**Title**

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**Problem statement**

How might we address waste (including e-waste), handling, storage, transportation, recycling, and final disposal of any residual waste in a uniform way globally such that the developing or poor countries are saved from becoming the dumping ground for the developed countries?

How can we incorporate technology solutions to sustainably grow dairy and livestock keeping emissions in balance?

Our App features a new waste management system for rapidly growing cities. Instead of waiting for inefficient waste collection systems and unreliable pickup trucks to collect your waste, WRAP lets you request a pickup on-demand with just the tap of a button. WRAP platform is cheaper, efficient, and reliable than local incumbent systems, faster than their service, and Waste collection made easy and fantasized.

Unlike other Waste management platforms, our idea is to spread good environmental habits of sorting and recycling your waste and help you to track your waste and impact on the environment from your solid waste collection data.

We categorize the collected waste according to our waste grading system and rewards with WRAP coins. They can be used to claim various deals and vouchers on our partner websites. This would encourage the users to manipulate the recyclables properly. We are launching "WRAP", a web application that collect your recyclables and provides you with rewards for them

**Objective**

The objective of this document is to outline the requirements for the Waste Management App.

The WRAP App is an application designed to assist users in managing waste disposal effectively. This app will provide a platform for users to track and monitor their waste disposal habits, learn about environmentally friendly waste disposal methods and connect with local waste management service providers.

User Requirements:

1. Registration: The app should allow users to register and create an account to access all features of the app.
2. User Profile: The app should allow users to create a profile that will include their name, location, and contact information.
3. Waste Tracking: The app should allow users to track their waste disposal habits, including the amount and type of waste generated.
4. Schedule Pickup: Allows the users to choose the time slot for waste door pickup or drop-off at collection points.
5. Waste to rewards: At every pickup, user receives a WRAP coin as reward. Using WRAP coins users are able to redeem rewards.
6. Waste Reduction Tips: The app should provide users with waste reduction tips and encourage them to adopt eco-friendly waste disposal methods.
7. Service Provider Listing: The app should provide users with a list of local waste management service providers, including their contact information, service area, and services offered.
8. Service Provider Reviews: The app should allow users to rate and review service providers based on their experience.
9. Notifications: The app should send notifications to users reminding them of waste disposal days and providing tips on waste reduction.
10. Privacy and Security: The app should ensure user privacy and data security by implementing secure login, data encryption, and protection of user information.

Functional Requirements:

1. User Interface: The app should have an intuitive and user-friendly interface that is easy to navigate.
2. Database: The app should have a database that stores user information, waste disposal data, and service provider information.
3. Geolocation: The app should use geolocation to identify the user's location and provide relevant waste management service providers in their area.

Conclusion: The WRAP system makes urban environment much cleaner and healthier by accordingly collecting wastes from user’s door steps. The WRAP keeps track of user’s waste and its impact through proper analysis. At every pickup, user receives a WRAP coin as reward. These WRAP coins can be collected overtime to claim products and discount coupons. Let’s properly dispose the scraps for achieving better waste management and amazing rewards while tracking your waste pickup rate.

**Methodology**

The methodology should be agile, iterative, and collaborative, with continuous feedback and communication between stakeholders and the development team. The following methodology can be used for developing the app:

1. Requirement Gathering: The first step in the methodology is to gather requirements from stakeholders, including end-users, business owners, and technical experts. This step involves understanding the needs and expectations of users and identifying the features and functionalities required for the app.
2. Planning: The planning phase involves defining the project scope, identifying the project's constraints, and creating a project plan. This phase should also include identifying project risks and developing mitigation strategies.
3. Design: The design phase involves creating a user interface, database schema, and system architecture. The design should be based on the requirements gathered in the first phase and should incorporate best practices for usability, scalability, and security.
4. Development: The development phase involves implementing the design and developing the code for the app. This phase should also include testing and debugging to ensure that the app meets the requirements and performs as expected.
5. Testing: The testing phase involves testing the app for functionality, performance, security, and user experience. The testing should be conducted using automated and manual testing methods to identify and fix any defects.
6. Deployment: The deployment phase involves deploying the app to a production environment and making it available to end-users. This phase should include creating user accounts, configuring security settings, and monitoring system performance.
7. Maintenance: The maintenance phase involves monitoring the app for defects, fixing bugs, and updating the app to meet changing requirements. This phase should also include providing support to end-users and ensuring that the app remains up-to-date with the latest security patches and software updates.