# ReCirle – The Waste Reduction App

**Project Idea:**

ReCirle is a smart, user-friendly application designed to minimize waste and support vulnerable communities by connecting generosity with need. The app allows restaurants and households to donate surplus food and clothing, which are then redistributed to people in need through charities, NGOs, or individual requests.

Using location-based algorithms, ReCirle ensures donations reach nearby recipients quickly and efficiently. A real-time logistics system enables donors to track pickups, while safety and quality guidelines maintain hygiene and food safety standards. Through features like the Impact Tracker and Community Wall, users can measure their contributions and engage with a network of donors, recipients, and volunteers.

The ultimate vision of ReCirle is to create a circular ecosystem where surplus becomes opportunity, generosity becomes action, and technology serves as the bridge connecting abundance with those in need.

**Team Members (pentaRae)**

- Sarah Shaban Mohammed Mohammed – Team Leader
- Mai Mahmoud Abdelnaby Sayed
- Salma Waleed Elmarakby
- Norhan Ashry

**Work Plan**

1. **Research & Analysis**

   Our first phase focuses on understanding the problem and target audience. We will develop detailed audience personas for donors, recipients, and volunteers to guide the app's design and functionality. Additionally, we will analyze existing waste-reduction platforms to identify their strengths, weaknesses, and opportunities for improvement.

2. **Visual Identity**

   **Logo**

3. **Main Designs**

   o Poster

   We will create a primary promotional poster to introduce the ReCirle app, its mission, and key features. This poster will serve as a visual communication tool for presentations and outreach efforts.

4. **Complementary Products**

   Supporting materials, such as social media templates, infographics, and brochures, will be developed to enhance the project's visibility and help engage a wider audience.

5. **Review & Finalization**

   All designs and materials will be reviewed collectively by the team to ensure quality, clarity, and alignment with the project vision. Any necessary revisions will be made before submission.

6. **Final Presentation**

   The final phase will focus on preparing and delivering a comprehensive presentation showcasing the project's concept, design process, outcomes, and impact. This presentation will highlight the full scope of ReCirle and its potential to make a difference.

**Roles & Responsibilities**

**Team Leader & Frontend Lead (Sarah Shaban Mohammed Mohammed):**

- Oversees project planning, team coordination, and deadlines.
- Leads frontend development using React, ensuring clean, modular, and responsive UI components.
- Integrates visual designs into the actual web interface.

**Backend & Database Developer (Mai Mahmoud Abdelnaby):**

- Designs and implements the backend API (Node.js/Express or similar).
- Manages database design and integration for user accounts, donations, and tracking.
- Handles server-side logic and security best practices.

**UI/UX & Visual Identity Designer (Salma Waleed Elmarakby):**

- Creates the brand identity including logo, color palette, and typography.
- Designs wireframes and mockups for all app pages before development.
- Works closely with the frontend lead to ensure the final UI matches the design vision.

**Testing, Documentation & Deployment Specialist (Norhan Ashry):**

- Conducts functionality and usability testing throughout the development cycle.
- Writes user documentation and developer handover notes.
- Manages deployment on hosting platforms (e.g., Vercel, Netlify) and ensures everything works post-launch.

## KPIs (Key Performance Indicators) – Metrics for Project Success

To measure the success, functionality, and overall impact of the ReCirle application, the following key performance indicators will be tracked:

1. **Feature Completion Rate**
   - **Definition:** Percentage of planned features (e.g., donor dashboard, smart matching system, impact tracker) fully implemented and functional by the project deadline.
   - **Goal:** 100% of core features completed before final submission.
2. **System Uptime**
   - **Definition:** The percentage of time the web application remains fully operational without downtime.
   - **Goal:** Maintain at least 99% uptime during testing and post-deployment phases.
3. **Response Time**
   - **Definition:** Average time taken for the system to process donation listings and match them with nearby recipients.
   - **Goal:** Under 3 seconds for standard operations.

4. **User Adoption Rate**
   - **Definition:** Number of users (donors, recipients, volunteers) registering and actively using the platform over time.
   - **Goal:** At least 50 active users in the pilot testing phase.
5. **Donation Volume**
   - **Definition:** Total quantity of food and clothing donations processed through the platform.
   - **Goal:** 100+ items successfully redistributed by the end of the pilot run.
6. **Bug Density**
   - **Definition:** Number of critical and high-severity bugs identified per 1,000 lines of code during testing.
   - **Goal:** Fewer than 5 critical bugs before final deployment.
7. **User Satisfaction Score**
   - **Definition:** Ratings and feedback collected from users on app usability, performance, and overall experience.
   - **Goal:** Minimum average rating of 4 out of 5 during user surveys.
8. **Code Quality & Maintainability**
   - **Definition:** Evaluation of code structure, modularity, and adherence to best practices for future scalability and maintenance.
   - **Goal:** Achieve a "high maintainability" score using code analysis tools (e.g., SonarQube).

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## Instructor

Eng. Hesham Mohamed

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## Project Files

You can find the full project files here:
https://github.com/SaraShaban-613/DEPI---Frontend---ReCircle

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