***Product Requirements Document***

***Title:*** PRD for WasteFlip

***Author:*** Aishat Salami

***Status:*** Ongoing

***Start Date:*** 16th September, 2024.

***End Date*:** Unknown

***Team***:

| Samuel Akachukwu |
| --- |
| Helen |
| Ella |
| Zeenat |
| Valentina |

| Product Manager | Aishat |
| --- | --- |
| Designer | Valentina |
| Engineering Leads | Samuel (Frontend) & Zeenat (Backend) |
| Approval/Sign-Off |  |

1. ***OVERVIEW:***

WasteFlip is an all-in-one waste recycling, management, and reselling platform designed to connect individuals and businesses to waste management and recycling companies for efficient waste collection and recycling. Also, users can resell used goods to reduce unnecessary waste. The platform focuses on reducing waste, improving recycling access, and creating economic incentives.

1. ***PROBLEM STATEMENT:***

Waste management in urban cities like Lagos and Abuja among others, faces issues such as limited access to efficient services, low public awareness, and lack of incentives for proper waste disposal. Also, Individuals and businesses struggle with selling or repurposing used goods, resulting in unnecessary waste.

***2.1. OBJECTIVES:***

The platform aims to:

* ***User convenience:*** The platform aims to offer effective and reliable connection to waste management and recycling companies.
* ***Reduce Waste***: By offering reselling options, individuals and businesses can sell used items like furniture, electronics, and equipment, keeping valuable goods out of landfills.
* ***Improve Recycling Access***: WasteFlip will help users locate nearby recycling services and schedule waste pickups easily.
* ***Create Economic Incentives***: Users can earn money by reselling goods, and businesses can offload old equipment efficiently, promoting recycling while gaining financially.

1. ***FEATURES IN***

***3.1. Waste Management Scheduling:*** This feature enables users to be able to schedule one-time or recurring waste pickups.

***Goal:***

* ***User Convenience***

***Use Cases:***[***USE CASES FOR WASTEFLIP APP***](https://docs.google.com/document/u/0/d/1uKskZCVQ0Ywjbfg8DC6k6J5sMCYvYslOqSYQj7fFfB8/edit)

***Use Case 1: Request Waste Pickup***

***Actor:*** User (Individual or Business)

***Trigger:*** The user wants to request waste collection.

***Preconditions:*** The user has opened the app.

***Postconditions***: The user successfully schedules a waste pickup.

***Main Success Scenario:***

1. The user navigates to the "Request Pickup" button.

2. The user selects waste type and categorizes it (e.g., plastic, electronics, organic).

3. The user schedules a one-time or recurring pickup.

4. The system confirms the pickup request and assigns a waste management company.

5. The user receives real-time updates on pickup status.

***Use Case 2***: View Scheduled Pickups and Routes

***Actor***: User

***Trigger***: The user wants to view their scheduled waste pickups and the route the truck will take.

***Preconditions***: The user has scheduled a pickup through the app.

***Postconditions***: The user successfully views their scheduled pickup details and the route for waste collection.

***Main Success Scenario:***

1. The user opens the app and navigates to the "Scheduled Pickups" section.

2. The app displays all upcoming and previously scheduled waste pickups, including one-time and recurring pickups.

3. The system shows the route that the waste collection truck will take for the day.

4. The user reviews the pickup schedule and any special requests.

5. The system updates the schedule dynamically if changes occur, and the user is notified.

***Use Case 3: Negotiate Price for Waste Pickup or Recycling***

***Actor:*** User

***Trigger***: The user wants to negotiate the price for waste pickup or selling recyclable waste.

***Preconditions:*** The user has opened the app and selected a waste type.

***Postconditions***: The user successfully negotiates and confirms the price for pickup or sale.

***Main Success Scenario:***

1. The user selects the waste they want to dispose of or recycle.

2. The system provides a list of available waste management or recycling companies.

3. The user selects a company and enters a negotiation interface.

4. The user negotiates the price for pickup or selling the recyclable waste.

5. Both parties agree on a price, and the transaction is confirmed.

***Use Case 4***: Track Waste Pickup

**Actor**: User

***Trigger***: The user wants to track the progress of their waste collection.

***Preconditions***: The user has already requested a pickup.

***Postconditions***: The user receives real-time updates on the status of their waste collection.

***Main Success Scenario***:

1. The user navigates to the "Track Waste Journey" option.

2. The system displays the current location of the waste collection truck.

3. The user receives notifications when the waste is picked up.

4. The system updates the user on the destination of the collected waste.

5. The user can track the recycling or disposal process in real-time.

***Use Case 5***: Receive Real-Time Notifications on Pickup Progress

***Actor***: User

***Trigger***: The user wants to receive updates on the status of their waste pickup.

***Preconditions***: The user has requested a waste pickup.

***Postconditions***: The user receives real-time notifications on the pickup status.

***Main Success Scenario***:

1. After scheduling the waste pickup, the system starts tracking the pickup process.

2. The user receives notifications when the waste collection truck is en route.

3. The system sends updates on when the truck is approaching and when the waste is collected.

4. The user is notified when the waste reaches the processing facility or recycling center.

5. If any delays occur, the user is promptly informed via notifications.

3.2. ***Nearby Waste Drop-Offs:*** This enables users to check for waste drop-offs close to them using the app.

***Goal:***

* ***User Convenience***
* ***Reduce Improper Waste Disposal***

***Use Cases:***

***Use Case 6:*** Show Nearby Waste Drop-offs

***Actor:*** User

***Trigger:*** User want to see nearby waste drop-offs

***Preconditions:*** User has logged in to dashboard,

***Postconditions:*** User sees nearby waste drop-off close to his/her location.

***Main Scenario:***

***3.3. Payment Gateway:*** Users are able to make payments for services rendered through the app, which then generates a proof of payment (receipt) for them.

***Goal:***

***Use Cases:***

***Use Case 7: Payment Gateway***

1. ***FEATURES OUT***

***4.1 Recycling Center Locator:*** The platform provides information on nearby recycling drop-off locations, helping users find the right place to dispose of materials responsibly.

***4.2 Marketplace:***

-Users can post items like used furniture, electronics, and other household goods to resell or donate instead of disposing of them.

- Connect users to recycling companies based on the type of waste selected.

***Reasons***

* Time
* Technical knowledge

1. ***Product Flow/Designs***

***User Flow:*** [***https://miro.com/app/board/uXjVLcU\_w2Y=/?share\_link\_id=136829135102***](https://miro.com/app/board/uXjVLcU_w2Y=/?share_link_id=136829135102)

***Wireframes:***

***User Personas:***

1. ***Success Metrics:***

***Key Performance Indicator***

| **KPI** | **Description** | **Target Value** |
| --- | --- | --- |
| **Daily Active Users** | Number of users engaging  with the app daily | Not less than 50% of the User base. |
| **Retention Rate** | Percentage of users who  continue to use the app over  time | 75% after 3 months |
| **User Satisfaction Score** | Average rating given by users | 4.0 stars or higher within the first three months. |
| **Pick-Up Accuracy** | Percentage of pick up accuracy to be met. | Maintain a pick-up accuracy rate of 98% or higher. |
| ***Pick Up Time*** | Average percentage for estimated pickup time. | Achieve an average pick up time of 30 minutes or less. |

1. ***Assumptions/Dependencies/ Constraints***

***7.1 Assumptions:***

* Individuals and businesses often face challenges in finding convenient and reliable ways to dispose of waste responsibly, with limited access to recycling and reuse options.
* The app’s infrastructure will be capable of scaling to accommodate a large number of users, businesses, and waste management companies as the platform grows***.***

***7.2 Dependencies:***

Waste Management Companies

Google GPS

***7.3 Constraints:***

***Awareness/ Enlightenment:***

***Logistics:***

***7.4 Requirements:*** [***User Stories for WasteFlip App***](https://docs.google.com/document/u/0/d/1elRszSn7kjE8CTVQ5KzlaNpD66tC_HF6W0WLTRA-9uM/edit)

| As a……. | I want to be able to….. | So that I can………. | Priority |
| --- | --- | --- | --- |
| As a ***user (individual or business)***, | ***request a waste pickup*** | ***I can dispose of my waste responsibly and efficiently***. | High |
| As a ***curious user*** | ***view my scheduled pickups and the routes the waste truck will take*** | ***be prepared and track the process***. | Medium |
| As a ***conscious user*** | ***categorize my waste when scheduling waste pickups*** | ***for easier matching and proper disposal.*** | High |
| *As a* ***economic user*** | ***negotiate the price for waste pickups****,* | ***I can get a fair deal for waste collections and pickups****.* | Medium |
| As a ***conscious user*** | ***receive real-time notifications about my waste pickup status,*** | ***I can stay informed on when the truck will arrive and when my waste is collected.*** | Low |

***8. GTM Approach***

***8.1 Target Audience:***

***Individuals:*** People looking for easy ways to manage waste, schedule pickups, and sell used items instead of throwing them away.

***Businesses:*** Companies that need reliable waste management solutions and wish to resell old equipment or furniture rather than discarding them***.***

***Waste Management and Recycling Companies***: Service providers who will benefit from the platform by connecting with users in need of waste disposal, recycling services, and bulk pickups.

***8.2 Value Proposition:***

WasteFlip is ***Nigeria’s first integrated platform*** that simplifies waste management by connecting ***individuals, businesses, and waste companies*** to ***recycling services*** while offering a ***community marketplace*** for selling and donating used goods. With WasteFlip, users can ***schedule waste pickups***, ***recycle materials***, and ***turn waste into profit*** by reselling items all in one app.

***8.3 Revenue/Price Strategy:***

a. ***Freemium***: This is for users using the MVP version of the product as it is a way to attract them to see the value our product has to offer and continue using it.

b. ***Transaction Fees***: A small fee is charged for each transaction in the marketplace (reselling of used goods).

c. ***Subscription Services:*** Businesses may subscribe to premium features, such as detailed analytics and waste tracking for sustainability reporting.

d. ***Partnerships with Recycling and Waste Companies***: Collaborate with local waste management services for profit-sharing or referral incentives.

e. ***Eco-Friendly Advertising:*** Green companies and recycling firms can advertise on the platform, promoting eco-friendly products, services and events.

***8.4 Product Tagline/ Product Position and Messaging***

***8.5 Marketing/ Sales Strategy***

***Marketing Strategy:*** Social media, Partnerships, Sponsorship

***Sales Strategy***: Referral incentives

***8.6 Launch Plan***

Pre-Launch:

Launch:

Post-Launch:

1. ***Milestones/Roadmap***

***Roadmap***

***Minimum Viable Product***

***Phase 1***

(Individuals and businesses to waste management companies)

***Phase 2***

(Individuals and businesses to waste management and recycling companies)

**Version 1:**

(Waste Management to recycling companies)

***Version 2:***

(Introducing the Marketplace where used goods can be sold rather than disposed)

***Milestone for MVP***

| ***Action*** | ***Status*** | ***Deadline*** |
| --- | --- | --- |
| Creation of website | Ongoing | Oct 2nd, 2024 |

1. ***Technical Requirements***

*10.1* ***Platform Requirements***

* -The app will be available on the web.

*10.2* ***Performance Requirements***

* The app should load quickly, with responses to user actions happening in under 2 seconds.

*10.3* ***Security Requirements***

* Payment and pickup schedule must be encrypted.
* User data should be protected with secure authentication methods.

*10.4* ***Integration Requirements***

* Integration with calendar apps for setting reminders.
* Integration with Google GPS service app.

1. ***Open Issues***

* Integration with Waste Management Systems: Finalize the technical details and partnership agreements with waste management services.

***12. Frequently Asked Questions (FAQ)***

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

***13. Feature Timeline and Phasing***

| Feature | Status | Dates |
| --- | --- | --- |
| Real-time Pickup Tracking | Backlog | [Date] |
| Pickup Zones | Backlog | [Date] |
| PickupPayment | Backlog | ***[***Date] |
| In-app Payment | Backlog | [Date] |

***14. PRD Checklist:***

| Topic | Done/In Progress/Backlog |
| --- | --- |
| Title | In Progress |
| Author | Done |
| Decision Log | Backlog |
| Change History | Backlog |
| Overview | Done |
| Success Overview | Done |
| Messaging | Backlog |
| Timeline/Release Planning | Done |
| Personas | Done |
| User Scenarios | Done |
| User Stories/Features/Requirements | Done |
| Features In | Done |
| Features Out | Done |
| Design | In progress |
| Open Issues | Backlog |
| Q&A | Done |
| Other Considerations | Backlog |