



**EXPRESSION OF INTEREST NOTIFICATION FROM  
EMERGING TECHNOLOGY DIVISION, K-DISC  
[Ref No: 134/2023/K-DISC dated 03/07/2024]**

**Project Name: AI Chatbot for eHealth Kerala**



**KERALA DEVELOPMENT AND INNOVATION STRATEGIC COUNCIL**

India Height, Govt. Women's College Road  
Vazhuthacaud, Thiruvananthapuram – 695014

Phone 2332920/2334472

[www.kdisc.kerala.gov.in](http://www.kdisc.kerala.gov.in)

## Table of Contents

<b>1. INTRODUCTION.....</b>	<b>3</b>
<b>2. TERMS OF REFERENCE .....</b>	<b>3</b>
<b>3. SELECTION PROCESS.....</b>	<b>4</b>
STEP 1: Submission of Expression of Interest (Eoi) .....	4
STEP 2: Project requirements clarification meeting and Eoi Response Sheet submission .....	4
STEP 3: Shortlisting of Startups for submission of Technical Proposal .....	4
STEP 4: Submission of Technical Proposal.....	4
STEP 5: Presentation / Demonstration by Startup and Technical Evaluation .....	5
STEP 6: Submission of Financial Proposal and Evaluation.....	5
<b>4. GUIDELINES FOR EOI RESPONSE SHEET .....</b>	<b>5</b>
<b>4.1. Organization Particulars .....</b>	<b>5</b>
<b>4.2. Organizational Capabilities .....</b>	<b>6</b>
<b>4.3. Organizational structure and capacity .....</b>	<b>6</b>
<b>4.4. Previous implementation experience.....</b>	<b>7</b>
<b>4.5. Certifications.....</b>	<b>7</b>
<b>5. GENERAL TERMS .....</b>	<b>8</b>
<b>6. TERMS OF AGREEMENT .....</b>	<b>9</b>

## Expression of Interest notification for the project- AI Chatbot for eHealth Kerala

### 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 recognized by the Department for Promotion of Industry and Internal Trade (DPIIT)) who can deliver a comprehensive solution for this project.

#### **Brief description of the project:**

The project aims to develop a bilingual (Malayalam and English) AI chatbot with two-way voice communication features for the eHealth portal. The chatbot should be designed as a plugin that can be seamlessly integrated into the eHealth portal.

The AI Chatbot shall provide interactive online appointment booking, new patient registration, UHID registration, ABHA ID registration, information on government hospitals, information on pending payments and payment facilities, offers cancer and NCD screening details, educates on communicable and non-communicable diseases, and delivers comprehensive maternal and childcare advice.

### 2. TERMS OF REFERENCE

Any startup recognized by the Department for Promotion of Industry and Internal Trade (DPIIT) 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 the Department for Promotion of Industry and

Internal Trade (DPIIT) 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)
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 meets 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 recognized by the Department for Promotion of Industry and Internal Trade (DPIIT) as a startup and currently holding startup status valid for at least 2 years (proof must be provided).
2. Should possess a successful completion certificate from a customer as evidence of implementation experience in AI chatbot (proof 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	Demonstration of a Chatbot using Sample documents	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. Registered Address: [Provide the complete postal address of the startup's registered office]
  8. KSUM or DPIIT Unique ID: [Provide the KSUM or DPIIT Unique ID]
  9. KSUM or DPIIT Startup Certificate Expiration Date: [Provide the validity date of KSUM or DPIIT Startup Certificate]
  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 AI Chatbot for eHealth 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- AI Chatbot for eHealth 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- AI Chatbot for eHealth 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- AI Chatbot for eHealth 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 Thiruvananthapuram 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.

payme

### **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 the 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 the 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**

**REQUIREMENT DOCUMENT**

*For*

**AI Chatbot for eHealth**



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

# Contents

<b>1. ORGANIZATION PROFILE</b>	<b>3</b>
<b>2. INTRODUCTION</b>	<b>3</b>
A. BUSINESS CASE/NEED FOR THE PROJECT .....	4
<b>3. PROJECT OBJECTIVE</b>	<b>5</b>
<b>4. SCOPE OF THE PROJECT</b>	<b>5</b>
<b>5. FUNCTIONAL REQUIREMENTS</b>	<b>6</b>
A. ONLINE APPOINTMENT BOOKING FACILITY FOR EHEALTH REGISTERED USERS (THROUGH EHEALTH API) .....	6
B. UHID REGISTRATION PROCESS (NEW PATIENT REGISTRATION – THROUGH EHEALTH API) .....	6
C. ABHA ID REGISTRATION PROCESS (NEW PATIENT REGISTRATION – THROUGH EHEALTH API) .....	7
D. INFORMATION OF ALL GOVERNMENT HOSPITALS AND FACILITIES.....	7
E. INFORMATION ON PENDING PAYMENTS AND PAYMENT FACILITY THROUGH THE CHATBOT. ....	7
F. CANCER SCREENING STATUS .....	7
G. NCD SCREENING STATUS.....	8
H. AMMAYUM KUNJUM (അമ്മയുടെ കുഞ്ഞിന്റെ) AND OTHER SERVICES OF THE HEALTH DEPARTMENT.....	9
I. TESTING AND VAPT.....	9
J. SAMPLE WEB USER INTERFACE (WEB UI) .....	9
K. EXTERNAL INTEGRATION .....	10
<b>6. NON-FUNCTIONAL REQUIREMENTS</b>	<b>10</b>
<b>7. DELIVERABLES</b>	<b>11</b>
<b>8. PROJECT SCHEDULE</b>	<b>11</b>
<b>9. KEY BENEFITS TO BE ACHIEVED</b>	<b>11</b>
<b>10. SAMPLE QUESTIONNAIRE</b>	<b>12</b>



## 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

Chatbots are software applications that use artificial intelligence & natural language processing to understand what a human wants and guide them to their desired outcome with as little work for the end user as possible.

A well designed & built chatbot will be able to Use already existing conversation data (if available) **to understand the** type of questions people ask. They can also analyze correct answers to those questions through a ‘training’ technique. Natural language processing (NLP) is the backend technology used to classify the user queries into a bucket of trained chatbot conversations and identify the intention of the user by the input and appropriately respond to the user queries. The response to the user can be in multiple formats which include but are not limited to text, buttons, hyperlinks, images, embedded videos, etc. The system will be able to continue the conversation with the user and use references from older chats to have the context of the chat. If the user question falls outside the trained conversations, then the system will be able to provide a general out of context response to the user as well as identify the question to train later in the development stage.

### **International/National Scenario**

Artificial Intelligence (AI) is transforming the way we interact, with large language models (LLMs) at the forefront of this change. LLM-powered chatbots are rapidly becoming a standard tool for brands globally. Utilizing advanced Natural Language Processing (NLP), these chatbots can comprehend customer intent, analyze interaction history, and deliver personalized responses to queries.

Continuous advancements are enhancing chatbots to be more multilingual and culturally aware, understanding nuances and colloquialisms to make interactions as human-like as possible.

Today, companies leverage LLM-powered chatbots for a variety of purposes, including lead generation, customer engagement, support, replicating in-store experiences, personalized recommendations, and sales. It's projected that chatbots will save businesses \$11 billion by 2025.

The chatbot revolution accelerated in 2016 when Facebook launched its developer platform, showcasing the potential of chatbots through their Messenger app. Google followed with Google Assistant, leading to the development of numerous chatbot applications across websites, apps, social media, customer support, and beyond.

ChatGPT, an advanced LLM, has further expanded the possibilities for AI chatbots, opening new avenues for innovation and efficiency in human-computer interactions. Other notable LLMs include GPT-4 by OpenAI, BERT by Google, RoBERTa by Facebook AI, and T5 by Google Research. Meanwhile Open-source LLMs democratize access to advanced AI technologies, enabling a broader range of developers and organizations to leverage these powerful tools without prohibitive costs. They foster innovation by allowing the community to experiment, improve, and build upon existing models. This collaborative environment accelerates the development of new applications and solutions, ensuring that advancements in AI benefit a wider audience and contribute to the collective progress of the field. Open-source LLMs also enhance transparency and trust, as their workings can be scrutinized and improved upon by the global research community.

## **Summary of the Document**

AI Chatbots can be used to revolutionize access to Health-related information for the public. The use of a chatbot will improve user interactivity by collaborating all the portal data into one place and giving responses to user queries in a conversational manner. This also reduces the response time to the user with around-the-clock availability and answer simple queries with ease. K-DISC is planning to implement such an AI chatbot for eHealth Kerala.

The purpose of this document is to brief the requirements regarding the proposed AI chatbot to be piloted for the Department of Health and family Welfare.

### **a. Business Case/Need for the Project**

- Currently all the data under the department of Health and Family Welfare, eHealth and other Health institutions are scattered in their respective websites.
- There is no mechanism to bring all the information under a single platform.

- Lack of Immediate delivery of information to the customers.
- High cost of human resource intervention.
- Lack of 24/7 support.
- Unpredictability in human interactions which may arise due to the moods and emotions of both the call center representative and the customer.

The reasons outlined above emphasize the fact that an AI chatbot system is necessary for the Health Department to function efficiently.

### 3. Project Objective

A single access point for disseminating all information in the eHealth portal using a multilingual (Malayalam and English) AI chatbot with voice communication capabilities. Following are the functionalities provided through AI chatbot.

- a. Online appointment booking for UHID registered users and new patient registration through API integration with eHealth system.
- b. Information of all government hospitals with available health facility information from eHealth portal through eHealth API.
- c. Provide general information given by Health Department on Cancer Screening, Communicable Diseases, Non-Communicable Disease & National programs like Ammayum Kunjum (അമ്മയുടെ കുഞ്ഞുമാ) will be displayed on appropriate selection.
- d. To provide first level online screening for cancer and non-communicable disease, based on Questionnaire given by Health Department.
- e. To provide screening status for patients tested at the FHCs using API integration with eHealth.

### 4. Scope of the Project

- a. To develop an AI chatbot for the eHealth portal. The chatbot should be a plugin that can be integrated into the eHealth portal.
- b. The chatbot should provide the following services:
  - i. Interactive Online Appointment Process using UHID/Mobile Number/ABHA ID through eHealth API
  - ii. Interactive UHID and ABHA ID Registration Process through eHealth API
  - iii. Patients can search for information on pending bills, payment status, pending prescriptions, and lab result reports through the

eHealth portal. A direct link to access the portal will be provided. Patients will be able to carry out payments through the Chatbot.

- iv. Information of all available health facilities at the eHealth integrated hospitals and locations, contact numbers and addresses of other government hospitals.
- v. Cancer Screening & Non-Communicable Diseases Screening and the status of the screened patients. Interactive Cancer screening and NCD screening online assessments.
- vi. Communicable disease and non-communicable diseases - General information on communicable and non-communicable diseases will be provided.
- vii. Ammayum Kunjum (അമ്മയുടെ കുഞ്ഞിനെ) and Other services of the Health Department that provides General information on Health to public.
- viii. For testing and VAPT, the Chatbot shall be integrated with eHealth's testing environment. The chatbot shall be integrated with eHealth platform in production after successful testing and VAPT.

## 5. Functional Requirements

### a. Online appointment booking facility for eHealth registered users (through eHealth API)

eHealth has an online booking facility for patients to the Government hospitals. The AI chatbot will provide an interface for online appointment booking by using API from eHealth.

It helps the citizens/patients to book online appointments to any of the Government Hospitals with ease in choosing their preferred time and date, also providing the doctors prior information of these appointments, avoiding unnecessary chaos. Online appointments are provided interactively through the existing online appointment API of eHealth portal.

### b. UHID Registration Process (New patient registration – through eHealth API)

UHID (Unique Health Identification) is a unique health ID created using Aadhaar based registration. ABHA ID (Ayushman Bharat Health Account) is a digital health ID that allows access to health records digitally. After the UHID registration, he/she can use the card for lifelong at Government Hospitals for getting treatment. Online registration for UHID and ABHA ID is provided interactively through the APIs provided by eHealth.

- Step 1 : User will provide their Aadhar Number
- Step 2 : Using the User input in step 1 an OTP Verification is done to the registered mobile number (Subject to OTP verification provided by eHealth API).  
Appropriate message will be displayed on non-verification of Aadhar.
- Step 3 : User personal information will be displayed (Name, Age, Address & District)
- Step 4 : User will provide their Mobile Number.
- Step 5 : The user is then registered in eHealth application, and a confirmation message is sent to the registered mobile number.

The UHID is generated for the new patient by eHealth application and patient details are updated in eHealth database through API.

#### c. ABHA ID Registration Process (New patient registration – through eHealth API)

ABHA ID registration shall be done the APIs provided by eHealth

#### d. Information of all Government Hospitals and facilities

The chatbot application shall provide users with the details of facilities available at ~1400 Government Hospitals. The details of available facilities shall be provided by eHealth. It provides the available health facilities at the eHealth integrated hospitals and locations, contact numbers and addresses of other government hospitals.

#### e. Information on pending payments and Payment facility through the chatbot.

Patients can search for information on pending bills, payment status, pending prescriptions, and lab result reports through the eHealth portal. A direct link to access the portal will be provided. Patients will be able to carry out payments through this portal. The existing payment gateway of eHealth will be used for payments.

#### f. Cancer Screening Status

General information for cancer screening will be shown on appropriate selection. The status of the screened patients will be displayed on selection, as available in the eHealth data, received through API. Interactive Cancer screening and online assessments are also available for individuals who are willing to participate. (*Attached as ANNEXURE -I*)

There will be three options provided by the chatbot for the user to choose from, regarding Cancer Screening.

1. General Information
2. Self-Assessment Questionnaire
3. Cancer Screening Status

**General Information** will provide the user with generic information related to Cancer.

The documents to be used to display to the users will be provided in word/excel format, by eHealth.

**Self-Assessment Questionnaire** - A Questionnaire to assess the risk of the user (to be provided by the eHealth Department) is presented to the user in a conversational manner. Based on the assessment on the response to the questionnaire, Chatbot will direct if the person needs to go to the nearest Primary Health Center.

**Cancer Screening Status** - The following steps will follow when the user tries to check the status of screening that they did at the PHC.

- Step 1 : User will provide their UHID / Mobile Number
- Step 2 : Using the User input in step 1 an OTP Verification is done to the registered mobile number (Subject to OTP verification provided by eHealth API). Appropriate message will be displayed on non-verification of Aadhar.
- Step 3 : DOB of the user is validated (if the user doesn't have UHID/Mobile Number)
- Step 4 : If the Cancer screening status is available, then the status will be shown
- Step 5 : If there is no screening status available for the user in server, then that message is conveyed to the user.

#### g. NCD Screening Status

There will be three options provided by the chatbot for the user to choose from, regarding NCD Screening.

1. General Information
2. Self-Assessment Questionnaire
3. NCD Screening Status

**General Information** will provide the user with generic information related to non Communicable diseases. The documents to be used to display to the users will be provided in word/excel format, by eHealth.

**Self-Assessment Questionnaire** - A Questionnaire to assess the risk of the user (to be provided by the eHealth Department) is presented to the user in a conversational manner. Based on the assessment on the response to the questionnaire, Chatbot will direct if the person needs to go to the nearest Primary Health Center.

**NCD Screening Status** - The following steps will follow when the user tries to check the status of screening that they did at the PHC.

- Step 1 : User will provide their UHID / Mobile Number
- Step 2 : Using the User input in step 1 an OTP Verification is done to the registered mobile number (Subject to OTP verification provided by eHealth API). Appropriate message will be displayed on non-verification of Aadhar.
- Step 3 : DOB of the user is validated (if the user doesn't have UHID/Mobile Number)
- Step 4 : If the NCD screening status is available then the status will be shown

Step 5 : If there is no screening status available for the user in server, then that message is conveyed to the user.

#### h. Ammayum Kunjum (അമ്മയും കുഞ്ഞും) and Other services of the Health Department

General information like Due Date Calculation (LMP Calculation) Process, Vaccination Schedule Information, Delivery Services Information, Scheme (Govt) Information, Antenatal Care Frequency Information, Antenatal Advices, Lactation Advices, Nutritional Advices, Neonatal Care Advices for mother and Immunization Schedule Information, Child Scheme Information, District Early Intervention Center (DEIC) Locations, Nutritional Advices, Anganwadi Services for children, along with BMI calculator and eight other health indicator calculators, will be provided.

#### i. Testing and VAPT

For testing and VAPT, till the integration is completed with the eHealth platform, Chatbot should work as a standalone application. The chatbot shall be integrated with eHealth platform after successful testing and VAPT.

#### j. Sample Web User Interface (Web UI)

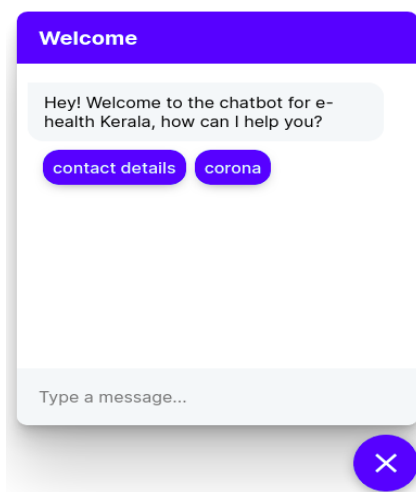


Figure 7: UI component

- Web interface supports different response formats which include text, buttons, images, hyperlinks, embedded video, or combinations of the above-mentioned. Web User interface which can be customized to match the color palette of the portal and support different types of response.
- Multiple responses support particular user input - Chatbot can understand the intention of the user using state of the art machine learning and deep learning and respond to the user with multiple forms of output which include text, image, hyperlink, etc.
- Customizable welcome message- Welcome messages can be customized to reflect the

portal theme.

- d. Custom buttons along with the welcome message - Give an idea about the possibilities of the chatbot.
- e. Multi-language support [Malayalam support] - Chatbot also supports the Malayalam language for regional users.
- f. Multi-channel (Web UI, WhatsApp, Facebook Page integrations) - Chatbot can be integrated into multiple channels to increase access.
- g. Natural Language Processing model
  - i. Best in class natural language understanding - User intent classification and important factors in user input need to be extracted for improving response.
  - ii. Context memory to make the chat more conversational - Chatbot will keep the user input in memory and will not ask the user further in the conversation which will improve user experience.
  - iii. Two-way voice-enabled - AI chatbot can take voice as input and response to the system can also be converted to voice for improving the user experience and availability of AI chatbot to differently abled people as well.
  - iv. Knowledge Base integrated response

#### k. External integration

- a. API integration with eHealth

AI chatbot can be integrated through API with eHealth for the following functionalities.

1. Online Appointments
2. New Patient Registration
3. Cancer Screening Status
4. NCD Screening Status
5. UHID and ABHA ID Registrations

- b. UIDAI server integration

For Aadhaar Authentication, UIDAI server integration may be required.

## 6. Non-functional Requirements

- a. 24/7 availability

As compared to the human counterpart, the chatbot will be available around the clock to help with the user queries.



b. Reduced responsive time compared to human response.

The AI chatbot reduces the time taken to answer user queries, which improves the user experience.

c. Data Security

The entire AI chatbot system works on-premises, which will ensure the security of the data handled by the system.

## 7. Deliverables

Sl.No	Deliverables	Duration	Format
1	Software Requirement Specification		
2	AI Chatbot First Version		
3	AI Chatbot Final Version after incorporating feedback and bug fixes, Deployment at State Data Centre after Security Audit Clearance		
4	APIs for eHealth and support for integration with eHealth		
5	UAT with Department and Incorporation of UAT feedback from Department		
6	Source Code and other Artifacts		
7	Project Completion Report		

Table 1: Deliverables/Milestones

## 8. Project Schedule

The maximum project duration can be only 8-12 months

## 9. Key Benefits to be achieved

- 24/7 availability.
- Better utilization of manpower and cost savings.
- Better user experience for the visitor since the chatbot reduces wait times and streamlines conversations, minimizing the potential for customer's stress and annoyance.
- Conversational response lends to user happiness.
- Reduced responsive time compared to human counterparts.
- Improve the redirection of customer queries.
- Keeps extensive records of the conversation which can be used for analysis and

further improvement in chatbot.

## 10. Sample Questionnaire

### Risk Info

- താങ്കളുടെ വയസ്സ് എത്ര ?(No need to show the Question autocalculate the score based on age. (Auto calculated)

Values:	score
30-39	0
40-49	1
>=50	2

- നിങ്ങൾ പുകവലിക്കുന്ന / പുകവലിച്ചിരുന്ന ആൾ ആണോ?
  - Yes
  - No(0)
  - If Yes selected then ask following questions.
  - എത്രമാത്രം വയസ്സിൽ താങ്കൾ പുകവലി തുടങ്ങി?
    - ✓ Provide text box for entering age (min value= 9 max =100)
    - ✓ ഉചിതമായത് തിരഞ്ഞെടുക്കുക
      - ദിവസവും പുകവലിക്കുന്നു(2)
      - വല്ലപ്പോഴും പുകവലിക്കുന്നു(1)
      - നിർത്തിയിട്ടു ഒരു വർഷത്തിൽ താഴെ ആയി.(1)
      - നിർത്തിയിട്ടു ഒരു വർഷത്തിൽ കൂടുതൽ ആയി(1)
- താങ്കൾ പാൻ പരാൾ,മുറുക്കാൻ എന്നീ പുകയില ഉത്പന്നങ്ങൾ ഉപയോഗിക്കാറുണ്ടോ ?
  - Yes
  - No(0)

#### If Yes then

- ✓ **Tobacco Status:**
  - ദിവസവും(2)
  - പണ്ട് ഉപയോഗിച്ചിട്ടുണ്ട്(1)
  - വല്ലപ്പോഴും ഉപയോഗിക്കാറുണ്ട്(1)
- താങ്കൾ മദ്യപിക്കുന്ന ആൾ ആണോ?
  - അതെ(1) അല്ല(0)
  - If yes selected then enable the next question. കഴിഞ്ഞ ഒരു വർഷത്തിനിടയിൽ സാധാരണയായി താങ്കൾ എത്ര പ്രാവശ്യം മദ്യപിച്ചു?

✓ Following are the answers for above question.

- ഇല്ല
- മാസത്തിൽ ഒരു തവണയോ കുറവോ.
- മാസത്തിൽ രണ്ടു മുതൽ നാലു തവണ
- ആഴ്ചയിൽ രണ്ടോ മൂന്നോ തവണ
- ആഴ്ചയിൽ നാലോ അതിൽ കൂടുതൽ തവണ

➤ **ഇടുപ്പ് ചുറ്റളവ് (in cm)**

Female values	Male values	Score
<=80 cm	<=90 cm	0
81-90 cm	91-100 cm	1
>90 cm	>100cm	2

➤ താങ്കൾ ആഴ്ചയിൽ 2.30 മണിക്കൂറുകൊണ്ടും ഏതെങ്കിലും തരത്തിലുള്ള ശാരീരിക അധ്വാനത്തിൽ ഏർപ്പെടാറുണ്ടോ ?

- Yes(1)
- No(0)

➤ താങ്കളുടെ കുടുംബത്തിലാർക്കെങ്കിലും (അച്ഛൻ,അമ്മ,സഹോദരങ്ങൾ ) രക്താതിമർദ്ദമോ ,പ്രമേഹമോ , ഹൃദ്രോഗമോ ഉണ്ടോ ?

- Yes(2)
- No(0)

## Detection

### For male

- വായ തുറക്കാൻ ബുദ്ധിമുട്ടുണ്ടോ  
Yes            No
- രണ്ടാഴ്ചയിൽ കുടുതലായി ഉണങ്ങാത്ത വായക്കുള്ളിലെ മുറിവ്  
Yes            No
- മൂന്ന് ആഴ്ചയിൽ കുടുതൽ ഉള്ള ശബ്ദത്തിലെ വ്യത്യാസം  
Yes            No

**For Female**

- തുടർച്ചയായി ശ്വസിക്കാനുള്ള ബുദ്ധിമുട്ട്  
Yes No
- രണ്ടാഴ്ചയിൽ കൂടുതലുള്ള ചുമ  
Yes No
- കഫത്തിൽ രക്താംശം  
Yes No
- വായ തുറക്കാൻ ബുദ്ധിമുട്ടുണ്ടോ  
Yes No
- രണ്ടാഴ്ചയിൽ കൂടുതലായി ഉണങ്ങാത്ത വായക്കുള്ളിലെ മുറിവ്  
Yes No
- മൂന്ന് ആഴ്ചയിൽ കൂടുതൽ ഉള്ള ശബ്ദത്തിലെ വ്യത്യാസം  
Yes No
- സ്തനത്തിലെ മുഴ / തടിപ്പ്  
Yes No
- മുലക്കണ്ണിൽ നിന്ന് വരുന്ന രക്തമോ മറ്റു സ്രവങ്ങളോ  
Yes No
- സ്തനങ്ങളുടെ ആകൃതിയിലോ വലിപ്പത്തിലോ ഉള്ള വ്യത്യാസം  
Yes No
- കുട്ടികളുണ്ടോ (If age >40)  
Yes No
- രക്തബന്ധത്തിൽ ആർക്കെങ്കിലും സ്തനാർബുദം സ്ഥിരീകരിച്ചിട്ടുണ്ടോ  
Yes No
- മാസമുറക്കിടയിലുള്ള രക്തസ്രാവം  
Yes No
- മാസമുറ നിന്നതിനു ശേഷമുള്ള രക്തസ്രാവം  
Yes No
- ശാരീരിക ബന്ധത്തിന് ശേഷമുള്ള രക്തസ്രാവം  
Yes No
- ചീഞ്ഞ ഗന്ധമുള്ള യോനീസ്രവം  
Yes No

**GROUPING cancer questions**

**Oral Cancer**

- 1)Difficulty in opening mouth
- 2)Ulcers/ patch/ growth in the mouth that has not healed in two weeks
- 3)Any change in the tone of your voice

**Breast Cancer**

- 1)Lump in the breast
- 2)Blood stained discharge from the nipple
- 3)Change in shape and size of breast
- 4) Do you have children?
- 5) In blood relations,Has anyone been diagnosed with breast cancer?

**Cervical cancer**

- 1)Bleeding between periods
- 2)Bleeding after menopause
- 3)Bleeding after intercourse
- 4)Foul -smelling vaginal discharge

## ANNEXURE 2

### Expression of Interest Response Sheet for the project - AI Chatbot for eHealth Kerala

#### 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 / DPIIT Unique ID	
9	KSUM / DPIIT 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	CV attached (Yes or No)

4. Previous implementation experience *(Please add two experiences relevant to the project and submit the relevant end-user certificates)*

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 *(Please attach the certifications also)*

Sl. No	Name of Certification	Issuing Body	Certification Number	Date of Issue	Expiration Date	Certification attached? (Yes/No)

*(Add rows as required)*

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

*(Please include the list of attachments)*

- 1.
- 2.



