



Assessing the Willingness of Local Recyclers and Scrap Dealers to Collaborate with the PlastiCredit App: A Field Study

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Abstract: This study explores the readiness and willingness of local scrap dealers, recyclers, and waste collection agents to collaborate with the PlastiCredit App—an MSME-funded digital innovation designed to promote responsible plastic waste disposal through systematic collection, traceability, and incentive-based recycling. The PlastiCredit platform serves as a bridge between households, institutions, and certified recyclers by enabling transparent transactions and rewarding users with digital credits for proper segregation and disposal of plastic waste. The research was conducted through field surveys and direct stakeholder interactions, focusing on understanding both the enthusiasm and apprehensions surrounding the adoption of a digital waste management framework. The findings reveal that a majority of recyclers and scrap dealers showed positive interest or conditional openness to participating in the initiative, driven by potential access to new waste sources and improved accountability in material flow. However, several barriers were also identified, including a preference for bulk over scattered household pickups, limited understanding of the app's operational cycle, and logistical challenges such as shortage of transport or labor. Despite these constraints, the inclusion of two new pickup agents during the initial field phase demonstrated the practical feasibility and growing confidence in the system. Furthermore, three major stakeholders expressed the need for personal meetings and demonstrations before formal onboarding, indicating a cautious but progressive attitude toward digital integration.

Keywords: Plastic waste management, digital recycling platforms, circular economy, MSME innovation, stakeholder engagement

I. INTRODUCTION

Plastic waste has emerged as one of the most pressing environmental challenges in India, with rapid urbanization and industrialization contributing to rising levels of non-biodegradable waste. Despite the government's push toward extended producer responsibility (EPR) and sustainable waste management, a significant gap persists in connecting households and institutions with reliable recycling mechanisms. The **PlastiCredit App**, an MSME-funded innovation, aims to bridge this gap through a digital platform that enables households, educational institutions, offices, and industries to responsibly dispose of plastic waste. The app incentivizes proper waste segregation and collection by offering digital credits, which can later be redeemed or used within a reward ecosystem. Moreover, it establishes a direct link between waste generators and certified recyclers, ensuring traceability, transparency, and circularity in plastic management. The present field study focuses on assessing the **acceptance, challenges, and potential collaboration opportunities** among local recyclers, scrap dealers, and pickup agents—the key operational pillars of the PlastiCredit system.

II. OBJECTIVES OF THE STUDY

The **primary objective** of this field survey was to evaluate the willingness and readiness of local stakeholders in the recycling and scrap industry to engage with the PlastiCredit App.

Specific objectives included:

1. To gauge the **interest level** of recyclers and scrap dealers in adopting the app-based waste collection model.
2. To identify **barriers and concerns** affecting collaboration willingness.
3. To assess the **readiness of pickup agents** to join the digital platform.
4. To recommend **strategic actions** for increasing stakeholder participation and operational efficiency.



III. METHODOLOGY

The study employed a **qualitative field survey approach**, engaging local recyclers, scrap dealers, and pickup agents through in-person visits and informal interviews. Each participant was briefed about the PlastiCredit App's objectives, operational framework, and potential benefits. Responses were recorded to assess levels of interest, hesitation, and readiness to collaborate.

Follow-ups were scheduled with select participants who expressed conditional interest or requested additional demonstrations.

IV. OBSERVATIONS AND FINDINGS

4.1 Interest Level

A majority of recyclers and scrap dealers demonstrated **keen interest or conditional openness** toward joining the PlastiCredit platform. Their positive responses were primarily driven by the potential for:

- Increased access to household and institutional waste streams.
- Transparency in transaction tracking.
- Incentivized engagement through the credit reward system.

4.2 Key Barriers

Despite the overall interest, some recyclers expressed hesitation due to the following factors:

- **Preference for bulk material** over fragmented household-level pickups.
- **Lack of clarity** regarding the app's operational cycle, payment structure, and accountability chain.
- **Logistical constraints**, including shortage of transport facilities or manpower for decentralized collection.

4.3 Supportive Agents

Two respondents immediately agreed to collaborate and were onboarded as **Pickup Executives** on the platform. Their inclusion strengthened the app's operational network and provided on-ground validation for the system's feasibility.

4.4 Follow-ups Required

Three stakeholders, identified as potential high-volume collaborators, requested personal meetings or live demonstrations before finalizing their participation.

Table 1: Findings from Field Survey

S. No.	Name	Location	Willingness to Collaborate	Remarks
1	Harjinder Singh	Sec 13, Hiran Magri	Ready	One meeting required to understand app operation.
2	Chaman Bhai	Mallatalai	Conditional	Wants large volume of plastic; emphasized dealing with larger scrap centers.
3	Jitendra Jain (via Manya)	Mallatalai	Pending (Owner unavailable)	Assistant Manya was supportive; owner to meet after 3 days.
4	Chandra Parkash Mehta	Gandhi Nagar, Mallatalai	Interested	Wants further clarity on collection cycle & logistics.
5	Kamal Scrap (Jai Bhawani)	Gandhi Nagar, Mallatalai	Open to connect	Mainly works with hotels; sees potential benefits from app.



S. No.	Name	Location	Willingness to Collaborate	Remarks
6	Babu Shah Scrap	Mastan Baba, Mallatalai	Considering	Open to idea but undecided about immediate involvement.
7	Harish Ji	RIICO Industrial Area	Pending Meeting	Awaiting in-person meeting with team.
8	Gaurav Ji	RIICO Industrial Area	Pending Meeting	Decision after team visit.
9	Nitesh Ji	RIICO Industrial Area	Pending Meeting	Decision after meeting with the app team.
10	Manoj Raddi	RIICO Industrial Area	Not Interested	Lack of manpower and vehicle resources.
11	Madan Ji	Dabok	Added as Pickup Executive	Will support app as field collection agent.
12	Rajjak Mohd.	Dabok	Added as Pickup Executive	Assigned as part of pickup team.

V. RECOMMENDATIONS

Based on the field findings, the following recommendations are proposed to enhance adoption and operational efficiency of the PlastiCredit App:

- Conduct Demonstration Meetings:**
Arrange practical demonstrations for stakeholders seeking clarity—specifically for Harish Ji, Gaurav Ji, and Nitesh Ji—to explain the app workflow, benefits, and payment mechanisms.
- Build Partnerships with High-Volume Dealers:**
Collaborate with large-scale recyclers like Chaman Bhai by guaranteeing sufficient inflow of segregated material, thereby maintaining their business viability within the digital system.
- Offer Incentive Models for Early Adopters:**
Introduce reward schemes or additional credits for recyclers and agents who onboard early, motivating others to follow suit.
- Establish Standard Operating Procedures (SOPs):**
Develop transparent SOPs for waste collection, verification, and credit distribution to build trust and ensure accountability among all participants.

VI. CONCLUSION

The preliminary field survey for the **PlastiCredit App** reveals encouraging engagement prospects among local recyclers and scrap dealers. Although certain stakeholders remain hesitant due to operational ambiguities, the overall response indicates a high potential for collaboration through targeted communication, demonstrations, and incentive-driven models. By strengthening partnerships with local recyclers and establishing clear operational frameworks, the PlastiCredit App can emerge as a **scalable and sustainable model** for digital waste management—aligning with India's circular economy goals and promoting community-driven plastic waste reduction. Overall, the study concludes that strategic engagement, demonstration-based outreach, and transparent operational frameworks can significantly enhance participation from the informal recycling sector. With targeted incentives and partnerships, the PlastiCredit App has the potential to evolve into a scalable, community-driven solution contributing to India's circular economy and sustainable waste management goals, while transforming local recycling ecosystems into efficient, tech-enabled networks.

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