# Terms of Reference for HARIT Ticker handover to UDD, SMM

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

## 1. Background

The project – Soil Protection and Rehabilitation for Food Security in India (ProSoil) is part of the Global initiative 'Special Initiative – One World No Hunger (SEWOH) by Federal Ministry of Economic Cooperation, Government of Germany (BMZ) and implemented by GIZ. ProSoil India, in strategic partnership with National Bank for Agriculture and Rural Development (NABARD); is implemented in the states of Madhya Pradesh and Maharashtra in collaboration with NGO partners. The objective of the project is to improve soil quality and promote sustainable agriculture practices. One of the key interventions under the project is to close the urban-rural nutrient cycle and provide alternative to chemical fertilizers by encouraging use of organic manures like compost, PROM and TP produced from urban organic waste streams.

Under the Swachh Bharat Mission (SBM), various efforts and initiatives are being made. One of the component under the SBM is 'Municipal Solid Waste Management (MSWM) refers to a systematic process that comprises of waste segregation and storage at source, primary collection, secondary storage, transportation, secondary segregation, resource recovery, processing, treatment, and final disposal of solid waste. The Swachh Maharashtra Mission (SMM) also has initiated HARIT, an initiative to certify and market the products made from urban solid waste. GIZ has been supporting the Swachh Maharashtra Mission (SMM) in planning, scientific processing of waste and also developing and testing products like phosphate rich organic manure (PROM) and/or Terra Preta (TP) from urban organic waste. GIZ also commissioned a 'Waste to Energy Plant' in Nashik. The ProSoil project, furthers the efforts by promoting use of the products from urban solid waste as organic inputs in agriculture.

## 2. Introduction

As part of the ongoing development program "Soil protection and rehabilitation for food security in India" conducted with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in India, various measures that aim to enhance agriculture and soil situation in Maharashtra are ongoing. To support this development program, complementary research activities are envisioned, with the aim to support local farmers in enhancing their agriculture practices with focus on improving soil health, to enhance fertilizer management and to apply more sustainable practices that allow to switch to soil amelioration instead of nutrient mining. To support the set targets, an increase in application of natural and organic fertilizer is envisioned. Various research has suggested that natural and organic fertilizers not only retain the fertility of soil for longer periods and reduces soil erosion; it also reduces the cost of production. However, the available organic matter (crop residue / cow dung etc.) locally is not enough to meet the nutrient requirements in the soil. The initiatives by the government towards better management of city waste, provides an opportunity to recover the organic input materials from municipal waste streams, thus closing the rural-urban nutrient cycle. This would likewise also address sanitation and waste management issues and decrease environmental and climate impacts due to uncontrolled waste disposal.

Various Urban Local Bodies (ULBs) have been directed by the Government to take initiatives around converting the urban waste into products that can be ploughed back to enhance soil fertility. GIZ – ProSoil project intends to develop business incentives for the ULBs to provide such organic compost for agricultural use. To compensate these efforts, GIZ proposed to develop Supply Chain Management system with latest IT technologies on blockchain to maintain supply of compost produced by ULBs with FPOs and Farmers in more sustainable way

## 3. Objective

The objective of this consultancy assignment is to engage services of consulting company to support in capacity development and handholding of HARIT Ticker Blockchain application to Urban Development Department, Swachh Maharashtra Mission (UDD, SMM), Government of Maharashtra appointed staff.

### 3.1. Description of Assignment:

The consultant will be responsible for following tasks:

- Technical Capacity Building
- Technical person at UDD, SMM having knowledge and experience of Blockchain technology will be trained by Consulting organisation to understand all back end database and codes to be enough capable to debug and resolve any issue occured at any point of time
- Technical person at UDD, SMM having knowledge and experience of Blockchain technology will be trained by Consulting organisation to migrate, transfer, reinstall and host application at another facility or organisation's server.
- Technical person at UDD, SMM having knowledge and experience of Blockchain technology will be trained by Consulting organisation to maintain the application both web and mobile version to ensure 24x7 availability of application.
- In case of replacement or change in person at UDD, SMM, new person will be trained in same manner by consulting organisation
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- Functional Capacity Building
- Functional expert at UDD, SMM having knowledge and experience of Blockchain technology will be trained by Consulting organisation, who will be capable to understand all features and functions of the system in Mobile and Web version
- The expert will be able to demonstrate the application through online demonstration or presentation
- The expert will be able to develop learning tools for users to understand the application and operate it including farmers
- The expert will be able to implement operational features of the applications with users at various levels such as ULB, FPO, NGO, Management etc
- The expert will be able to create Master trainer for scale out purpose
- In case of replacement or change in person at UDD, SMM, new person will be trained in same manner by consulting organisation
- Handholding
- Consulting organisation will provide complete support for handholding the system to UDD, SMM.
- Local Support
- Consulting organisation will provide local support as and when required for above requirements

## 4. Expected Output

- HARIT Application is being implemented in all ULBs working under UDD, SMM

- HARIT certified ULBs identified by UDD, SMM are registered on HARIT Ticker and using the application for all activities
- Enough capacity is developed to operate and run application across the state
  - Technical Expert at UDD confirms through report on successfull support, handover and Capacity development
- Enough capactiy is developed at UDD, SMM to independently maintain, run and operate the application
  - Functional Expert at UDD confirms through report on successfull support, handover and Capacity development.
- Technical and Function documentation is handed over to UDD,SMM
- Development of visibility material or training content for implementation and technical management
- SMM, UDD certifies to run application independently and support is no longer required.

**5. GIZ shall hire the contractor from 1st Sep 2019 until 31st Aug 2020.**

**6. Eligibility Criteria for Firms**

The bidder must fulfil the following conditions against documentary evidence:

- Legal Status of the Firm
- Declaration of consortia if proposed
- Average annual turnover of last 3 years, minimum 60,000 Euros
- Minimum 25 number of employees on payroll
- Commision value of refernce projects, not less than 25,000 Euros
- 1 reference project in field of Supply chain on Blockchain or open source technology
- 2 reference projects of Knowledge management, CRM, B2B, or B2C

**6.1. Project reference for technical experience**

The bidder must detail out following experiences with or without evidence (value not required)

- Supplychain system developed or partnered
- Involved in Blockchain technology for development or experience
- Training and capacity Development with training materials developed
- Open Source technology applications or Knowledge Management Systems
- Organisation should attended minimum 1 hackathon like contest and proved eligibility in real time for technical knowledge.
- Experience in Government or Development sector in State of Maharashtra

**7. Expert requirement**

**6.1. Project manager (code 2.1)**

Engineering degree in Computer Sciences / IT Project Management experience of at least 8 years / experience in open source software development.

Overall IT experience minimum 8 years

Relevant IT Experience minimum 5 years

Leadership Management experience minimum 4 years

Excellent English language skills

Relevant regional experience

Development cooperation experience prefered

**6.2. Web Application Developer (code 2.2)**

Engineering degree in Computer Sciences / experience in web application development for Knowledge Management Systems of at least 3-4 years / experience in open source software development. Overall IT experience minimum 5 years
Relevant IT Experience minimum 3 years
Excellent English language skills
Relevant regional experience
Development cooperation experience prefered

**6.3. Mobile Application Developers (code 2.3)**

Engineering degree in Computer Sciences / experience in mobile application development for Knowledge Management Systems of at least 3-4 years / Android app toolkit.
IT experience minimum 5 years
Relevant IT Experience minimum 3 years
Excellent English language skills
Relevant regional experience
Development cooperation experience prefered

**6.4. Technical Trainer (code 2.4)**

Engineering degree in Computer Sciences or related field. Certification in user trainings on software applications to handle/ maintain software applications at technical level. Experience of at least 5 years.
IT experience minimum 5 years
Relevant IT Experience minimum 3 years
Excellent English language skills
Relevant regional experience
Development cooperation experience prefered

**6.5. Functional Trainer (code 2.5)**

Engineering degree in Computer Sciences or related field. Certification in user trainings on software applications to use/run software applications at functional level. Experience of at least 5 years. Excellent English language skills
IT experience minimum 5 years
Relevant IT Experience minimum 3 years
Excellent English language skills
Relevant regional experience
Development cooperation experience prefered

**6.6. Communication and Training expert (code 2.6)**

Experience in conceptualising and delivering trainings to adults / Knowledge of training methods and concepts / experience in IT training
Experience in developing reports and manuals. Experience of working for IT applications.

Communication and Training expert can be one person, or two persons based on qualification and experience, Vendor may decide as per their budget.

*NOTE: CV should not exceed more than 3 pages and CVs should clearly mention requirement as above required*

| Sl. No. | Code | Expert | Days required |
|---|---|---|---|
| 1 | 2.1 | Project manager | 40 |
| 2 | 2.2 | Web Application Developer | 40 |
| 3 | 2.3 | Mobile Application Developer | 40 |
| 4 | 2.4 | Technical Trainer | 70 |
| 5 | 2.5 | Functional Trainer | 70 |
| 6 | 2.6 | Communication and Training expert | 105 |

## 8. Documents required

Organisation/Vendor should furnish registration, Tax details including details of directors and partners

Propsoal need to be submitted in Technical and Financial formats as below, where technical requirments should be detailed out in the proposal as per below sections.

A. Technical
   a. Strategy
      i. Interpretation of Objectives
      ii. Strategy to deliver the services
   b. Cooperation
      i. Vendor need to explain cooperation strategy between relevant actors in the project involved
      ii. Strategy to establish cooperation
   c. Steering structure
      i. Approach and procedures for steering the measures with the project partners
      ii. Description on monitoring results and strategy for challenges
   d. Processes
      i. Implentation plan
      ii. Work steps
      iii. Milestones
      iv. Schedules
   e. Learning and Innovation
      i. Contribution for Knowledge Management
      ii. Strategy to promote scaling-up effects
   f. Project Management
      i. Details of approach and procedure for coordination with GIZ in the project
      ii. Expert assigment details for or above required expert months

iii. Expert's plan of activities (Who, when, what)
iv. Backstopping strategy including CVs of all experts.

g. Any additional details Vendor like to mention

B. Financial (in GIZ format provided)

## 9. Specification of inputs

*(please complete in full)*

| **Fee days** | **Number of days** **up to** | **Comments** |
|---|---|---|
| • Preparation/debriefing | 30 | |
| • Implementation | 310 | |
| • Travel days | 25 | Travel for training, handholding and presentation |
| **Travel expenses** | **Number of days/nights** **up to** | **Comments** |
| • Per diem | | As per location |
| • Accommodation allowance | | As per location/actuals |
| **Other travel expenses** | | **Comments** |
| • Number of domestic trips | 6 | Flights/Train/Taxi |
| • Number of trips abroad | | NA |
| • Ancillary travel expenses (e.g. visa, airport transfers) | | NA |
| **Flights** | **Number of flights** **up to** | **Comments** |
| • International flights | | NA |
| • Domestic flights | 12 | Return from Delhi To Mumbai or any required location as per UDD, SMM within in Maharashtra |
| **Other costs** | | **Comments** |
| Equipment hiring for testing application and training | | Projector/Tablets/Laptops |
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