

Design Thinking Project:
The Green Bin



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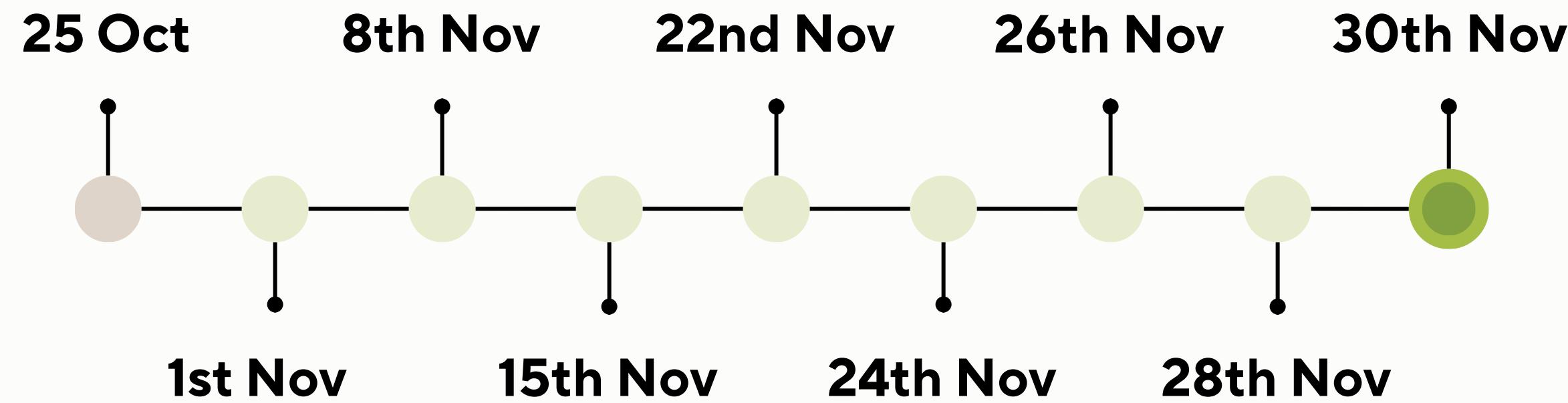
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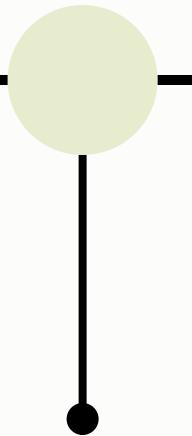
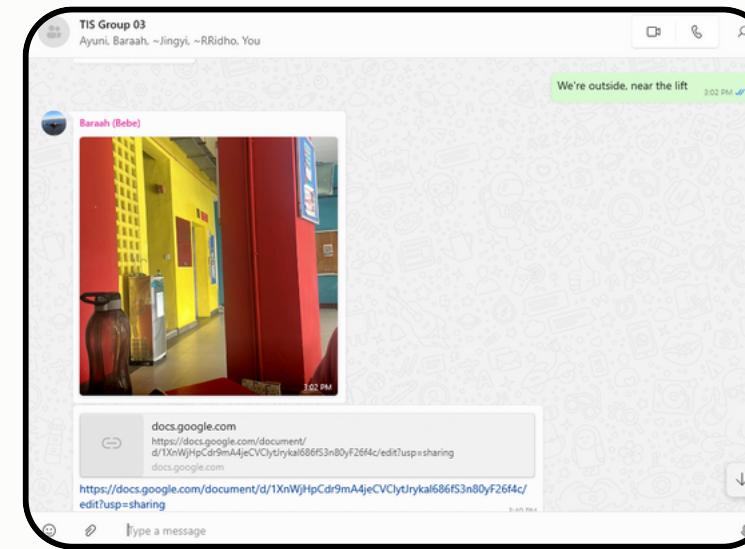
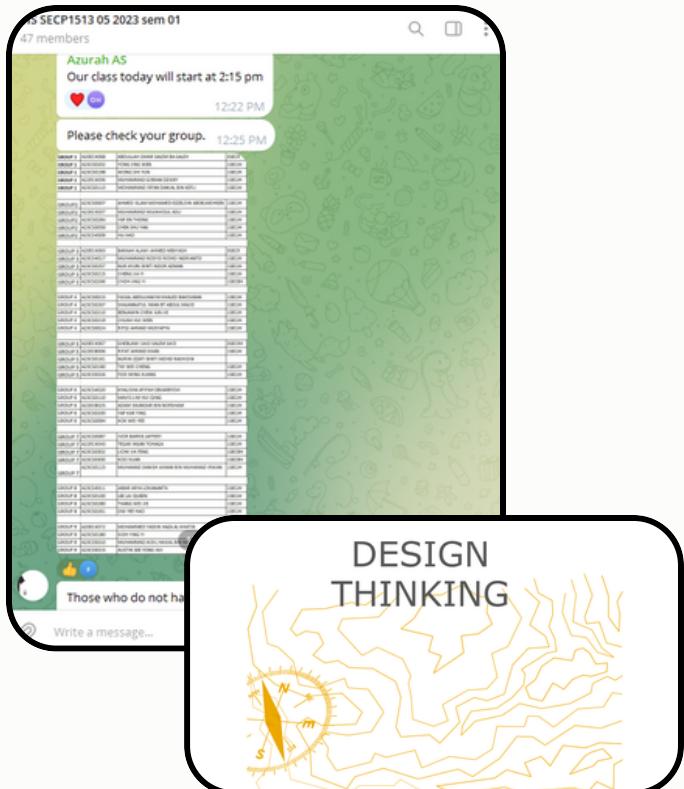
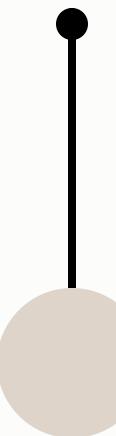
Design Thinking Evidence

Design Thinking Project Timeline



25th Oct

Introduction to the group members and a briefing by Dr. Azurah regarding the Design Thinking Project.

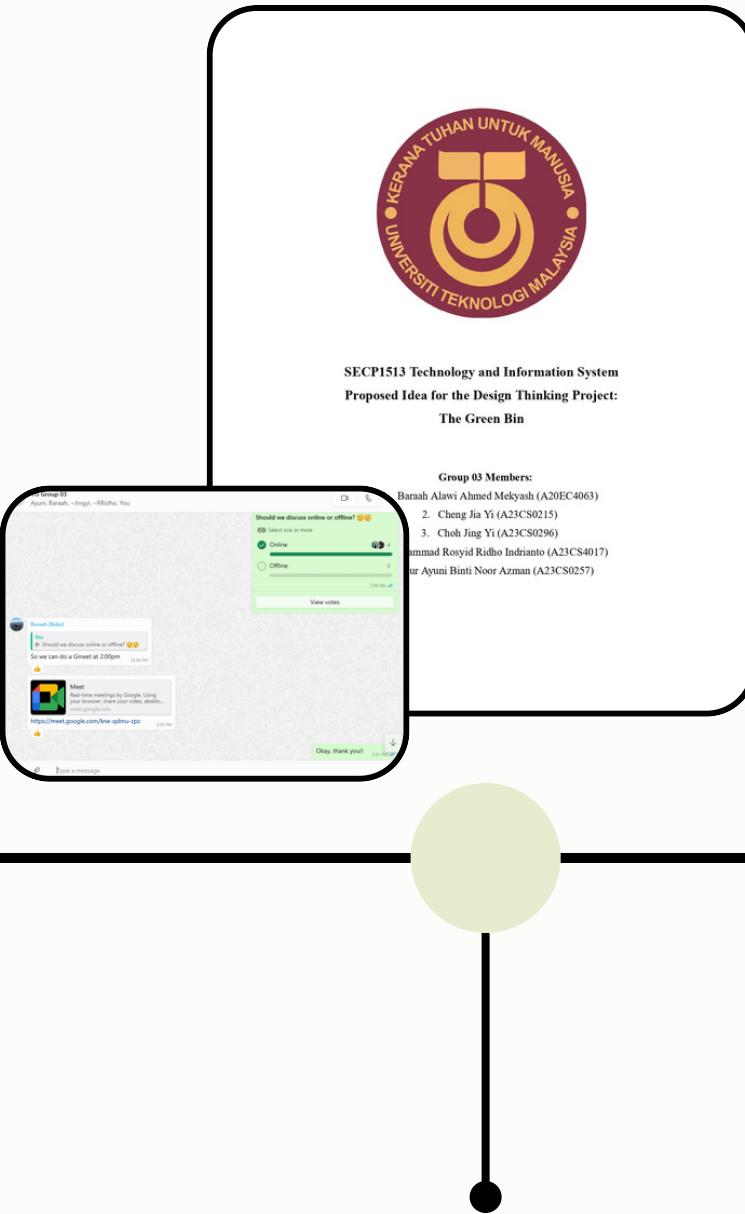
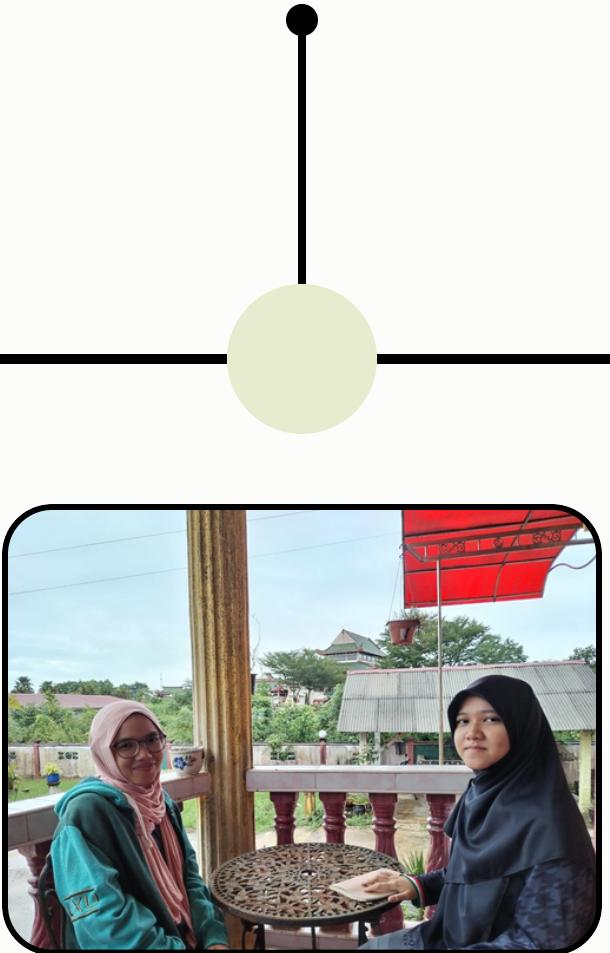


1st Nov

Conception of the idea for the Design Thinking Project: The Green Bin

8th Nov

Empathise Phase: Interview with
Nur Ain binti Noor Azman



15th Nov

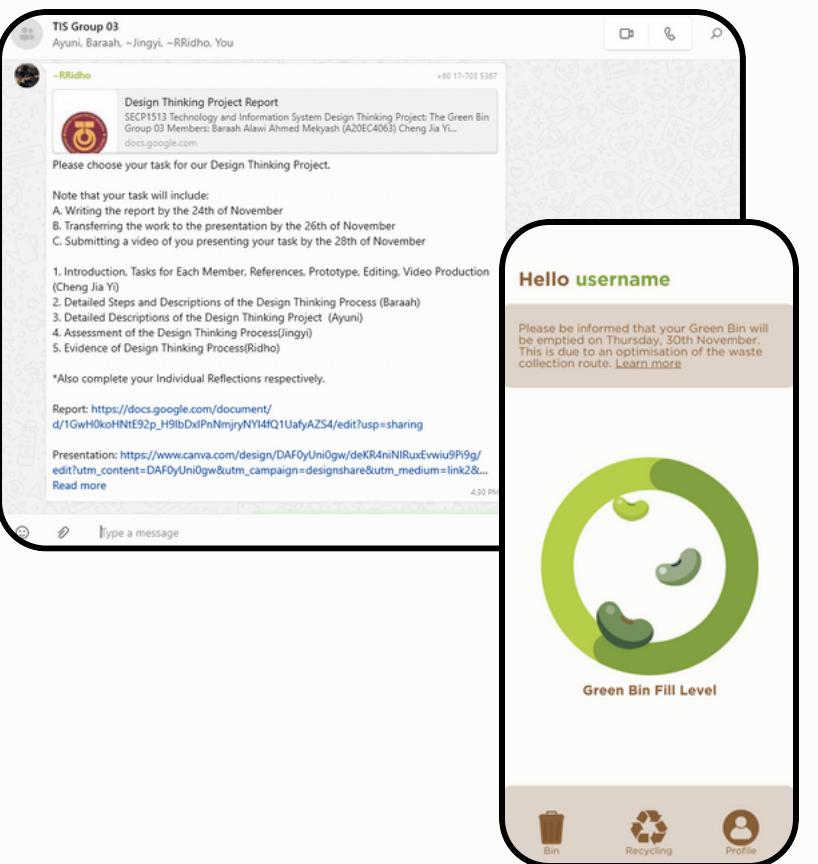
Define Phase: Identification of problems
Ideate Phase: Generation of solutions

Writing of a report titled Proposed Idea for the
Design Thinking Project

22nd Nov

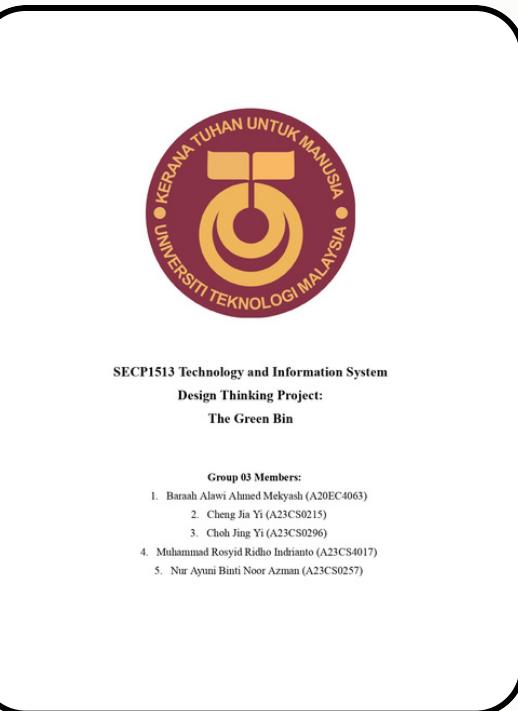
Prototype Phase: Creation of various prototypes

Delegation of tasks and starting content creation



24th Nov

Completion of the report



26th Nov

Completion of the presentation

30th Nov

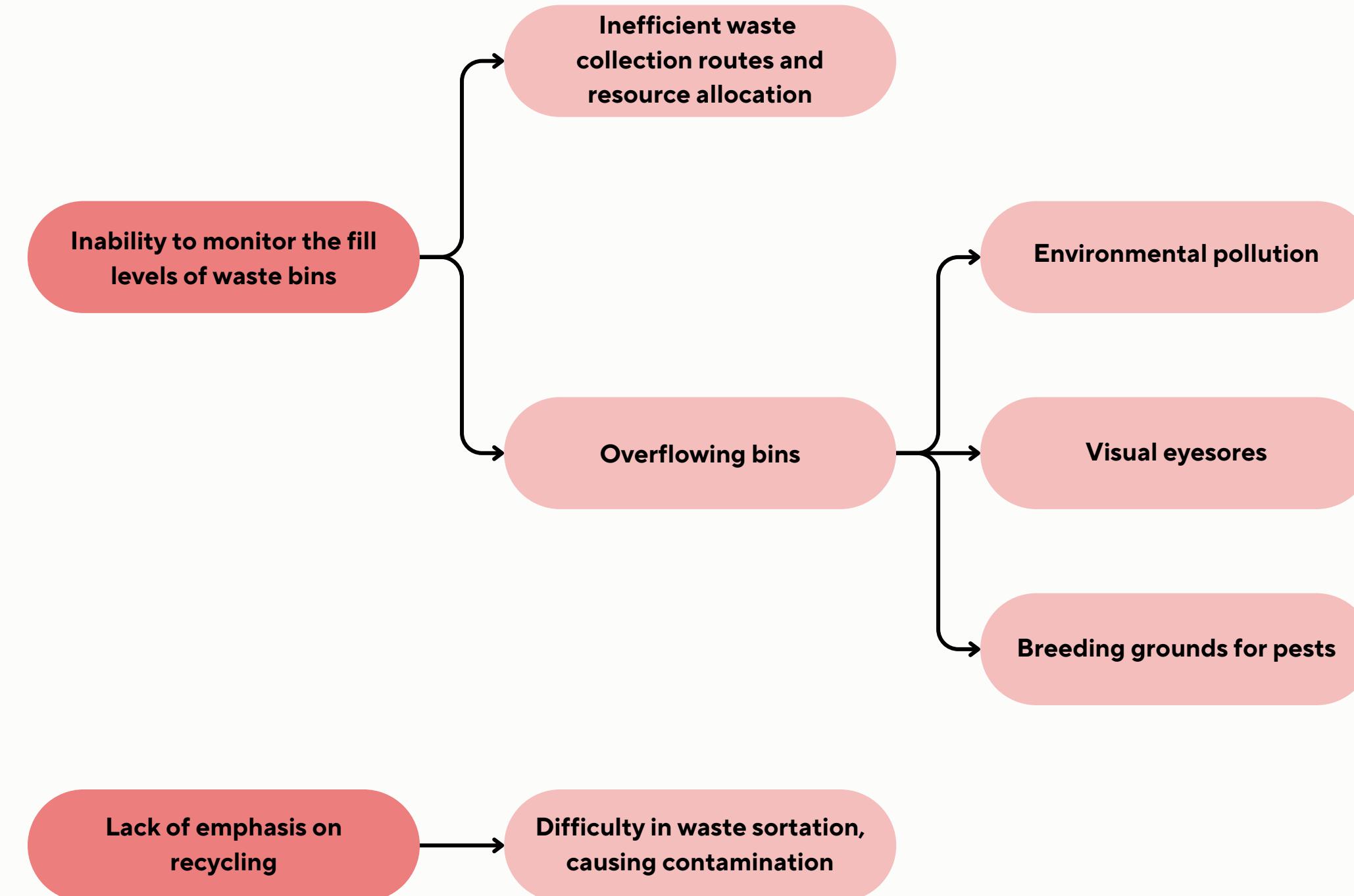
Completion of the video,
submission of the report and
submission of the video



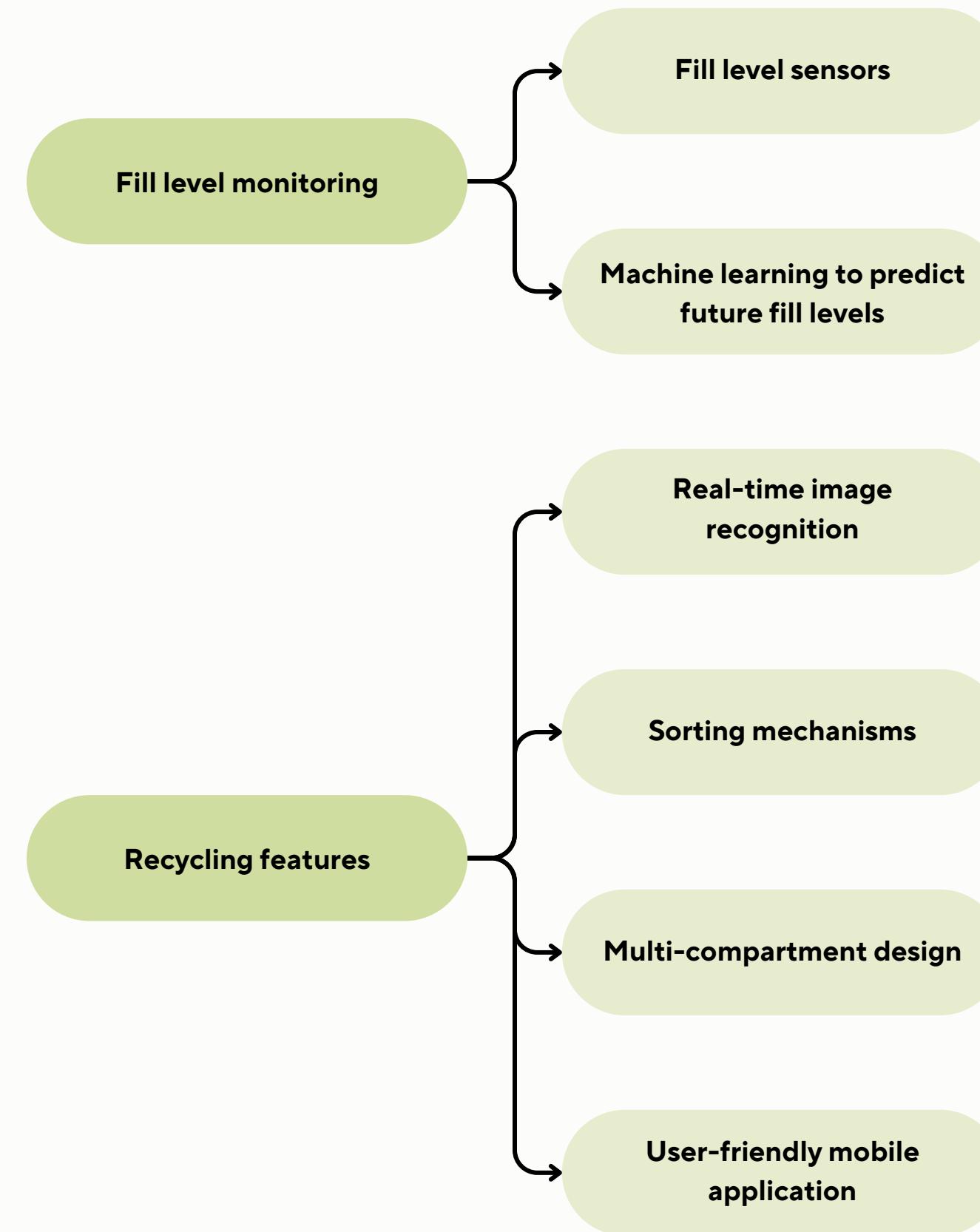
28th Nov

Submission of videos to the video
producer

Descriptions of the Problems



Descriptions of the Solutions



Descriptions of the Teamwork

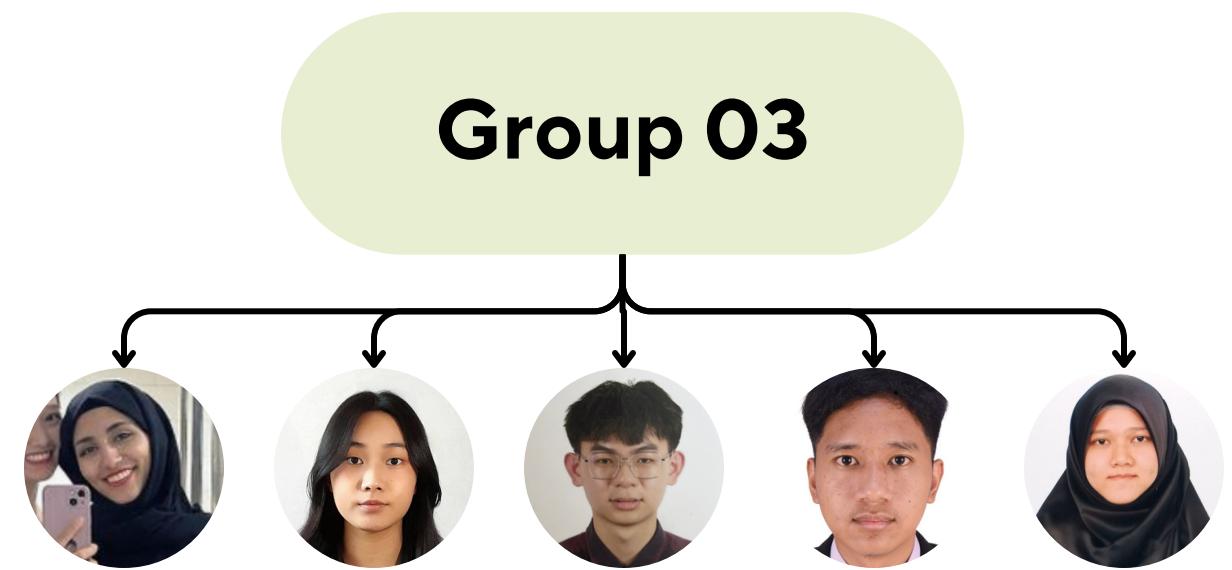
All group members **collaborated, contributed and cooperated** in the process of completing the Design Thinking Project.

Design Thinking Process

- During the empathise phase, all group members took part in the **preparation and documentation for the interview**.
- During the define phase, all group members took part in the **identification of the issues and problems**.
- During the ideate phase, all group members took part in **brainstorming ideas and solutions**.
- During the prototype phase, all group members took part in **translating the ideas generated into a physical model**.

Content Creation

- While writing the report, all group members **completed their allocated tasks**, ensuring a comprehensive and cohesive document.
- While creating the video, all group members put effort into **scripting, filming and editing**, ensuring a polished and engaging final product.
- While preparing the presentation, all group members participated in **creation of the slideshow**, ensuring that our Design Thinking Project is conveyed clearly and concisely.



Design Thinking Assessment Points

Empathise Phase

- ✓ Conducted an **interview**
- ✓ Gained an **empathetic understanding**, of user habits and challenges related to the traditional waste management system

Define Phase

- ✓ Identified and defined the **issues** in the traditional waste management system
- ✓ Constructed a **problem statement**: Users need an efficient and effective method to dispose of waste and sort out recyclables

Ideate Phase

- ✓ Engaged in **brainstorming sessions**
- ✓ Generated **solutions** to the problems in the traditional waste management system

Prototype Phase

- ✓ Created a **mind-map, sketch and mobile application mockup** to visualise the project
- ✓ Ensured that the Green Bin is **compatible with users**, and addresses their needs and wants

End of the Design Thinking Project

- ✓ Transformed insights and observations into a **practical solution: The Green Bin**, through the design thinking process
- ✓ Ensured that the project **addresses the traditional waste management problems**, simplifying waste disposal and promoting recycling

Design Thinking Evidence: Empathise Phase



Images of the Interview



Transcript of the Interview

Q: "What is your name, age and background?"

A: "My name is Nur Ain binti Noor Azman and I am 26 years old. I work as an Environmental and Tourism Planner. I am also currently working towards a PhD in Urban and Regional Planning at Universiti Teknologi Malaysia."

Q: "What are the problems with traditional waste management?"

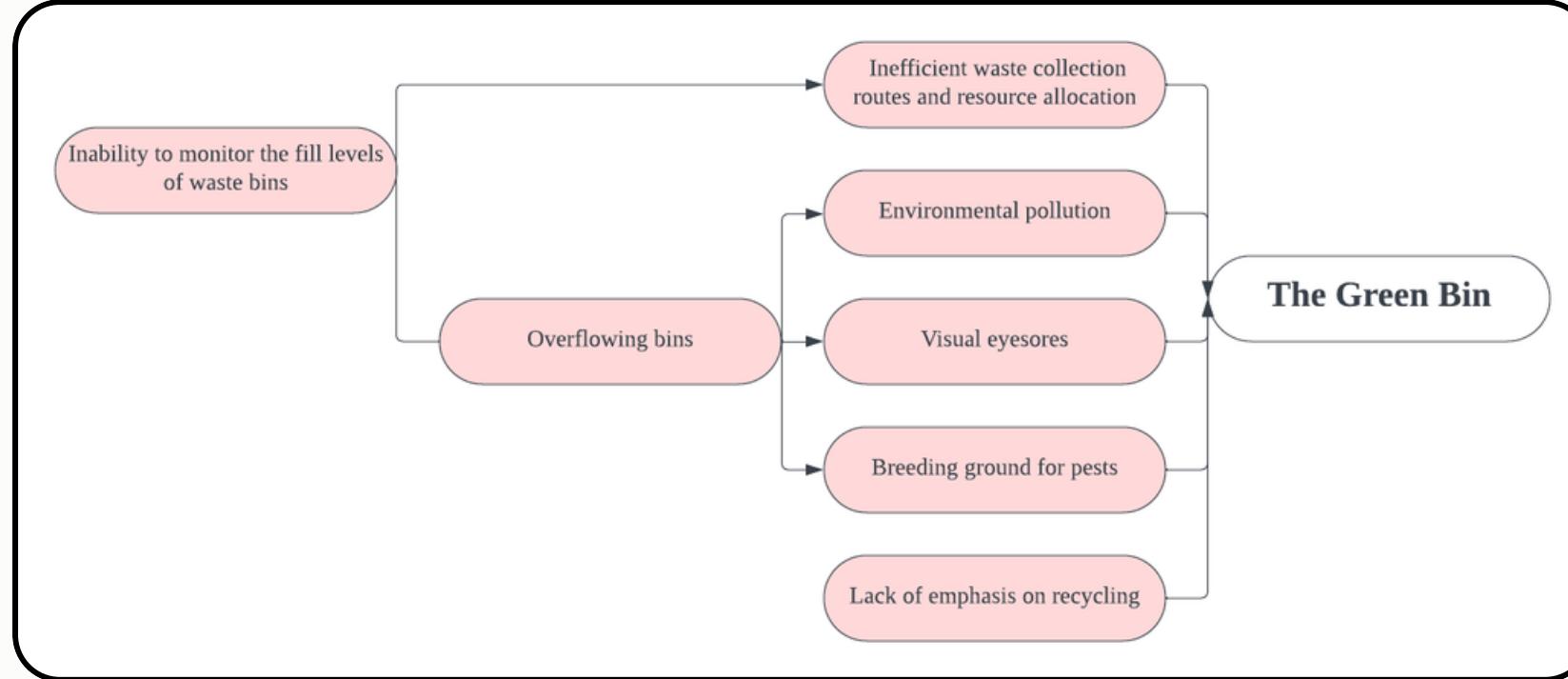
A: "Traditional waste management is not systematic, causing waste bins to overflow with trash. This often leads to residents burning the excess trash, which contributes to environmental pollution."

Q: "What other challenges do you face with waste disposal?"

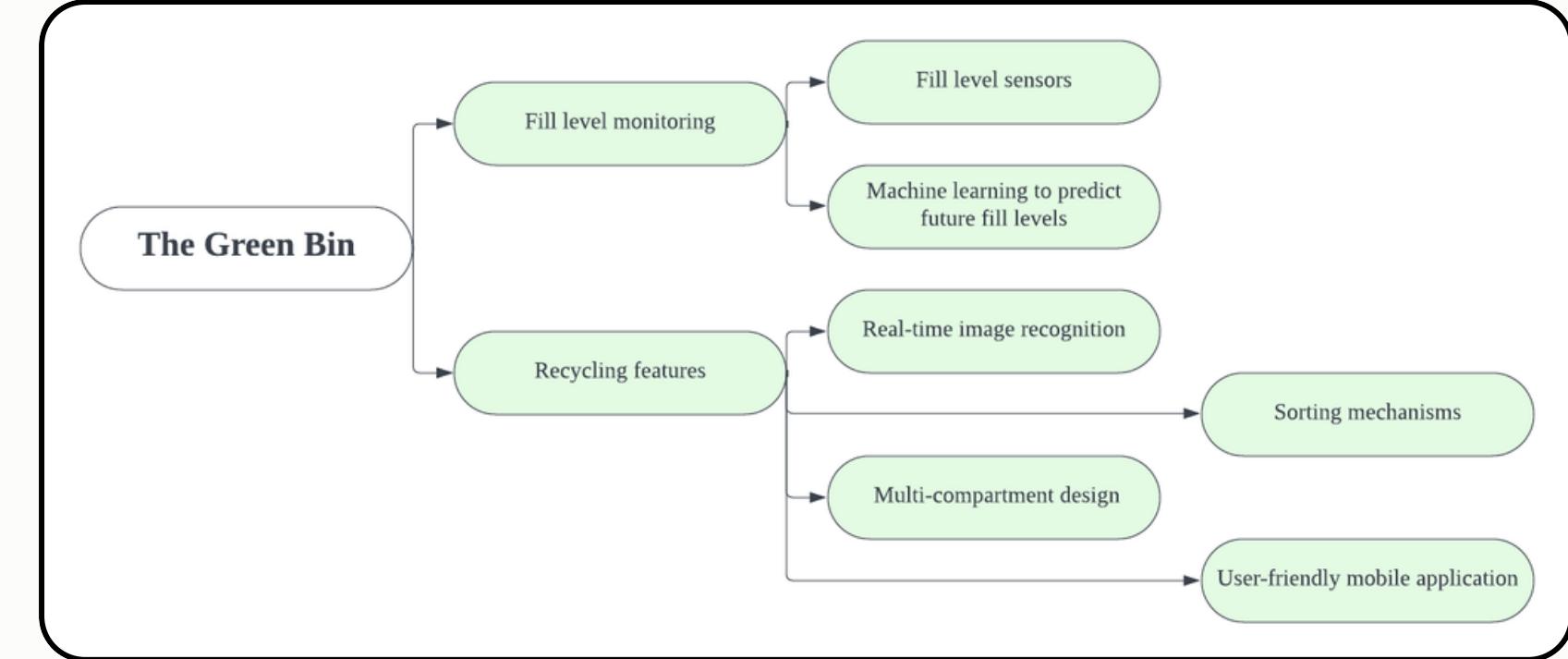
A: "Other than that, traditional waste management does not prioritise recycling. It is difficult and time consuming to sort recyclables correctly, making it hard for residents to stay motivated. This often causes recyclables and valuable materials to be contaminated."

During the empathise phase, group members conducted an **interview** to gain an **empathetic understanding** of user habits and challenges related to waste disposal. As documentation, **pictures** were taken and a **transcript** was written.

Design Thinking Evidence: Define Phase and Ideate Phase



Mind-map of Problems

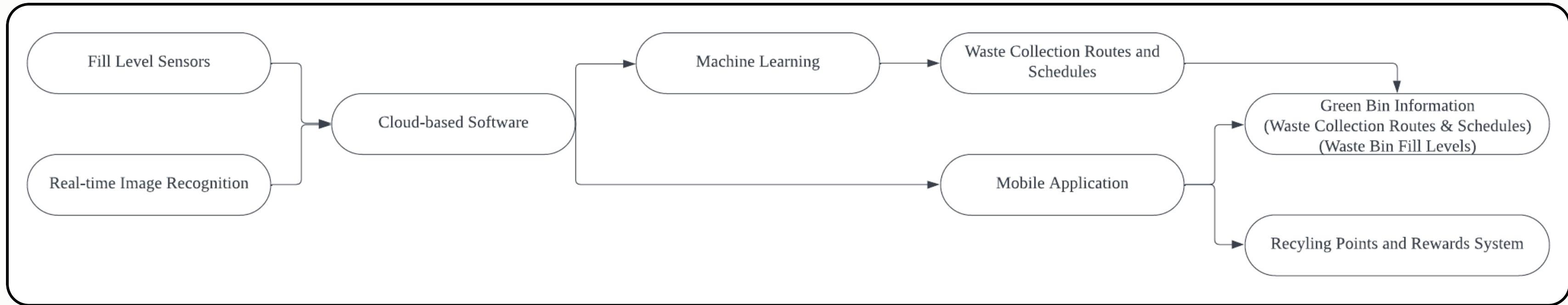


Mind-map of Solutions

During the define phase, group members **identified and outlined the problems** in the traditional waste management system. To visualise the problems, a **mind-map** was constructed using Lucidchart.

During the ideate phase, group members **brainstormed and generated solutions** to the problems. To visualise the solutions, a **mind-map** was constructed using Lucidchart.

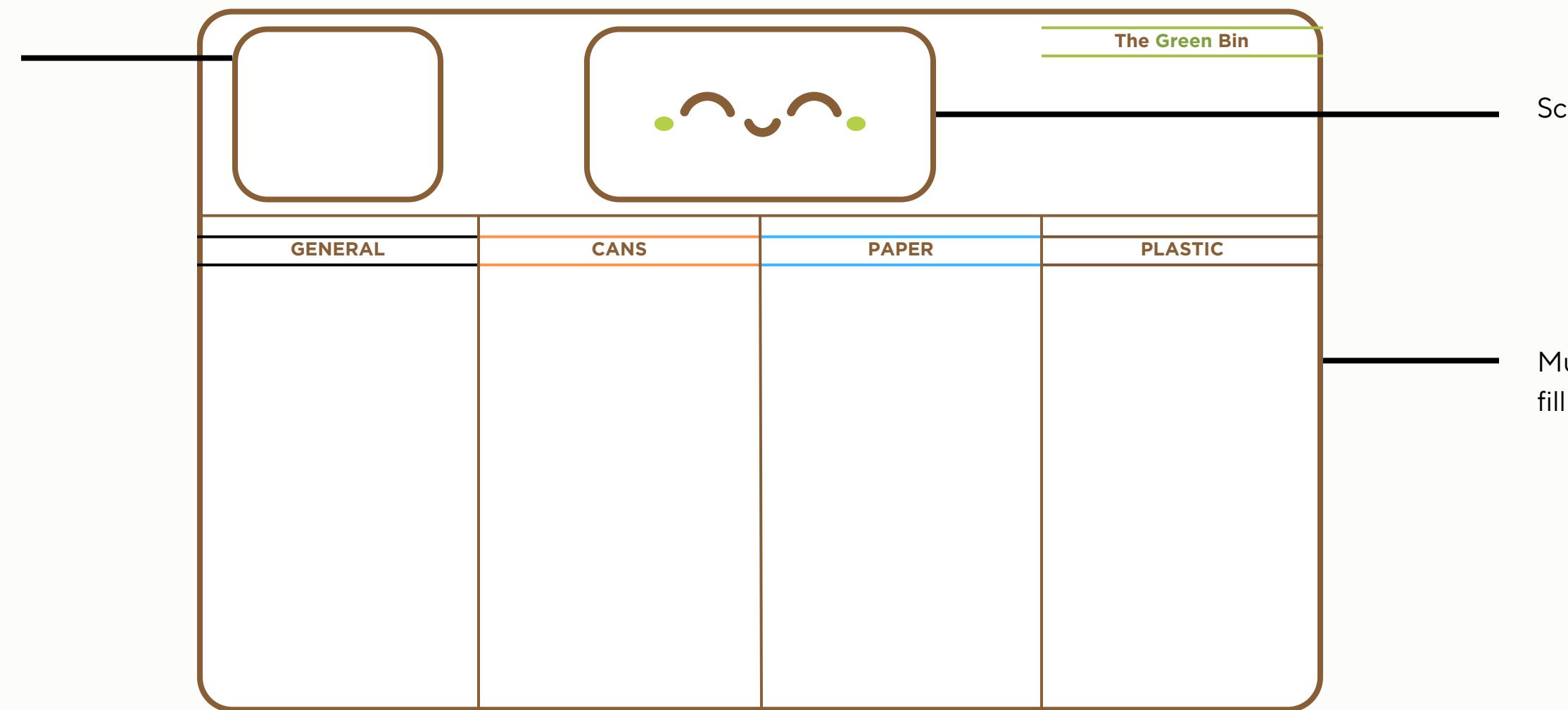
Design Thinking Evidence: Prototype Phase



Sample Work: Mind-map of Data & Information Flow

During the prototype phase, group members created **a mind-map of data & information flow** via Lucidchart, **a sketch & a mobile application mockup** via Canva.

Insert waste to be sorted via real-time image recognition sorting mechanisms



Screen

Multi-compartment design with
fill level sensor

Log In



Username or E-mail

Password

Sign In

Don't have an account? [Sign Up](#)

Create Account



Full name

E-mail

Username

Password

Sign Up

Already have an account? [Sign In](#)

Loading...

The Green Bin

Hello username

Please be informed that your Green Bin will be emptied on Thursday, 30th November. This is due to an optimisation of the waste collection route. [Learn more](#)



Green Bin Fill Level



Bin



Recycling



Profile

7200 Beans

You are eligible for rewards. [Browse now](#)



Cans

Recycle 15 More Cans to Earn 100 Beans

The Green Bin accepts beverage cans, food cans, aerosol cans, etc. Please make sure that they are clean and free from any residual liquids or food particles. [Learn more](#)



Plastic

Recycle 10 More Plastic Items to Earn 100 Beans

The Green Bin accepts plastic bottles, plastic food containers, plastic packaging, etc. However, not all plastics are recyclable. [Learn more](#)



Paper

Recycle 5 More Paper Items to Earn 100 Beans

The Green Bin accepts office paper, cardboard, paperboard, etc. Certain types of paper, like tissue paper or paper towels, are not accepted. [Learn more](#)

7200 Beans

Earn more beans by recycling. [Learn more](#)



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Redeem

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Help and Support

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Bin



Recycling



Profile



Bin



Recycling



Profile

Thank You!

Any Questions?