



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076.

Ref. : Rfx-6100002110

PR No.1000046682

Item Description: Custom Software

Sr. No	Item Description	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1.	Custom Software	<p>Brief Technical Specification:</p> <p>A customized software solution to help in the training of health workers on exclusive breast feeding and complementary feeding is required.</p> <p>1. The software should be able to run in standard form factors. For example, it should run on mobile phones. It should also run on laptops with the full screen use, especially for presentation purposes.</p> <p>2. It should be possible to display more items or less items as required on any page, without code changes.</p> <p>3. The schema used for tables, reports and plots, based on the data collected, should be available.</p> <p>4. The software should effortlessly allow the export of all collected data in a csv format, with annotations to help understand which data set corresponds to which variable.</p>		

	<p>5. The software should be capable of being simultaneously used by the health workers in a typical district as mentioned below without any loss in performance:</p> <table><tr><td>Location</td><td>Quantity</td></tr><tr><td>Meghalaya</td><td>18000</td></tr><tr><td>Jashpur</td><td>3500</td></tr><tr><td>Nanded</td><td>2000</td></tr></table> <p>Software based services for Health and Nutrition Project along with up gradation/Add-on software</p> <p>Software Requirements for Spoken Tutorials Spoken Tutorial Health and Nutrition project, IIT Bombay, offers valuable advice on Maternal Nutrition, Child Nutrition, General Nutrition and Covid related information by a team of eminent doctors, nutritionists, and field officers with decades of experience. We are a dedicated team who are focused on eradicating malnutrition and promoting healthy development in infants, expectant mothers, toddlers and children in the first three years of life. This work is especially useful for promoting good health in under-resourced families and for the improvement of general health using simple methods and easily available food sources. Our advice is delivered in the form of a series of tutorials, in different languages, which cover crucial topics and vital information for viewers to understand and grasp the most important aspects and practical details of nutrition relating to breastfeeding, complementary feeding and</p>	Location	Quantity	Meghalaya	18000	Jashpur	3500	Nanded	2000		
Location	Quantity										
Meghalaya	18000										
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		<p>Pregnant and lactating mothers. The tutorials are created using simple words for ease of understanding and covered using graphics with simultaneous narration to help illustrate the respective topics with maximum clarity. Further information on the project and the tutorials can be found here: https://health.spoken-tutorial.org.</p> <p>Through this series, the Health Spoken Tutorial project at IIT Bombay aims to reach out to a wide number of people for spreading awareness on nutrition and improve the quality of life in India and across the globe. To pursue our aims, we plan to work with women's health and nutrition service programs at the regional and local levels in India. We anticipate working with government administrators at the district or municipality level, under separate project arrangements. Our specialists train and assess a select number of service workers, who then act as mentors to further train additional service workers in the field. The trained service workers could have administrative, health, nutrition, field-level, and other responsibilities.</p> <p>We are now seeking a software-based service to promote our aim, to document the reach of our services, and to demonstrate the benefits of our advice. The software-based service must meet the following criteria. The vendor should have experience in developing actively used software to carry out a service that meets the requirements mentioned herein. We expect this software to meet the current requirements as it</p>		
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		<p>is, or through reconfiguring, without a need to extensive coding. The following are generic requirements:</p> <p>a. The software should be able to run in standard form factors. For example, it should run on mobile phones. It should also run on laptops with the full screen use, specially for presentation purposes.</p> <p>b. It should be possible to display more items, as required in the next section. It should also be possible to reduce the number of items displayed on any page.</p> <p>c. All the data should be stored within India.</p> <p>d. The schema used for tables, reports and plots, based on the data collected, should be available.</p> <p>e. The software should effortlessly allow the export of all collected data in a csv format, with annotations to help understand which data set corresponds to which variable.</p> <p>f. The software should be capable of being simultaneously used by the health workers in a typical district, say about 6,000 in number, without any loss in performance.</p> <p>g. The vendor should, within two weeks of opening the technical bid and short listing, come up with a demo incorporating the requirements mentioned herein.</p> <p>The following are application specific requirements:</p>		
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		<p>1. The service must be based on a no code delivery model, so that IIT-HST, through authorized staff or partners can configure, manage, and optimize key features of the nutrition training and counseling services it delivers to case subjects in a reliable, yet rapid, fashion without code development.</p> <p>a. Should be able to split Spoken Tutorial content into small segments, accessible through the accompanying scripts</p> <p>b. Should be able to give reasoning and direct to appropriate video segment</p> <p>2. The service must support custom language requirements as specified by IIT-HST and each organizational partner. The language support must allow for dynamic updating of content and version management in designated languages, where such update is required to be made through automated means and manual entry.</p> <p>a. To be able to handle hierarchy of locations: district, taluka, and block</p> <p>b. Should provide language support that can use content items distributed by IITHST in multiple languages</p> <p>3. The service must enable the assignment of responsibilities to each user based on end use contexts. Such assignment must be capable of being customized for different partner organization needs and end user context.</p> <p>a. Should be able to create roles</p>		
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		<p>b. Should be able to create a hierarchy between the roles, in terms of access to data, etc.</p> <p>c. To be able to monitor performance of people below a role</p> <p>d. Should be able to create escalation process</p> <p>4. The service must be capable of generating actionable insights that can then be used to automatically modulate the data delivered to end users and the actions required of the users, while also prompting the users to deliver the actions required of them. Such modulation must be configurable based on end user interaction context and performance measures specified by IIT-HST and/or its partner organizations.</p> <p>a. Should be able to instruct users based on case observations</p> <p>b. Should support configurable criteria for observations and user actions</p> <p>c. Support the generation and delivery of communications based on configurable criteria</p> <p>5. The service must be capable of supporting user actions that are based on a pre-set calendar schedule, where the schedule itself may evolve depending on multiple performance measures specified by IIT-HST and/or its partner organizations.</p> <p>a. To be able to create schedule (both time and state events): when to call the baby back, vaccination schedule, etc.</p>		
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		<p>6. The service must be based on a continuous learning system that can use machine learning and artificial intelligence methods authorized by IIT-HST and its partner organizations for application to their projects, for each partner organization to smartly and continuously</p> <p>a. augments the data intake, processing, and analysis capacity of their users</p> <p>i. To be able to enter the data interactively</p> <p>ii. To be able to enter the data through a csv file or other files</p> <p>iii. To be able to define different time periods as the basic variable: e.g. days, weeks, months, etc.</p> <p>iv. To be able to store and retrieve NF4, NF5, data, and check how</p> <p>b. Identify/incorporate the factors (e.g., training content, workload, field conditions) that drive beneficial outcomes towards the business objectives of the organization</p> <p>i. To be able to include arbitrary variables (e.g. weight, length, circumference of the head, LDL, HDL, blood group, etc.)</p> <p>ii. To be able to define arbitrary algebraic functions of the available variables (e.g. weight to height ratio, LDL to HDL ratio, LDL+HDL, etc.)</p> <p>iii. To be able to create and invoke rules based on some conditions (e.g. weight gain in two successive periods, etc.)</p>		
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		<p>c. enhances the impact of the organization's work</p> <p>i. Should be able to establish guidelines, which should be easily imbibed into the work flow (e.g. vaccine schedule, protein schedule, etc.)</p> <p>ii. Should be flexible to accommodate different business rules that come from different districts, states, ministries, etc.</p> <p>d. improve the integrity (accuracy, completeness, timeliness) of user inputs through measurable indicators.</p> <p>i. Each baby, mother, health worker, et al., should have an identity, which can be used to access the historical data</p> <p>ii. All business rules should be changeable, or should be possible to introduce new business rules, depending on new guidelines, or additional learning through experience, etc.</p> <p>7. The database that holds the data collected through the software should be available at all times.</p> <p>a. To be able to get consolidated information in for the form of reports, etc.</p> <p>b. To have a dashboard at any arbitrary level: e.g. individual worker level, supervisor level, block level, district level, etc.</p> <p>c. Should provide plots, etc.</p>		
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		<p>d. Should provide Tables, etc.</p> <p>e. To be able to send automated emails based on time and state events</p> <p>f. To be able to send automated text messages (SMS) based on time and state events</p> <p>The software mentioned here are add-ons to the main software.</p> <p>1) Registration and Training Services (RTS): This software should enable a Subscriber to designate thousands of Learners to register their details, submit demographic, and share learning characteristics data, and receive organized training programme links to access IITB-HST training content on YouTube. The proposed software should set up the data fields used in RTS for the Subscriber based on template(s) already agreed upon with IITB-HST. RTS should allow the Subscriber and IITB-HST to download the data submitted by the Learners in a spreadsheet format once daily.</p> <p>2) Learner Testing Services (LTS): This software should enable registered Learners to access and submit a practice test and three assessment tests (referred to as FT (Familiarization Test), ST (Screening Test), and SAT (Summative Assessment Theory) by IITB-HST). This add-on will grade answers submitted by the Learners and share results of the grading with IITB-HST through a downloaded spreadsheet. This add-on should support thousands of Learners taking the hour-long FT and ST tests spread over several</p>		
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		<p>scheduled sessions, and hundreds of Learners taking the 3-hour SAT test in a single sitting. The questions to be used in each test, the grading rubric used for each question, the scheduling of each test on one or more specific dates/times, and the determination of which Learners are authorized to sit for each session of the test, shall be the responsibility of IITB-HST.</p> <p>3) Field Project Services (FPS): This add-on should enable 250 Learners who are selected by IITB-HST for in-person training, for the practical field stage of the IITB-HST mother-child project in the district, to perform the following data tasks:</p> <ul style="list-style-type: none"> a) Register a mother for a new mother-child case Record antenatal care details for the mother b) Record the protein intake details for the mother c) Record the birth of the baby d) Register growth measures periodically for the baby e) Record assessments about the mother's breastfeeding approach f) Record assessments about the child are complementary feeding. <p>The add-on should set up the data fields used in FPS as agreed upon with IITB-HST. Data submitted by the participating Learners will be available to IITB-HST as downloaded spreadsheets and in the form of summary tables and charts covering the cases managed by the Learners. The verification,</p>		
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	<p>if any, of the selection of fields, the accuracy, timeliness, and completeness of information submitted by the Learners, and compliance with IITB-HST’s learning action protocol, shall be the responsibility of IITB-HST.</p> <p>4) Monitoring, Evaluation, and Learning Services (MELS): This should enable the 250 Learners authorized to receive FPS, up to 5 IITB-HST representatives (“Mentors”), and up to 50 supervisors or administrative-leaders designated by each Subscriber (“Supervisors”) to have access to a set of integrated reports that cover monitoring, evaluation, and learning measures for the district. MELS will provide project and case insights across the applicable training, assessment, and field phases of Learner interactions with the RTS, LTS, and FPS packages (as purchased by the Subscriber). Not all Supervisors will receive access to all MELS data; the access permissions will be configured at the time of project design.</p> <p>a) Z-score and percentile growth metrics based on growth measurements provided by the Learners.</p> <p>b) Growth charts that include reference measures.</p> <p>c) Counseling points based on an assessment of the growth measures submitted by a Learner and the applicable IITB-HST learning action protocols.</p> <p>d) Indicators that convey growth and faltering trends to the Learners and Mentors.</p>		
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		<p>e) Case adoption and protocol adherence measures by each case and Learner.</p> <p>f) Scoring data for the practical field work undertaken by the Learners and outcomes measures from the field work.</p> <p>g) Scoring data for tests (under the LTS package) administered by IITB-HST to the Learners.</p> <p>h) Case, worker, and community level analysis measures that include Learner demographic profile, Learner characteristics, case profile, protocol adherence, and supervisor/mentor support.</p> <p>i) A ranked list of the 250 Learners, for IITB-HST to select 50 Learners as the master trainers at the conclusion of the MP Project.</p> <p>Location – Nanded</p> <p>1) Nanded - The SaaS services below are additional requirements to services previously ordered via a GeM order, allowing for the following through September 30, 2025:</p> <p>a) The registration, training, and testing of additional 2000 HCWs in this single district.</p> <p>b) Field selection of up to 550 HCWs, allowing them to submit survey form and MB dyad form submissions.</p> <p>c) The issuance of up to 300 individual user accounts.</p>		
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		<p>d) Use in the face-to-face training of up to 300 HCWs, including, the creation of practice cases.</p> <p>e) HST mentors and monitors to track member activities in a dashboard that is updated at least once weekly and the ability for the HST mentors to rate the trained HCWs in connection with selecting a designated number of Master Trainers and Facilitators from among the 250 HCWs.</p> <p>f) The extension to September 30, 2025, of the period for delivery of the field services by 250 HCWs (and 2500 cases) beyond the 1-year period specified in January 2025 by the original applicable GeM order.</p> <p>Location – Jashpur</p> <p>2) Jashpur - The SaaS services below are additional requirements to services previously ordered via a GeM order, allowing for the following through September 30, 2025:</p> <p>a) The registration, training, and testing of additional 3500 HCWs in this single district.</p> <p>b) Field selection of up to 550 HCWs, allowing them to submit survey form and MB dyad form submissions.</p> <p>c) The issuance of up to 300 individual user accounts.</p> <p>d) Use in the face-to-face training of up to 300 HCWs, including, the creation of practice cases.</p> <p>e) HST mentors and monitors to track member activities in a dashboard that is updated at least</p>		
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		<p>once weekly and the ability for the HST mentors to rate the trained HCWs in connection with selecting a designated number of Master Trainers and Facilitators from among the 250 HCWs</p> <p>Location- Meghalaya</p> <p>3) Meghalaya- The SaaS services will allow for:</p> <p>In Year 1</p> <p>a) The setup of 12 districts with English as the user language for application use.</p> <p>b) The setup of 2 new languages (Gharo, Khasi) for use in forms, HST counseling content, HST videos, Exams, and system alerts and notifications.</p> <p>c) The registration, training, and testing of up to 18000 HCWs across the 12 districts.</p> <p>d) Field selection of up to 2000 HCWs, allowing them to submit survey form and MB dyad form submissions.</p> <p>e) The issuance of up to 900 individual user accounts.</p> <p>f) Use in the face-to-face training of up to 750 HCWs, including, the creation of practice cases.</p> <p>g) Field work by 750 health care workers who have already received HST face-to-face training.</p> <p>h) Up to 7,500 field cases adopted and tracked by the trained health care workers.</p> <p>i) HST mentors and monitors to track member activities in a dashboard that is updated at least</p>		
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		<p>once weekly and the ability for the HST mentors to rate the trained HCWs in connection with selecting a designated number of Master Trainers and Facilitators from among the 750 HCWs.</p> <p>j) The administration of a summative assessment test (SAT) by HST for the trained 750 HCWs. The SAT will include 100 questions and be a 3-hour exam. HST will provide the questions and responses required to administer the exam in the SaaS.</p> <p>k) Support extended to HST project coordinator between 9 am to 6 pm IST Monday through Friday.</p>		
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