



## TERM OF REFERENCE (ToR) FOR THE RECRUITMENT OF INDIVIDUAL CONTRACTOR (IC)

### GENERAL INFORMATION

**Services/Work Description:** Recruitment of a Consultant for development of grass root innovation database and data collection app.

<b>Project/Program Title:</b>	Accelerator lab
<b>Post Title:</b>	National Consultant (NC)
<b>Consultant Level:</b>	<b>Level C</b> (Senior Specialist)
<b>Duty Station:</b>	Addis Ababa, UNDP Ethiopia country office/home based depends on COVID regulations
<b>Expected Places of Travel:</b>	none
<b>Duration:</b>	66 days
<b>Expected Start Date:</b>	Immediately after Signing the Contract

### I. BACKGROUND / PROJECT DESCRIPTION

The UNDP accelerator lab's purpose is mainly to catalyze innovative solutions to some of the complex development challenges of the community that it serves. It focusses on breakthrough ideas originate from the local community, individuals, and grassroots institutions to take them to rapid iteration and experimentation before scaleups. The UNDP accelerator lab is situated within the UNDP to support the country office programs with capturing and developing the untapped potentials of social innovations to contribute to the SDGs. There has been a growing interest to cultivate the existing indigenous innovations pursued by the local community in a course of solving their own problems. Therefore, starting with the grass root innovations, which is a bottom up approach that puts the community to lead the development agenda as opposed to the top down structure of infusing innovations designed by external developers.

Therefore, a solution mapping is one of the pillars of the accelerator lab thematic endeavors to the acquisition of locally used innovations that could have potential positive impact if replicated by the wider community. Thus, there had to be ways of tracing and exhausting the nationally available solutions to prioritize them for further ethnographic studies before they undergone through an iterative experimentation. Prioritization criteria could be defined based on their contributions to the SDGs in general and acceleration values to the country program development. The accelerator lab in its solution mapping strategy has identified some pivotal participatory methods that considers relevant stakeholders and the country program office.

The solution mapping process is supposed to bring local solutions into a situation where they are iteratively evaluated based on set of criteria. Best fitting solutions will be considered for testing and scaling up. Moreover, a learning will be generated to initiate policy ideas related to grassroots innovations or ameliorate the existing ones. The national grassroots innovations mapping starts with the identification of new ways of doings/practices, new products usage, and services that are devised by the local communities and individuals to solve a sort of contemporary challenges. Having the infrastructure and the practice of collecting such social innovations could input testing of the selected best innovations in iterative process to come up with the best suiting replicable, financially and technically feasible solution under the context of a given community.

For its realization, the proposed initiative, requires a partnership between the UNDP accelerator lab, TechIN (grassroot and startups unit), and other government and private sector (such as Ethiopian Association for innovations). The overall intervention aims to lay an ICT based infrastructure to map local solutions in different parts of the country and disseminates them to relevant end users from the solutions database. Therefore, the national consultant (IC) is required to develop a solution data collection app that supports assorted data types (texts, geolocations, videos, audios, etc.) and respective repository database/portal for grassroots innovations.

The main aim of the work is to develop an android and iOS supported app, which is a user friendly and applicable to ordinary people to capture grassroots innovations and send it to its respective grassroots innovation database to be designed as part of this assignment.

## II. SCOPE OF THE WORK

Local grassroots innovation sought to be accumulated at the central database need to have an infrastructure to capture them from their source to the central database. Thus, the methods of local solution data acquisition need to be defined. The innovation mapping process will enable innovators or any solution mapper to capture different forms local solutions from different geographic locations to the central database. All the data types such as texts, images, audios, videos, GPS, QR codes, etc. Therefore, to realize this:

- The Independent Consultant is expected to understand the technical requirements and features of the data collection app and GID
- The GID and the installable data collection app shall accommodate data features enlisted below
  - Capture demographic information and contact details of the grassroots innovation owners
  - Dates of solutions captured, geolocations, type of the innovation and its relevant sector, target groups of the innovation, the innovation category (to be defined from a list of choices), nature of the innovation (product/service), purpose of the innovation, actors involved/supporting the innovation, level of priority and expected impacts, shall capture photos, audios and videos, and others
  - The app should be operable for *English, Amharic, Oromifa, and Tigrigna* (Therefore, translated versions should be built-in). The accelerator lab shall provide the translated versions

- The app shall give language switch options, and this has to allow the possibility of language additions based on the user groups demands in the future
- The GID shall allow a direct migration mass innovation data from other sources as well
- Manual data entry shall also be possible, in case there are paper based data collection
- The GID shall have filtering, and data visualization options based on key variables
- The GID shall be developed with a leading-edge cybersecurity consideration
- GID shall automatically return quantitative information on innovation (the selected key variables to be identified)
- The IC will define the open source software requirements based on compatibility check in consultation with UNDP internal ICT team.
- The data collection app shall be accessible via a play store and app store and its maintenance/renewal had to be clearly covered in the training and documentation guide
- The IC presents the prototype of the database and the data collection app with options (along with their merits and demerits)
- The IC develops a beta version of the app and the GID and undergo testing within controlled circumstances for testing and validation of the functionality of the platform.
- The IC collects feedback from beta testers and makes the necessary amendment
- The IC deploys and implements the GID and the associated data collection installable app V1.0 release in the cloud hosting User Acceptance Testing (UAT) environment
- The IC collects the UAT testers feedback and make the necessary amendment
- The IC deploys and implements the GID and the associated data collection installable app V1.0 release in the cloud hosting production environment.
- The IC develops a documentation of the GID and the data collection app development workflows, and end user training guide
- The IC demonstrates technical/administrator and end users hands-on training

### III a. EXPECTED OUTPUTS AND DELIVERABLES

No.	Deliverables / Outputs	Estimated Duration to Complete (working days)	Review and Approvals Required <i>(Indicate designation of person/Unit who will review output and confirm acceptance)</i>
1	SRS (Software requirement specification) to structure the grassroots innovation database <ul style="list-style-type: none"> <li>● Gather data on the requirements from the Acc lab team and from potential users through interview (in person or remote) and document review.</li> </ul>	10	Amanuel Tadesse/Accelerator lab

	<ul style="list-style-type: none"> <li>Analyze the result to understand the client's (UNDP acc lab) and users' expectations from the GID.</li> <li>Prepare the SRS document which include the data collection app and GID expected features and high-level system architecture</li> </ul>		
2	<p>GID and data collection app design document</p> <ul style="list-style-type: none"> <li>Create a mockup screen for GID pages, prepare a detailed deployment diagram, Prepare database diagram.</li> <li>Design prototype for the GID data collection app for installation, start data collection, contents feature for different data natures (Image, GPS, videos, and audios, QR codes scanning, etc.)</li> </ul>	10	Amanuel Tadesse/Accelerator lab
3	<p>Beta version of GID</p> <ul style="list-style-type: none"> <li>Develop the GID, and all GID pages and back end code.</li> <li>Conduct unit testing.</li> <li>Ready the beta version on a test environment.</li> </ul>	15	Amanuel Tadesse/Accelerator lab
4	<p>GID and the database collection app Server setup and configuration</p> <ul style="list-style-type: none"> <li>Support with specification for the UNDP to Procure cloud hosting (UNDP will be responsible for the incurred costs to purchase server slots from its HQ)</li> <li>Database server</li> <li>Application server</li> <li>domain name and public IP</li> <li>Configure the servers and make them ready for deployment.</li> </ul>	10	Amanuel Tadesse/Accelerator lab
5	<p>User Acceptance Testing (UAT) and GID V1.0 release by the IC</p> <ul style="list-style-type: none"> <li>Preparation of end user test plan and test case</li> <li>Create functionality list, create a test case for each functionality, create acceptance criteria, execute user testing, execute test</li> <li>Document test result</li> <li>Bug fixing</li> <li>GID and data collection app V.10 release and deployment</li> </ul>	13	Amanuel Tadesse/Accelerator lab
6	<p>Documentation and Training</p> <ul style="list-style-type: none"> <li>Prepare an end-user manual which contains a step by step guide on how to use the grass root innovation data collection and app.</li> <li>Prepare system manual which guides administrators how to manage the GID and its associated data collection app and troubleshoot possible issues/errors.</li> <li>Prepare training slides.</li> <li>Conduct users and administrators training (online/in person)</li> </ul>	8	Amanuel Tadesse/Accelerator lab

### III b. METHODOLOGY / APPROACH OF THE SERVICE (WORK)

#### The Individual Contractor

- understands the scope of the work, therefore, writes an inception report to depict the level of understanding on the scope of the work and objectives and expected methods for execution.
- In collaboration with the accelerator lab, identifies the required structures of the GID and the data collection app

- Identification of a reliable open source software to develop the GID and the data collection app
- Validates the open source software compatibility with the UNDP ICT team
- Advises the preferred database in consultation with the UNDP Ethiopia ICT Team
- Laying out the data collection app and the GID as per the scope of the work and seek feedback from the acc lab team as well as the UNDP Ethiopia ICT team (may also learn from the ODK based grassroots innovation mapping tool that is adopted by the acc lab team)
- Upon agreed structure of the data collection app and GID develops their beta versions
- Upon completion of the design, the data collection app and GID will be deployed for beta test
- Collects feedback from test and do the necessary amendments
- Develops final version for UAT test based on considerable number of users
- Makes the necessary amendment based on the UAT testers feedback and produces the final production application
- Provides technical documentation with all the necessary steps taken to develop the data collection app and GID from its inception up to the final version (all the necessary codes to be included)
- Provides hands-on training for users and technical staff, accordingly.
- Formal handover and closure of the assignment.

#### **IV. INSTITUTIONAL ARRANGEMENT / REPORTING RELATIONSHIPS**

The consultant will be contracted by UNDP Ethiopia. The principal responsibility for managing the contract resides with UNDP Engagement and Partnerships. The service provider will be required to report to UNDP Inclusive economic transformation Unit/ Accelerator lab. For the chosen IC, following the evaluation the contract will be awarded for a cumulative amount which is the total of the quoted financial proposal and the amount. The accelerator lab will work closely with the consultant on a day-to-day basis to ensure deliverables are achieved in accordance with the TOR. The expected duration of the assignment is 66 working days from the time of entering into the contract and formally a biweekly progress reporting is required. Please note that it is critical to adhere to the timeline as this is a critical priority for the partners in accordance with project timelines. The IC might be required to remain flexible to work either from office or home based. The IC shall have the necessary machines (laptop/desktop) and associated gadgets to perform the assigned task

#### **V. LOGISTICS AND ADMINISTRATIVE SUPPORT TO PROSPECT IC**

Any required logistical supports pertaining to the GID and the data collection app confirmed by the accelerator lab, will be deployed. All the emerging necessary logistical supports shall be identified at the very early stage of the project (to be completed and communicated in 10 days since the start of the contract).

## VI. DURATION OF THE WORK<sup>1</sup>

- The work is planned to be completed in 66 working days (refer the work schedule below) and the expected major outputs and deliverables section
- Reporting will be carried out upon requests from the accelerator lab

		2021													
		Jul			Aug				Sep				Oct		
Activity	Week of	11.	18.	25.	01.	08.	15.	22.	29.	05.	12.	19.	26.	03.	10.
Inception report (software and system requirement definitions)		█													
GID and data collection app designing				█											
Beta version of GID and the data collection app						█									
Server setup and configuration										█					
UAT GID and the data collection app v 1.0 release											█				
Documentation and training														█	

## VII. QUALIFICATIONS OF THE SUCCESSFUL INDIVIDUAL CONTRACTOR (IC)

### a. Education:

- MSc Degree in Software Engineering, Computer Science, Information Science or related field
- Project Management and DevOps certifications are an advantage

### b. Experience:

- 8 years of relevant experience. Excellent knowledge in software development, online database development with HCD (Human Center Designing) principles, data modelling techniques and demonstrated attention to user-friendliness and user experience. Strong experience in responsive web-design and web application development with cross-browser and cross-platform compatibility approach. Good Knowledge of at least one of the following programming languages: SQL, PL/SQL, PHP, ASP.NET, JavaScript or Java. Demonstrated experience of user-friendly data collection apps development. Strong knowledge of relational database systems and server management with good understanding of networking. Experience in delivering hands-on training with good command of training delivery skills. Previous experience in government private sector and international

<sup>1</sup> The IC modality is expected to be used only for short-term consultancy engagements. If the duration of the IC for the same TOR exceeds twelve (12) months, the duration must be justified and be subjected to the approval of the Director of the Regional Bureau, or a different contract modality must be considered. This policy applies regardless of the delegated procurement authority of the Head of the Business Unit.

organizations is highly desirable. Experience in the usage of computers and office software packages. Similar international projects engagement is a value adding one.

- Experience in undertaking similar tasks (experience in similar projects in Ethiopia will be a significant advantage).
- Experience in working with indigenous people, familiarity with the key issues is an advantage

**c. Language:**

- Excellent spoken and written communication skills in English and Amharic and other local languages, if any

**d. Functional Competencies:**

- Well-structured, critical thinker with exceptional ability to communicate clearly and effectively on complex data and ICT systems.
- considerable experience on data collection app development and online database designing coupled with HCD (Human Center Designing).
- Excellent project management, analytical, and technical document and report writing skills.
- Experience working with innovation hubs
- Able to work within time constraints
- Proficient in software development tools
- Proficient in agile software development methodology
- Knowledge of Cloud Database Management System
- Knowledge of Opensource Content Management Systems
- Good knowledge of Cyber Security
- Knowledge of DevOps principles is an advantage
- Strong interpersonal skills and team spirit
- Solid organizational skills including attention to detail and multitasking skills
- A good working relationship with UNDP as well as with the relevant government agencies such as the TechIn (Technology and innovation institute).
- Have a broad network in government, and private sector in Ethiopia (preferably in grassroots innovation)
- Have references /links on similar areas of ICT based field research could be included to this application

**e. Core Competencies:**

- Demonstrates integrity by modelling the UN's values and ethical standards
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability
- Treats all people fairly without favouritism;
- Fulfils all obligations to gender sensitivity and zero tolerance for sexual harassment.

**Important Note:**

The Consultant is required to have the abovementioned professional and technical qualifications. **Only the applicants who hold these qualifications** will be shortlisted and contacted.

**VIII. CRITERIA FOR SELECTING THE BEST OFFER**

Upon the advertisement of the Procurement Notice, qualified Individual Consultant is expected to submit both the Technical and Financial Proposals. Accordingly, Individual Consultants will be evaluated based on Cumulative Analysis as per the following scenario:

- Responsive/compliant/acceptable, and
- Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation. In this regard, the respective weight of the proposals are:
  - a. Technical Criteria weight is **70%**
  - b. Financial Criteria weight is **30%**

Details of technical evaluation criteria are below.

S/N	Criteria	Score Weight
<b>1</b>	<b>The IC qualifications, experiences and competencies</b>	
<b>1.2</b>	International experience	3
<b>1.3</b>	Training experience (academic and short-term trainings qualifications)	10
<b>1.4</b>	Professional experience in the area of specialization	30
<b>1.5</b>	Demonstrated competencies (project management, agility, flexibility, self-starting, well-structured written and communication skills, socio-cultural sensitivity, etc.)	8
<b>1.6</b>	Knowledge of region	4
<b>1.7</b>	Language qualification	3
<b>1.8</b>	<b>Competency-based Interview</b> to evaluate individual competencies in terms of language proficiency; analytical and comprehension skills; confidence; problem solving skills; teamwork ability, managerial ability	10
	<b>Sub total</b>	<b>68</b>
<b>2</b>	<b>Proposed Methodology, Approach and Implementation Plan</b>	
<b>2.1</b>	To what degree does the Proposer understand the task?	8
<b>2.2</b>	Have the important aspects of the task been addressed in sufficient detail?	8
<b>2.3</b>	Does the proposal attempt to rely on a preliminary survey/desk review, therefore, to support it with evidences and state of the art is reflected	8



<b>2.4</b>	Is the scope of task well defined and does it correspond to the TOR?	8
	<b>Sub total</b>	<b>32</b>
	<b>Total</b>	<b>100</b>
<b>Financial (Lower Offer/Offer*100)</b>		
<b>Total Score = Technical Score * 70% + Financial Score * 30%</b>		

## IX. PAYMENT MILESTONES AND AUTHORITY

The IC payment will be agreed up on a lump sum modality, which will stay fixed throughout the contract, while field travels, whenever organized by the UNDP accelerator lab will be covered by the organization as per the standard DSA. Therefore, the lumpsum offer will have to consider only for the national consultant's expertise cost to deliver the intended work. And payments shall be disposed as per the below schedule. Prospective Service Provider will indicate the cost of services for each deliverable in US dollars when applying for this consultancy. The prospect IC will be paid based on the effective UN exchange rate (in case of other currency denomination), and only after approving authority confirms the successful completion of each deliverable as stipulated hereunder. In accordance with UNDP rules, the lump sum contract amount to be offered should consider the professional fee inclusive of travel, living allowances, communications, taxes, out of pocket expenses, and other ancillary costs. The national consultant shall then be paid the lump sum contract amount upon certification of the completed tasks satisfactorily, as per the following payment schedule:

<b>Instalment of Payment/ Period</b>	<b>Deliverables or Documents to be Delivered</b>	<b>Approval should be obtained from:</b>	<b>Percentage of Payment</b>
1 <sup>st</sup> payment	Completion of defining the technical needs, and specifications and submission of mock-up design submission for approval	Team leader IGSD	30 %
2 <sup>nd</sup> payment	GID and the data collection app layout/user interface is developed with the required network related configurations	Team leader IGSD	30 %
3 <sup>rd</sup> payment	Key functionalities are completed with quality assurance tests (database structure is completed, and the portal is	Team leader IGSD	35 %

Instalment of Payment/ Period	Deliverables or Documents to be Delivered	Approval should be obtained from:	Percentage of Payment
	accessible and operable through tablets and PCs. Data collection app fully functional upon installations either from the play store/Appstore. The end user training manual is developed, and sample users are trained.		
4 <sup>th</sup> payment	SLA Signed, 1-year warranty period completed based on the SLA.	Team leader IGSD	5%

## **X. RECOMMENDED PRESENTATION OF TECHNICAL PROPOSAL**

The IC CV should include brief motivational statement describes how the IP is fit to proposed service, an academic qualifications and trainings, quantified professional experiences, supplementary skills, and three relevant references pertaining to the assignment. Proposals whose contents are uniformly presented and to facilitate their comparative review, an IC is advised to use a proposed table of contents are preferred. Hence, your Technical Proposal document must have at least the preferred content as outlined in the respective RFP Proposal Submission Form.

The technical proposal must cover at least the following contents.

- Consultant’s projects’ profile (most relevant experiences)
- Reflections/ Suggestions on the Terms of Reference
- Description of Approach and Methodology
- Envisaged demos of products (how the data collection app and the GID are organized and connected) are a value-added advantage
- Work Plan

In the proposal, financial offers shall be indicated as a lumpsum with high level of work breakdowns corresponding to the proposed outputs of the work.

## **XI. CONFIDENTIALITY AND PROPRIETARY INTERESTS**

The consultants shall not either during the term or after termination of the assignment, disclose any proprietary or confidential information related to the consultancy without prior written consent from the

UNDP. Proprietary interests on all materials and documents (the data collection app and the GID, and detailed development guideline and training materials) prepared by the consultants under the assignment shall become and remain properties of UNDP. This assignment will be administrated by the United Nations Development Programme (UNDP), and all relevant UNDP rules, policies and procedures will apply.

After completion of the contract, the consultant will provide warranty period for any technical, usage and development related issue associated with the GID and the data collection app based on Service Level Agreement (SLA) signed between the host and the IC after the release of the GID V1.0 for 1 year within the following maximum response time from reporting the issue. S/he will provide the support remotely, onsite or by telephone, as appropriate.

- 4 hours for technical related issues
- 6 hours for usage related issues
- 3-5 days for modification of features (development related issue).

This task is bounded by the agreed specification of the GID and the data collection app in the ToR and the final documented agreement of the inception phase.

**This TOR is approved by:**

**Name:** *Gizachew Sisay*

**Designation:** ETU team leader

**Signature:** \_\_\_\_\_

**Date Signed:**