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A Simple Waste Management App

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Problem Statement

The current waste management system in Addis Ababa, Ethiopia faces challenges due to the city's growing population, urbanization, and increasing waste generation which adversely affects the residents, businesses, and municipal authorities

GCGO: Infrastructure

WHY: Non-biodegradable waste is a major problem in urbanization, as it can take hundreds of years to decompose and can pollute waterways, contaminate soil, and release harmful toxins into the environment. It can also create unsightly eyesores and pose a health hazard to humans and animals

Affected Group

User Persona

Rahel, a resident of Addis Ababa
Description: Rahel, a mother of two, lives in an area with poor waste management

Impact

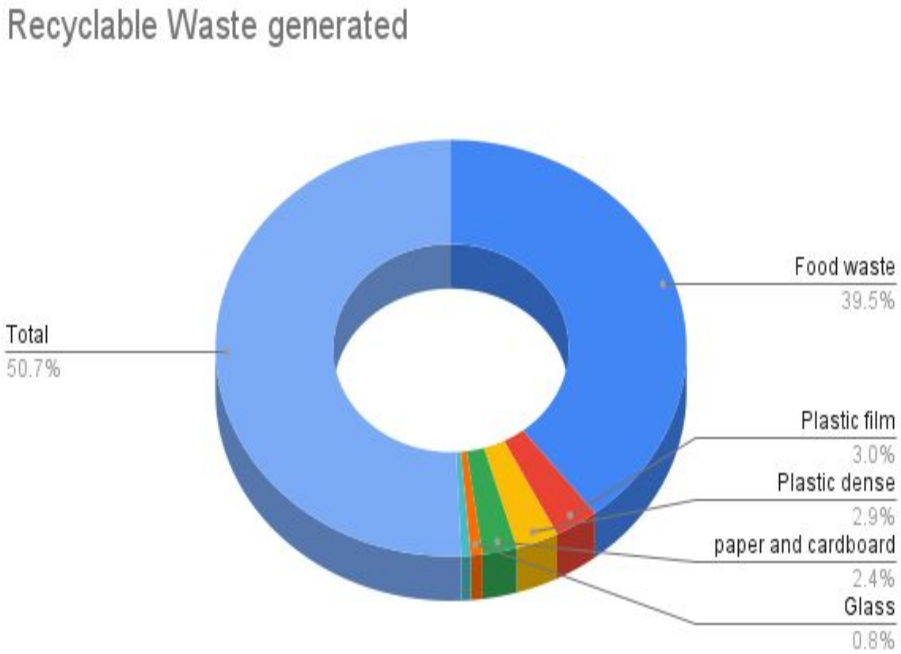
The uncollected waste leads to foul odors, attracts pests, and poses health risks to her family

Relevant Information

Only 10% of the waste generated in Addis Ababa is properly collected and disposed of

- Improper waste management leads to the contamination of water sources, causing waterborne diseases
- The lack of recycling infrastructure in Addis Ababa results in a significant amount of recyclable waste ending up in landfills

Recyclable Waste Generation



Of total recyclable waste generated, food waste takes up the largest share at 39.5%.

A close second is plastic waste at about 6% total

Recycling efforts focus on plastic waste & often ignores food waste

Solution...

- A mobile application that provides waste collection scheduling and tracking system for residents with guidance and reminders for proper waste separation and recycling
- Selected as it provides both ease of management and raises awareness while being relatively accessible to masses
- Effective as it provides a digital waste management and education solution in a “build once, deploy everywhere” manner in a growingly digitized country

Technology Usage in Ethiopia

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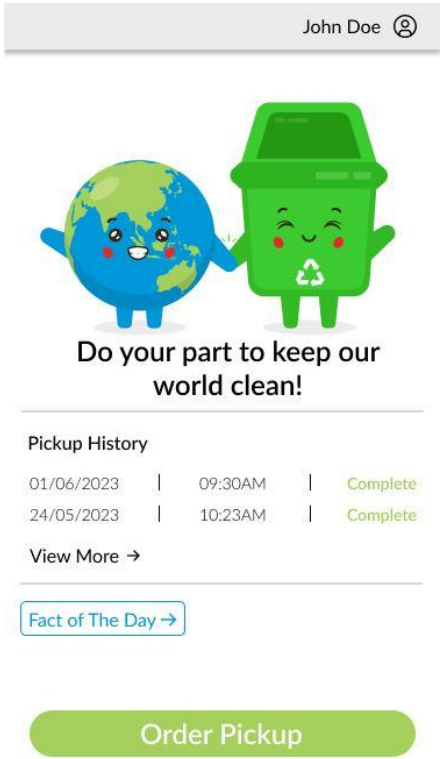
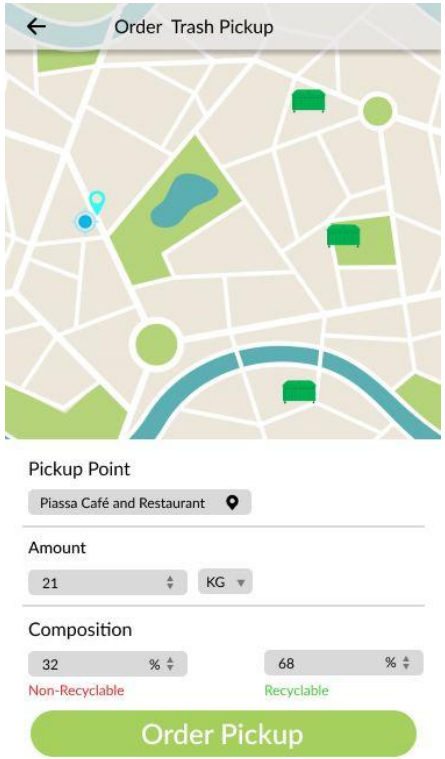

John Doe
Do your part to keep our world clean!
Pickup History
01/06/2023 | 09:30AM | Complete
24/05/2023 | 10:23AM | Complete
View More →
Fact of The Day →
Order Pickup


Order Trash Pickup
Pickup Point
Piassa Café and Restaurant
Amount
21
KG
Composition
32 %
68 %
Non-Recyclable
Recyclable
Order Pickup


Fact of The Day
Less than 20% of global waste is recycled each year and rich countries often export recyclables to poorer nations.
The US, UK, Canada, Ireland, and Germany have relied on countries like China, Indonesia, Malaysia, Kenya, Vietnam, and Turkey to take on their recycling, but countries overwhelmed with the massive imports or under equipped to handle it properly often mismanage or incinerate the recyclables. One-third of recyclables in the US are shipped abroad. The UK estimates that 46% of its recycling goes to countries like Turkey, Poland, and Malaysia.
Learn more →

Pain Points

Challenges

Accuracy And Reliability Of The Real-Time Information

If the data on waste collection schedules and locations is outdated, inconsistent, or not synchronized with the actual service, it can lead to frustration and lack of trust in the app's effectiveness.

Concerns

Technological Literacy

Users with lower technological literacy may find it challenging to navigate and understand and Navigate

User Feedbacks and Recommendations

Implement a mechanism to regularly update the app's data in real-time.

This can involve syncing the app with the backend system to fetch the latest information on waste collection schedules and locations.

Simplifying the Interface

Use intuitive icons, and providing clear instructions can help mitigate this pain point and make the wireframes more accessible to a wider range of users

Next Steps

- **Development and Refinement:** Allocate resources to the development team to build the full-fledged mobile app based on the wireframes. Continuously refine the app's features, user interface, and user experience based on feedback and usability testing.

- **Data Integration and Partnerships:** Collaborate with municipalities, waste management agencies, and relevant data providers to establish reliable data integration. Strengthen partnerships to ensure access to accurate and up-to-date waste collection schedules and locations. Explore opportunities for data sharing and collaboration to further enhance the app's functionality.

- **Platform Compatibility and Optimization**: Optimize the app for different mobile platforms (iOS, Android) and devices, ensuring compatibility and a consistent user experience across various devices. Conduct rigorous testing on different devices and operating system versions to identify and resolve any compatibility issues.

Recap...

Why:

The current waste management system faces challenges due to the city's growing population, urbanization, and increasing waste generation. The inadequacy of waste management infrastructure adversely affects the residents, businesses, and municipal authorities

How:

A mobile app for waste collection schedules and locations can make an important difference through its accessibility, promoting sustainable behaviors, optimizing resources, enabling data-driven decision making, and fostering community engagement.

Thank You!

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By Team **KMS**