

# GreenSync: AI-Powered Waste Management Platform



**Submitted To**

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## Vision

GreenSync aims to revolutionize waste management by leveraging AI and community-driven participation for efficient waste reporting, collection, and management. Our goal is to create cleaner, more sustainable cities through an intelligent, automated waste tracking system.

## Mission

Our mission is to integrate AI-driven waste classification, incentivized recycling programs, and real-time collection management to ensure efficient, responsible waste disposal while engaging communities in eco-friendly practices.

## Objectives

- Develop an AI-powered platform for waste reporting, identification, and removal.
- Encourage user participation via a reward-based system.
- Enhance efficiency in waste collection and recycling.
- Deploy a scalable, user-friendly, and secure platform.

## Scope

GreenSync leverages AI to improve waste management by:

- Automating waste classification and sorting.
- Streamlining collection and removal.
- Incentivizing recycling to boost community engagement.
- Collaborating with waste management authorities for sustainable change.

## Key Deliverables

- AI-powered waste classification using globally recognized models.
- Full-stack web application utilizing Next.js.
- Secure authentication via Web3Auth.
- A transparent, efficient waste management platform.
- An incentive-based user engagement system.
- An interactive community leaderboard.

## Technology

- **Project Management:** Jira/Asana/Notion/Trello
- **Frontend/Backend:** Next.js
- **Database:** Drizzle ORM, Neon
- **AI Model:** Google AI model
- **Authentication:** Web3Auth

## Minimum Viable Product (MVP)

Key features of GreenSync include:

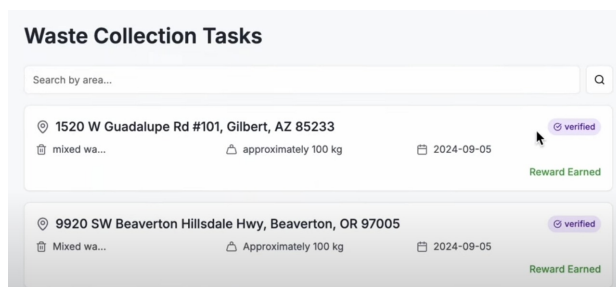


Figure 1: Waste Collection Tasks

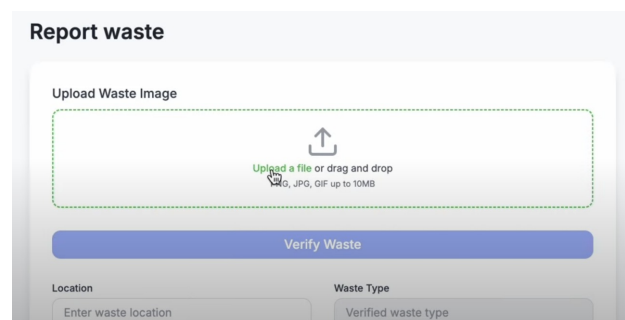


Figure 2: Report Waste Interface

## Key Features:

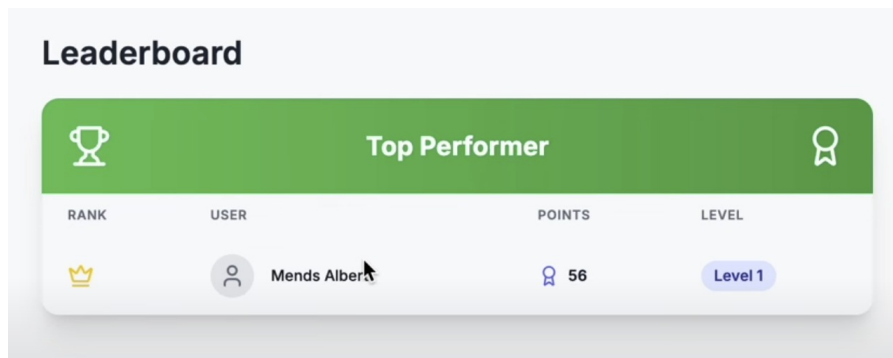


Figure 3: Leaderboard for User Engagement

- Waste Collection Tasks (Fig. 1)
- Report Waste (Fig. 2)
- Leaderboard (Fig. 3)

## Business Alignment

GreenSync is aligned with key initiatives:

- **UN SDGs:**
  - **SDG 15:** Life on Land
  - **SDG 3:** Good Health and Well-being
  - **SDG 13:** Climate Action
- **Government Initiatives:** Support for smart city and sustainability projects.
- **CSR:** Programs focused on environmental conservation.
- **Market Demand:** Rising interest in AI-driven waste management.
- **Public-Private Partnerships:** Enhancing efficiency.

## Market Potential and User Interest

Government initiatives, increased environmental awareness, and growing interest in AI-driven solutions underscore the need for a system like GreenSync.

### Survey Insights:

- 80% face waste disposal challenges.
- 90% prefer photo-based reporting (Fig. 6).
- 60% are willing to report via a web platform.
- 50% believe AI improves reporting accuracy (Fig. 4).
- 90% have not used AI-based waste management (Fig. 5).

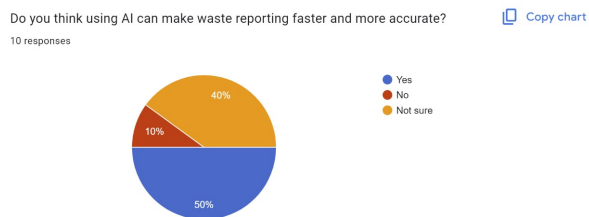


Figure 4: Perception of AI in Waste Reporting

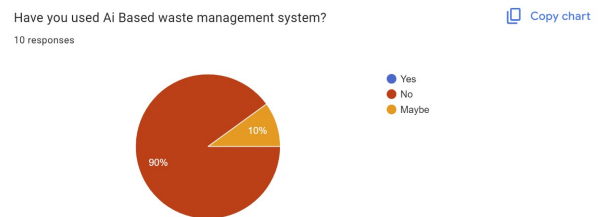


Figure 5: Usage of AI in Waste Management

### Key Impact Metrics:

- Reduces waste challenges by 35%
- Boosts reporting efficiency by 40%
- Enhances community participation by 60%
- Achieves 90% user satisfaction

## Competitive Advantages

- Real-time AI-powered waste verification.
- Gamification and reward-based engagement.

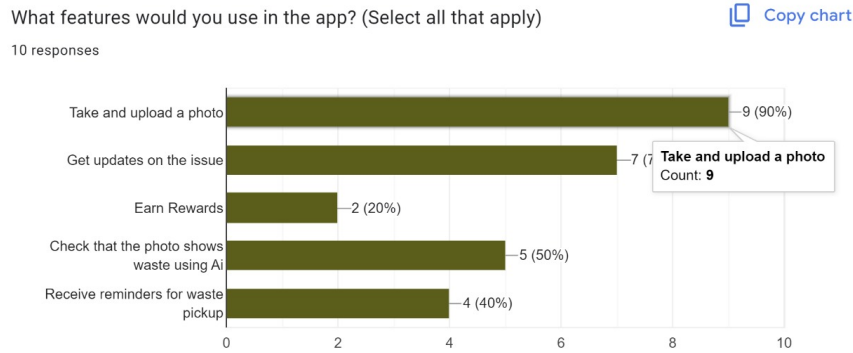


Figure 6: Preferred Features in the App

- A community-driven approach to environmental responsibility.

## Growth Strategy

- Partner with local waste management authorities.
- Launch public awareness campaigns.
- Expand to additional cities post-pilot.
- Integrate blockchain for transparent tracking.

## Conclusion

GreenSync is an AI-powered platform designed to make waste disposal smarter, more efficient, and community-driven. By combining advanced technology with sustainability initiatives, we aim to contribute to a cleaner, greener future.