

Request for Proposal (RFP)

for the Selection of a Technology Partner

for Implementation of “Rural & Urban Landscape Free of Dry & Plastic Waste”

1. Project Background

The consumption of plastic in India is increasing by a compounded annual growth rate (CAGR) of 10% every year. It is estimated that shortly by 2022, India’s production from virgin plastics would reach a figure of 20.0 million metric tons (MMT) while plastics consumption presently in 2020 is nearly 11.0 MMT. This prioritizes the importance of circular economy approaches usefulness. Reuse, Reduce, Refurbish, Repair, Recycling, and Recovery of the plastics waste (resource/product) in the overall economy of plastics.

The per capita consumption of plastic in India is 11 kgs per person, which is much below the world average per capita consumption of 28 kgs per person. (Figures 2015). HDFC Bank and Centre for Environment Education (CEE) partnered to address the circular economy approaches for dry & plastic waste to be seen as a resource or a product than waste.

The proposed project will focus in meeting the following thresholds:

1. **Minimize negative impacts and risks** to the environment and to human health in the pilot areas in both rural and urban and promoting a **zero-waste approach** - zero landfills, zero littering, zero plastic burning, zero emissions, and zero wastages in plastic waste management in rural and urban spaces in India,
2. **Enhancing a more participatory, integrated sustainable plastic waste management practices**, through a socio-technical model - collection, segregation, transportation, processing/manufacturing and recycling/End of life/Co-processing, its institutionalization with respective national and state governance mechanisms.
3. **Ensuring compliance with regulations to have efficient use of material resources and improved socio-economic conditions of waste pickers and informal sector.** The project focus is to have systems and processes in place to have an inclusive growth for the informal sector. Bring the informal recyclers into the formal organised and structured sector. This will help better in the recycling industry and in line with the plastic waste management Rules, 2016, 2018 and the Swachh Bharat Mission (Rural) I and II in India.
4. **Multi stakeholders approach as an integrated model to address better dry and plastic management with support from HDFC BANK and convergence cost** (both in-cash and in-kind) from the state and central government funds, NGOs/Companies contributions as waste management agencies (WMAs), by establishing an Swachh Sustainable Business Models (SSBMs) for improved plastic waste management, piloted and implemented in 10+ cities and 140 villages in a state by establishing – dry waste material recovery and recycling facilities as Swachh Centres (SCs), in line with the emerging MOEFCC GOI “National Resource Efficiency Policy” and the “National Materials Recycling Policy”.
5. **Better Institutionalization in the project both for the informal sector and waste pickers** working in the Swachh Centres (SCs), and in the DRDAs in the rural areas for a more sustainable solution.

2. Objective of the Assignment

The selected Technology partner (TP) is expected to:

1. Development and implementation of a cloud-based technology platform for tracking and monitoring of project operations in the identified cities.

2. Prepare and update an online dashboard for sharing the status of collected and recycled dry waste at Swachh Centers.
3. Ensure a proper understanding of the developed technology platforms by the Service Providers and other stakeholders of the project.
4. Maintain the security and updation of data as per the requirement of the project
5. Facilitate the implementation and supervision of the activities as required.
6. Update/Modify the application as and when required.

3. Scope of Work for SP:

The selected Technology Provider (TP) is expected to do the following activities to support the end-to-end digitization of project operations:

1. Assessment and Planning

- a. Conduct an initial assessment of current MRF/MRC's operations to identify areas for digitization and process improvement. To experience and learn about all operations done by the coordinator, monitoring & reporting person, account person, and muqaddam are managing & monitoring Urban and Rural centres.
- b. Observe how waste collectors, sorters, safai-mitra & aggregators/recyclers manage each operation on the ground, noting down the customizations needed for each centre. Consider their geographic locations, using a centralized and decentralized approach under the guidance of the CEE team.
- c. **Major activities for end-to-end digitisation of all MRF operations: -**

I. **Transportation monitoring & live tracking of waste collection system**

- i. Provides real-time navigation, with warning system to supervisor for ensuring drivers/collectors reach their destinations efficiently and providing multiple languages support.
- ii. GPS enabled IoT device integration to all waste collection vehicles
- iii. QR-code generations for each waste collection point.
- iv. Route with all collection point planning & scheduling according to day/week/monthly basis.
- v. Helps waste collection vehicles to plan the most efficient routes, saving time and fuel costs.
- vi. Geo-tagged Images from each collection point & enables visual documentation of waste collection with on-ground waste report.
- vii. On-site waste quality rating, ensuring effective segregation practices with record-keeping.
- viii. Tracking driver activities, ensuring compliance with routes, working hours & fuel consumptions.
- ix. Provides environmental accountability by tracking greenhouse gas emissions of transportation.

II. **Workforce management and Inward-Outward materials with app-based inventory management system to maintain REGISTER**

- i. Workforce Management at MRF with unique ID generation system using QR-codes for safai-mitras and the Service provider's employees with their comprehensive profile, attendance module for accurate wage allocation.
- ii. Detailed records maintained for additional expenses, salaries, loans, medical check-ups, PPE kit benefits, etc. to ensures transparency and accountability in operations.
- iii. Formal-informal dealers' management with maintain detailed records of all recyclers, aggregators, and kabadiwalas onboarded with their transactions.

- iv. Inward Material Audit- Records transactions with proof, names of contributors, and transportation details. Generate invoices with includes photos of waste quantities, and receipts with real-time stock updates.
- v. Outward Material Record Management- Documents sales and dispatch transactions, including customer details, vehicle info and generates PDF invoices with alerts for overloading stock, and stores transaction proofs for transparency.
- vi. Daily Expenditure Register- Documents all expenditure details with bill numbers, dates, descriptions, amounts, and photo proofs, requiring digital signatures from the Accounts in-charge and MRF centre in-charge.
- vii. Visitor Data Management- Stores visitor data, including photos and signatures, facilitating feedback collection for continuous improvement and accountability.

III. Dashboard for maintaining record of all major activities & primary infrastructure

- i. The software solution provides a centralized dashboard system that allows the admin to maintain and record all major primary activities through an admin profile accessible from a laptop or PC.
- ii. Infrastructure & Fixed Asset Details- This module captures detailed information about land, infrastructure, and fixed asset, including procurement details, location of installation, capacity, machine commissioning date, warranty periods, contact details for repair, and insurance information.
- iii. Machine Maintenance Details- This module records operational and breakdown issues of installed machines. It includes machine details, date and time of breakdown, issue specifics, repairs undertaken, and the cost of repairs.
- iv. Accident or Fire Incident at the Facility- This module maintains on-site records of any accidents or fire incidents at the MRF facility, ensuring thorough documentation and response tracking.

IV. Track record of every day operation & process at MRF

- i. Daily Operations and Process Tracking- Records detailed information on operational hours and efficiency of key processes, enabling assessment of workforce and machinery performance for accurate output measurement.
- ii. Reporting and Analytics- Provides data-driven decision-making and environmental impact measurement as per GHG protocol.

2. Training and Capacity Building

- Provide comprehensive training sessions to the drivers, supervisors and monitoring CEE staffs on the usage and maintenance of the new digital system. Develop training materials with sops, manuals, and guidelines for easy reference.

3. Testing and Quality Assurance

- Conduct rigorous testing of the software system to ensure functionality, reliability, and security. Address any bugs, glitches, or performance issues identified during testing.

4. Implementation and Deployment

- Coordinate with CEE team to plan and execute the implementation of the new digital system. Ensure a smooth transition from the existing manual processes to the new digital system.

5. Data Security and Ownership

- Ensure the highest standards of data security and ownership throughout the digitization process.
- Following data security protocols with AWS cloud service to protect sensitive information collected during the assessment and digitization process, ensuring data integrity and

confidentiality. When using the software, the data needs to be securely backed up for up to five years as long as the subscription plan remains active; if the project decides to cancel the subscription, the TP need to be notified to export the data within three months. Clearly define data ownership rights and responsibilities in the project plan, ensuring that CEE retains ownership of all data collected during the project.

- Regularly review and update data security measures to address any emerging threats or vulnerabilities. Establish procedures for data backup and recovery to minimize the risk of data loss.
- Include clauses related to data security and ownership in the project contract, demonstrating the technology partner’s commitment to compliance with legal and regulatory requirements while prioritizing data security and integrity.

6. Documentation and Reporting

- Document all aspects of the digitization process, including user manuals, and training materials.
- Provide regular progress reports to CEE management, highlighting achievements, challenges, and recommendations.

7. Devices and system requirements for comprehensive digitization

Sl. No.	Name of item	Details of items	No. of Gadget/MRF
1	Mobile for supervisor & driver*	1) Redmi 13C** 2) One-year SIM recharge 3) Mobile waterproof cover	As per nos.
2	GPS for vehicle	1) Ajjas GO-GPS Tracker 2) Recharge for one year	As per nos. of vehicle.
3	ID-card for all members	Colour-print with lamination	As per members
4	QR-code for all waste collection points	QR code printed on the stainless steel (SS) plate- size 8x8 inches	As per collection points

* The number can vary per city.

** Phone is to be provided with the restriction of no outgoing calls and no other apps can be used.

4. Proposal by TP:

The selected TP will undertake tasks as listed. It is envisaged that the TP will ensure end-to-end digitization of all centers’ operations. Given the dynamic situation and requirements, new activities can also be included in the contract. But the Budget lines and the total budget remain the same.

The list below is for first year activities, some activities however, will be on-going during future year, along with new activities added in the subsequent year. Every year budget lines will be agreed for the activities and a year plan will be approved under a new contract for the year following the due diligence processes.

Proposal to be submitted by TP:

The bidder will submit a proposal in the format as attached.

The proposal must demonstrate how the proposed methodology meets the scope of work, while ensuring appropriateness of the approach to the local conditions and the detailed project activities.

This methodology must be laid out with the required details of activities to be done defined in qualitative, quantitative and in time frame.

The proposal must define and state how the project will be able to deliver the requirements in the ToRs. The strategy/methodology and also the monitoring mechanisms. Other innovative methods for better awareness and check littering will be welcomed.

The proposal must contain the required details and document as detailed in the eligibility & evaluation criteria to specific points.

The Proposal must be sent through email to purchase@ceeindia.org With the subject line clearly mentioning the as below:

Subject line: Proposal_Technology Provider_____ City name: **Ranchi Rural**
The proposal may be restricted to 10 pages. Annexures can be extra.

5. Eligibility & Evaluation Process:

MSMEs and start-ups are encouraged to apply.

Evaluation of proposals will be based on Quality-based competitive bidding Selection methodology - that means the selection will be based on the best quality proposal, experience in management and operations of end-to-end digitization experience of MRFs, in particular, will be given preference and the lowest quoted budget (Lowest bid party (including GST) will get the highest mark) as per the below-given marking system.

Amongst technically responsive and qualified organisations, the top-scoring organisation will be selected for the award of the contract to work as a Technology provider in the city.

Sl. No.	Evaluation Criteria	Maximum Points
1	Applicants must have experience in at least one digitizing Material Recovery Facility (MRF) and waste management operations, including fleet monitoring, route scheduling for pick-ups, and managing collection points. Bidders should demonstrate the successful operation of their platform and provide supporting links or information. * (One MRF operations experience will get 15 marks and every additional MRF/institute will get 5 marks up to a maximum total of 30 marks)	30
2	The proposed software solution must offer batch-wise traceability with an inward-outward audit process to ensure transparency. It should also be capable of generating reports for profitability analysis, pricing insights, and material inventory management. (Capacity of audit reports, the analysis will get 10 marks and every additional feature will get 01 mark up to a maximum total of 15 marks)	15
3	The system must support a local language application, integrate with GPS devices, and offer a centralized dashboard for end-to-end monitoring of multiple MRFs. (Local language and effective dashboard will get 10 marks and every additional feature will get 01 mark up to a maximum total of 15 marks)	15
Total		60
4	Presentation on the processing, management and operations	20
Total		80
5	Budget quotation (L1) Lowest bid party (including GST) will get the highest mark.	20
Grand Total		100

*Contractual letters, agreements, and other documents need to be supported with the bids.

6. Duration of Assignment, Deliverables, Payment terms

The contract duration will be for up to 31 March 2025 initially, extension depending upon availability of budget and satisfactory performance of the selected TP.

Payment Terms:

Cost Breakdown instalment wise (including of GST)*:

Sl. No.	Deliverable	% payment of the contract amount in INR
1	Detailed work plan with estimated costs for activities from the signing of the contract in the cities.	40
2	Submission of audited Utilization Certificate (90%) from a Chartered Accountant for previous instalment and system setup of operational in the city. Work completion certificate to be given by the Technology Provider.	45
4	Final Payment after submission of audited Utilization Certificate for all expenses in year one (01) from a Chartered Accountant for all the expenditures related to year one and the satisfactory completion of activities as listed. A penalty clause will be levied in case of uncompleted activities at the end of Year 1 (contract duration). Work completion certificate to be given by the Technology Provider.	15
Total		100%

* The price to be quoted by the bidders is including of GST and cannot exceed the given maximum amount.

Penalty clause:

CEE may impose a penalty up to 5% - 8% of the contract value for moving out of project mid-way; non-completion of activities.