the time period(s), then K-DISC shall, without prejudice to its other remedies under the Contract, deduct from the Contract price, as liquidated damages, a sum equivalent to 2% of the contract value per week or part thereof, up to a maximum of 10%. Once, the maximum is reached, then K-DISC may consider termination of the contract. K-DISC may withhold any payment due to the consultant until the whole of the work is completed. This clause is without prejudice to the right of K-DISC to make risk purchase mentioned and the liability under that clause shall be in addition to liquidated damages.

6.3. Settlement of Disputes: -

- (a) Amicable Settlement, -

If during the subsistence of the agreement, Parties have differences or disputes on any matter directly or indirectly related to and/or connected with the Agreement, the same would be resolved by mutual consultations and for which purpose the Parties shall engage with each other.

- (b) Arbitration, -

In case the attempt to resolve differences and disputes does not result in amicable settlement within 21(twenty-one) days of such reference then, either Party may as per its position initiate disputes redressal by means of arbitration, in India, in accordance with the provisions of Arbitration and Conciliation Act, 1996(26 of 1996). The arbitration shall be presided upon by a sole arbitrator to be appointed by the mutual consent of the Parties. The venue of such arbitration shall be in Thiruvananthapuram, Kerala and the language of such arbitration proceedings and that of all documents and communications between the Parties shall be English. The decision of the arbitrator shall be final and binding on the Parties. The expenses of the arbitrator as determined by the arbitrator shall be shared equally by Client and the Technology Partner. However, the expenses incurred by each Party, in connection with the preparation, presentation of the documents shall be borne by the Party itself. All arbitration awards shall be in writing and shall state the reasons for such award.

6.4. Governing Law and Jurisdiction

The Agreement, its meaning and interpretation, and the relation between the Parties shall be governed by the laws of the state of India (“Applicable Law”). Subject to clause “Settlement of disputes” mentioned above, the Courts of Kerala shall have exclusive jurisdiction. (The Client reserves the right to modify the agreement as may become necessary in terms of Government orders/circulars issued from time to time, during the term of the assignment based upon mutual consultation between both the parties.)

6.5. Force Majeure

- a) The Technology Partner shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Agreement is the result of an event of Force Majeure.
- b) For purposes of this clause, “Force Majeure” means an event beyond the control of the Technology Partner and not involving the Technology Partner’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the State Government in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- c) If a Force Majeure situation arises, the Technology Partner shall promptly notify the Client in writing of such condition and the cause thereof. Unless otherwise directed by the Client /Government of Kerala in writing, the Technology Partner shall continue to perform its obligations under the Agreement as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- d) It is hereby agreed between the parties that Force Majeure is applicable when need arises.

6.6. Penalty

If the Technology partner abandons the project without fulfilling the terms and conditions of the agreement, they will be liable to return the amount received from the Client with interest (12% of the principal amount) and penal interest as applicable to the Government funds.

6.7. OEM Conditions

OEM, as a recipient, shall ensure that their sub-recipients understand and acknowledge conditions and potential requirements that may be placed upon undertakings as a result of provisions of the Agreement with K-DISC. OEM shall defend, indemnify and hold K-DISC, and K-DISC’s officers, directors, and employees and agents harmless against any and all third party claims against K-DISC, including, without limitation, claims of infringement or misappropriation of intellectual property rights, arising from: (a) the OEM Products or services provided by OEM in conjunction with the OEM Products excluding the Product, or (b) OEM’s additions or changes to the Products, or use of the Products in combination with other materials not furnished by K-DISC or with systems, products or components not reasonably anticipated to be used with the Product or part thereof; and OEM shall pay in all such cases the costs, including reasonable attorney’s fees, finally awarded against K-DISC, provided that K-DISC:

(i) timely notifies OEM of the claim, and (ii) gives OEM a copy of each communication relating to the claim, and (iii) gives OEM the authority, information, and assistance, at OEM’s expense, reasonably necessary to defend or settle the proceeding. OEM agrees that any and all warranties made to K-DISC and End User Department shall be made only by the OEM. OEM acknowledges and agrees that OEM will make no additional representatives or warranties. In connection with any sale of the licensed software bundled with the OEM products, OEM shall expressly and conspicuously disclaim all express or implied warranties of merchantability or fitness for a particular purpose shall exclude liability for consequential damages and loss of profits and information. In addition to its indemnity obligations hereunder, OEM shall indemnify and defend K-DISC against any loss or damages, including attorney fees, arising out of OEM’s failure to comply with its obligations regarding warranties.

6.8. Guarantee/Warranty

- a) During implementation period

During the implementation, the Technology Partner shall meet all conditions set forth in the Agreement and follow the implementation schedule strictly, failure to comply with the same, shall attract application of penalty clause.

- b) During Warranty period
 - i. Software

As part of the warranty covered as part of the agreement, the Technology partner shall.

- 1) Provide and install, at Technology partner's sole expense, with bug fixes and code corrections to correct software malfunctions in order to bring the services into substantial conformity with the specifications set forth in the projects scope of work. Bug fixes shall be acknowledged within one hour of the client intimating them and fixed within reasonable time as agreed with the client as per the severity of the bug.
- 2) Provide and install relevant updates of the software released by the Technology partner within the warranty period, installing them within 48 hours of release, without causing any downtime. In the event the Technology Partner foresees downtime requirement, the same shall be carried out with permission of the client
- 3) Ensure that the database used in the Project will be managed with reasonable care and diligence, and that any updates or modifications to the database and related changes to application will be performed in a timely manner, without causing any downtime. In the event the Technology Partner foresees downtime requirement, the same shall be carried out with permission of the client.
- 4) Perform any updates or modifications related to changes in configuration (App server/Web server, DB server etc.)/ operating system (OS)/ other operating environment of virtual machine's hosted at SDC in a timely manner, without causing any downtime. In the event the Technology Partner foresees downtime requirement, the same shall be carried out with permission of the client.
- 5) Take necessary steps for maintaining SSL Certification and Domain validation and maintenance, including the initial purchase and any subsequent renewal during the Warranty Period.
- 6) The Technology Partner shall provide timely and adequate support to the Client whenever necessary, including technical support and customer service. Such support shall be provided within 12 hrs from the receipt of the support request from the Client.
- 7) The Technology Partner is responsible for implementing security measures to protect the application from unauthorized access and promptly addressing any security issues within 12 hours of identification.
- 8) The Technology Partner must provide monthly reports to the Client that outline the application's performance, availability, and incidents that occurred during the reporting period.
- 9) The Technology Partner is responsible for 24/7 monitoring of the application, proactively detecting and resolving any issues within 24 hours of detection.
- 10) The Technology Partner is responsible for providing training and documentation to the Client's staff on the proper use of the application, which must be provided after before handing over the project to the End User Department
- 11) The Technology Partner must maintain adequate staffing levels to provide timely and effective support for the application and provide a designated point of contact for the Client's staff to contact in the event of any issues.
- 12) All issues raised during the warranty period must be addressed and resolved by the Technology Partner.

ii. Hardware

- 1) The Technology Partner shall ensure that any hardware components supplied as part of the project will be free from defects in materials and workmanship. If any such defects arise during this warranty period, the Technology Partner will repair or replace the defective hardware at no additional cost to the Client.
- 2) The Technology Partner shall ensure that
 - a. The hardware will meet the performance specifications specified in the Agreement throughout the warranty period
 - b. Periodic maintenance of the hardware is carried out as required.

- c. If any issues arise due to the Technology Partner's improper actions or omissions, the Technology Partner shall promptly correct the issues at no additional cost to the Client
- 3) The Technology Partner is responsible for providing training and documentation to the Client's staff whenever Hardware/ Equipment is repaired/upgraded during warranty period. The Technology Partner must maintain adequate staffing levels to provide timely and effective support for the Hardware/Equipment, and provide a designated point of contact for the Client's staff to contact in the event of any issues.
- c) During AMC period

The Technology Partner shall comply with all the conditions in the AMC Agreement to be signed upon mutual agreement.

6.9. Contract Period / Duration or Validity

The agreement shall valid for one year with effect from the date of signing of the Agreement, covering the installation and commissioning and the warranty period.

6.10. Change Orders / Management of Change in Scope of Work: -

The Agreement is based on the scope of work given in 'Schedule A', furnished as part of agreement as well as in the K-DISC Project proposal as approved by end user department. Any change in Scope of Work, and any delay from end user department/ K-DISC with respect to approvals, site readiness etc. or decisions of end user department/K-DISC which may result in:

- a) Enhancement to Geographical, Functional or Technical Scope of Work
- b) Postponement of the major milestones in Project Plan or
- c) Any other matter to be mutually identified and agreed by the parties and shall be subject to the following change management process:
 - i. A Scope Change Request ("SCR") as raised by either the Client or Technology Partner's Project Manager accompanied by suitable supporting documents.
 - ii. Technology Partner shall prepare a detailed estimate of actual efforts to be required together with an estimate of additional fees and likely impact on the Project Plan for each SCR
 - iii. Only upon formal written approval by Client of the SCR, together with cost and time estimates, Technology Partner shall commence any work arising out of the SCR(s).

On approval by K-DISC, a new appendix containing the changes to the Agreement shall be mutually signed and appended to the Agreement, which together with the existing Schedules, shall constitute the entire Agreement.

6.11. Subcontract

The Technology Partner shall notify K-DISC in writing of all subcontracts awarded under the contract if not already specified in their bid. Such notification, in the original bid or later shall not relieve the Technology Partner from any liability or obligation under the contract.

6.12. Risk Purchase Clause

K-DISC shall reserve the right to terminate the order or contract and purchase from anywhere at the risk and cost of the Technology Partner, either the whole part of the system/goods which the Technology Partner has failed to deliver within the stipulated delivery period or if the same were not available, the best and the nearest available substitute(s) thereof. The Technology Partner would be liable to compensate the K-DISC for any loss, which the K-DISC may sustain by reason of such purchase. This clause will be operated only after completion of delivery period including extended period with penalty.

6.13. Project Monitoring and Feedback Collection

- a) The Technology Partner shall monitor and track the progress, milestones, and overall performance of the project. The project monitoring should include regular status meetings, progress reports, and key performance indicators (KPIs) to assess project success.

- b) The Technology Partner shall provide regular project status reports to the client, outlining the achieved milestones, deliverables, and any significant project updates. The frequency and format of the reports shall be defined and agreed upon by the client.
- c) The Technology Partner shall take necessary actions for collecting feedback from the client & end user department regarding the project's progress, quality, and adherence to requirements. Feedback collection methods may include surveys, meetings, or other communication channels to gather input from client & end user department.
- d) The Technology Partner shall review and analyze the feedback received from the client and end user department promptly. Based on the feedback, the Technology Partner shall develop an action plan to address any identified issues, concerns, or areas for improvement.
- e) The Technology Partner shall document the lessons learned from the project monitoring and feedback collection process.

ANNEXURE 1

REQUIRMENT DOCUMENT

For

**INDOOR NAVIGATION SYSTEM IN HOSPITALS
FOR THE PUBLIC TO TRACK AND USE**

At

GOVERNMENT MEDICAL COLLEGE HOSPITAL, THRISSUR



**Kerala Development of Innovation and Strategic Council
(K-DISC)**

08th March 2024

Version: 1.0

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1 Organization Profile

Kerala Development and Innovation Strategic Council (K-DISC) is a strategic think-tank and advisory body constituted by the Government of Kerala. It aims at bringing out path-breaking strategic plans that reflect new directions in technology, product and process innovations, social shaping of technology, and creating a healthy and conducive ecosystem for fostering innovations in the State. In the sphere of development, K-DISC is promoting and initiating new projects in Emerging Technologies such as Blockchain, Internet of Things, Machine Learning, Artificial Intelligence, Robotics, and soon that would enable transparent and cognitive advances in various departments of the state Government and deliver the ultimate benefit to the citizens. K-DISC would facilitate with different government departments that may need any of these technological advances to solve their critical problems and to arrive at the proof of concepts stage with adequate technical and financial resources to promote innovation. Also, K-DISC will ease the implementation by overseeing the same.

2 Introduction

2.1 Business case for the Project

- On an average, 2000 people visit the 25 departments at Government Medical College, Thrissur on a daily basis. More than 1000 tokens are given to outpatients every day. Patients and bystanders also need to visit labs and other facilities such as pharmacies, canteen, etc.
- It is not easy for a visitor to locate the various facilities available at the Hospital.
- This also results in unorganized crowd movements inside the hospital leading to difficulty in crowd management.
- Hospital staffs have considerable effort to direct the visitors to required facilities other than the assigned duties. Yearly approximately 2800 hours can be saved.
- Thus, an indoor navigation system will help the patients and visitors to easily locate the facilities they are searching for, thereby enhancing the visitor experience, saving time as well as eliminating unorganized crowd movements inside the hospital.

2.2 International/National Scenario

The international landscape of indoor positioning is dynamic, with various technologies, industry trends, and applications evolving swiftly to meet the increasing demand for precise indoor navigation and location-based services. Key technologies such as Bluetooth Low Energy (BLE) beacons, Ultra-Wideband (UWB), Wi-Fi positioning, RFID, NFC, and Visible Light Communication (VLC) offer diverse solutions catering to different needs, from retail and museums to industrial settings and smart homes. Market growth is robust, fueled by the desire for improved customer experiences, operational efficiency, and safety across sectors like retail, healthcare, manufacturing, and logistics. Integration with the Internet of Things (IoT) is becoming commonplace, facilitating smart buildings and factories. The rise of Location-Based Services (LBS) is driving the adoption of indoor positioning solutions, particularly in personalized marketing and navigation assistance. Healthcare facilities are increasingly leveraging indoor positioning for asset tracking and patient flow management. Future directions include addressing interoperability challenges, refining indoor-outdoor transition, and balancing accuracy with scalability and cost-effectiveness.

2.3 Summary of the Document

Indoor navigation systems can be used to create an enhanced, digitized hospital experience that benefits visitors and employees. Patients and guests can often find themselves lost within a hospital and rely on up-to-date maps to navigate through the complex venue. It is important that hospitals implement a contactless and safe solution for visitors to find their way through the building with as little frustration as possible. With indoor navigation systems, hospital staffs can focus on their core duties and improve productivity. K-DISC is planning to implement such a pilot indoor navigation system in healthcare field.

The purpose of this document is to brief the requirements regarding the indoor navigation system to be piloted for the Department of Health and family Welfare at Government Medical College Hospital Thrissur.

3 Project Objectives

The objectives of the project include the below: -

- To develop a user-friendly system for guiding the patients and visitors to navigate 38 indoor facilities across multiple floors (Approximately 14000 m²) at Government Medical College Hospital, Thrissur.
- To reduce the time to reach the facility with fewer hassles and increase the patient experience with an interactive indoor floor map of the hospital.
- Minimize the effort on hospital staff in directing visitors to necessary facilities, allowing them to concentrate on their primary responsibilities and enhance productivity.

4 Scope of the Project

The scope of the project includes the below:

- Pilot the project at the Government Medical College, Thrissur with Implementation of the indoor navigation system.
 - Development and implementation of a multilingual android mobile application to search and locate the facilities for users
 - Development and implementation of a web interface for Administrator to manage and monitor the indoor navigation system.
 - Delivery and installation of required Hardware along with necessary supporting infrastructures (electrical, communication network, etc. if required) at Government Medical College Thrissur, to run the indoor navigation system.

5 Deliverables

SI. No	Items	Format
1	System Requirement Specification Document (Including Software Requirement Specification)	PDF/WORD
2	Web Application	URL
3	Mobile Application	APK
4	Hardware	

5	Post implementation Evaluation Report	PDF/WORD
6	Project Completion Report	PDF/WORD

Table 1: Deliverables

6 Project Duration

- The maximum project duration can be only 8-12 months.

7 Key Benefits to be achieved

- Patients reach in time to the facilities of Government Medical College, Thrissur with fewer hassles as time taken by the patient to identify a facility shall be reduced. This will also reduce unorganized crowding in the Hospital.
- Improvement in the patient and visitor experience by providing patients with an interactive indoor map.
- Saves times for Hospital staff by reducing effort to direct the visitors to required facilities leading to better utilization of Human Resources.
- Hospital Administration can gain insights into patient and visitor flow through the Hospital.

ANNEXURE 2

Expression of Interest Response Sheet for the project- Indoor Navigation System in Hospitals for the Public to Track and Use

Instructions

1. Please carefully read through both the expression of interest notification for the project and the project requirement document before filling the EoI response sheet.

1. Organization Particulars

Sl. No	QN	Response
1	Name of the Project for which EoI Response is submitted	
2	Name of the Startup	
3	Legal Name	
4	Legal Status	
5	Registration Number	
6	Date of Registration	
7	Registered Address	
8	KSUM Unique ID	
9	KSUM Startup Certificate Expiration Date	
10	Website	
11	Full name of the contact person	
12	Designation of the contact person	
13	Contact Mobile Phone Number	
14	Contact e-mail id	

2. Organizational Capabilities

Sl. No	QN	Response
1	Introduction (Word Limit 150)	
2	Key products or Services (Word Limit 250)	

3. Organizational structure and capacity

Sl. No	QN	Response
1	Total number of Employees	

2. Details of the key personnels in the technical & management team *(Add rows as required)*

Sl. No	Name	Designation	Skill Set

4. Previous implementation experience

Sl. No	QN	1	2
1	Customer Name		
2	Customer Category		
3	Location		
4	Start Date		
5	End Date		
6	Project Brief (Word limit-100)		
7	Scope of the Project (Word limit-150)		
8	Is the implemented system currently being used by the customer		
9	Address of the customer		
10	Name of the person to be contacted		
11	Designation of the person to be contacted		
12	Contact Number		
13	Email address		
14	Experience Certificate from customer attached (Yes/ No)		

5. Certifications (Add rows as required)

Sl. No	Name of Certification	Issuing Body	Certification Number	Date of Issue	Expiration Date

6. List of attachments (Short CVs of key personnel, Experience certificates, and other certifications)

(Please include the list of attachments)

- 1.
- 2.