

# Theme: Sustainability

# Effective Waste Management

Wasto

Presenting you with a solution for a better world

## Problem

The increased population increases the waste generation. This puts pressure on waste management facilities, which are already in short supply.



## Solution

Automate most parts of a waste management cycle. From source to recycling unit with proper tracking of the waste



## Target Variables

Identification of different types of waste, a record of waste travel, segregation, and recycling statistics

Further Discussion



Our Project as Solution

# Introducing **WASTO**

The organization helps to track  
the wastage



# Key Problem's



## 01

### Source Level

- No base level of Segregation and awareness
- No regular tracking of the usage of the dustbin leads to no response when a dustbin gets filled, which leads to waste in random places.
- .No awareness about the base level of segregation.
- No proper maintenance of the dustbins and no awareness to prevent the intermixing of dry and wet waste.

## 02

### Pick up level

- No regular pickup due to no trackage of the waste generated in different locations.
- No proper information about the waste generated daily in different locations.
- Intermixing of Organic, recycle, plastic waste (Wet & Dry).
- Delay in pickup due to lack in man force and other logistics issues.
- Very few pickup Locations.

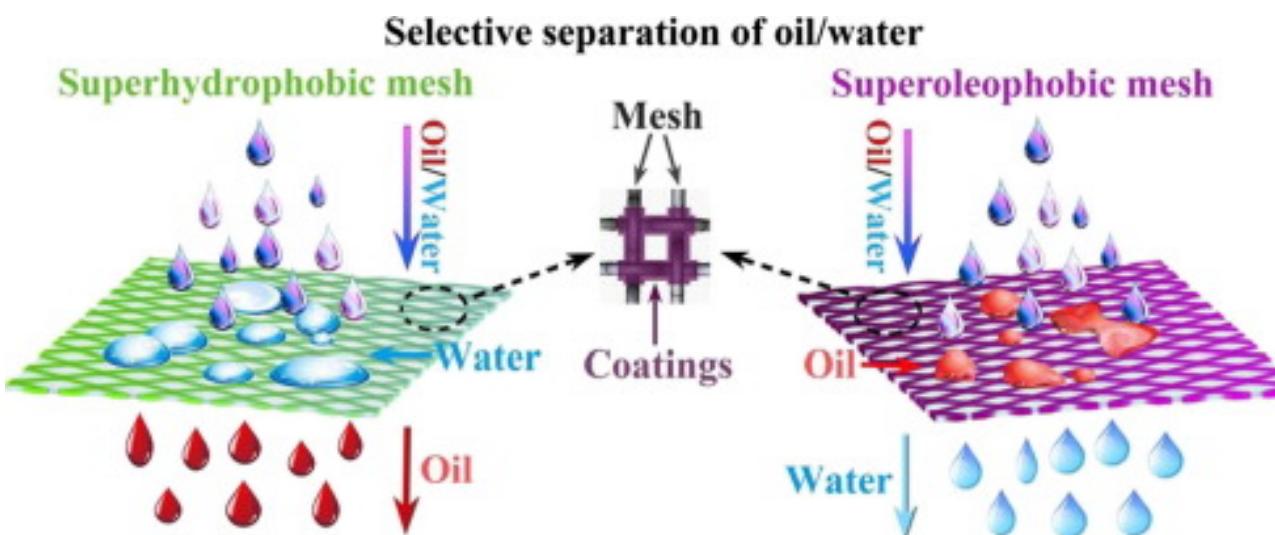
## 03

### Unit

- No proper differentiation between Organic, Plastic, and recycling waste.
- A lot of money is consumed by the current waste unit and plants. No Source of income and power.
- A lot of landfills are filled up without compressing the waste, increasing the level of waste.
- No proper statistics are generated regarding the efficiency in recycling.

## Intro to new era of Wasto Dustbins

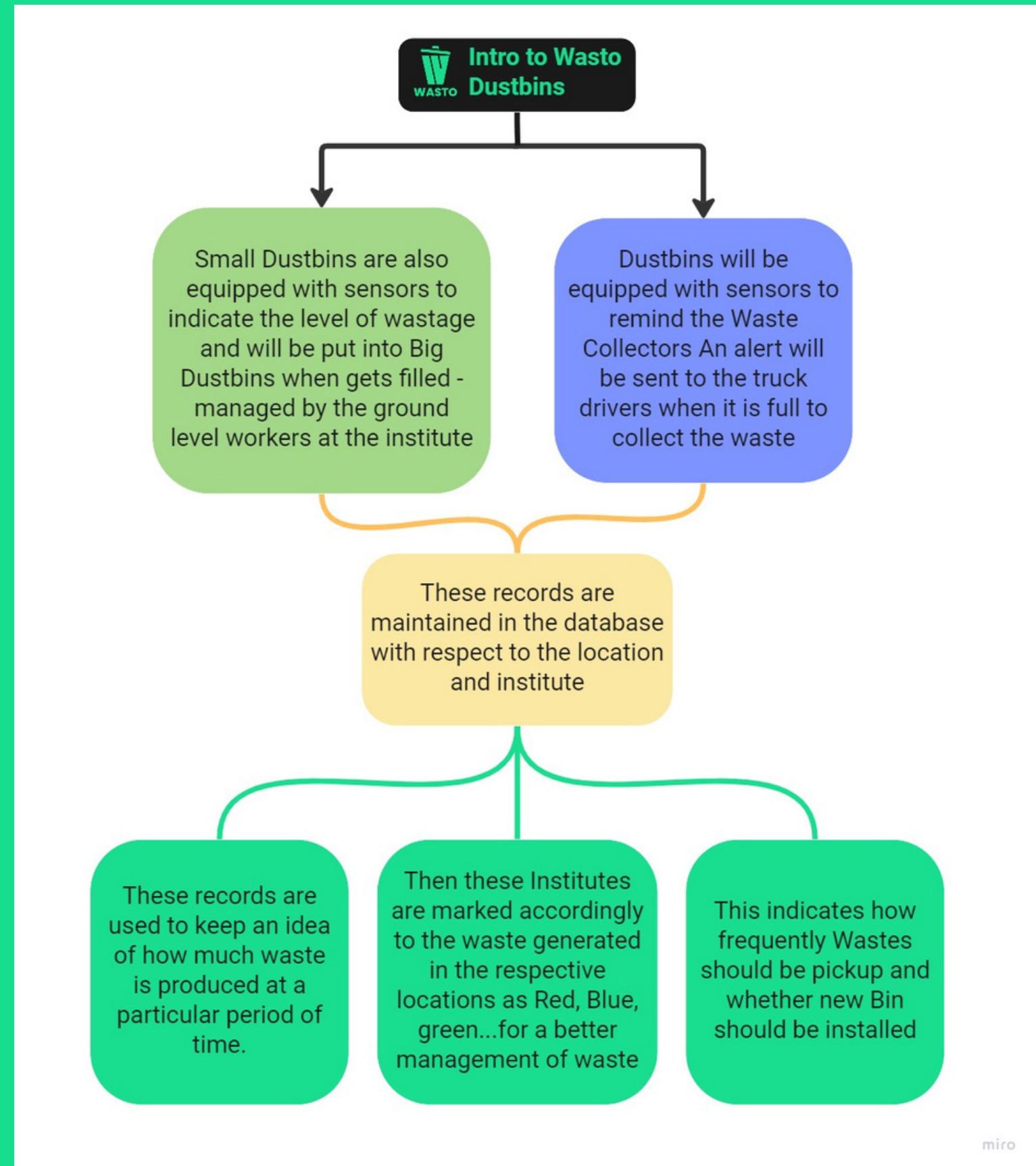
- Clear Visualisation with proper installation of stickers like compost(No plastic), Waste(Plastic) instead of dry or wet is installed on these dustbins for clear identification to throw waste.
- Press Mechanisms to open the dustbins are included.
- A selective separation layer is installed 40 cm from the bottom of the dustbin to separate the wet waste. (reference image is given below)
- All the Bigger Dustbins and a few smaller dustbins where wastage generation is more will be equipped with sensors to alert the authorities about the complete filling of the big dustbin, which leads to contact with the Waste Collectors.
- These big Dustbins contain level and weight sensors, which will record the quantity of wet and dry waste.



Small Dustbins which are present across the institutes



Big Dustbins relatively bigger to hold many small Dustbins Waste



- This Mind Map gives the idea about our prototype working model that we implemented in the dustbin.

 Concept Map

[See the board](#)

Miro.com | Free online collaborative whiteboard platform [Learn more](#)

To view the Concept map  
Click on this link:  
<https://miro.com/app/board/uXjVPLY5IEA=/>



- The weight sensors and ultrasonic sensors detect the filling percentage of the labeled dustbins around the institute and pass the information about the same to the respective authority through our **wasto**.
- This will help us to control the waste and leads to better waste management at the source level.
- We tested on a few dustbins installing the sensors and Arduino, and we got the results below. The information is passed to the governing authority of the college to take measures accordingly (to transfer the waste to more giant bins and replace them at the respective location with spare bins).
- A similar mechanism works with bigger bins where the info will be passed to respective college authorities and recycling units so that it will be picked up on time. The waste generation data (including organic plastic ..etc) will be stored subsequently in the Wasto and notified to the institute daily and providing weekly and monthly analysis.

The screenshot shows the Arduino IDE interface. On the left, the code for 'dustbin\_fill.ino' is displayed:

```
23 digitalWrite(trigPin, LOW);
24 delayMicroseconds(2);
25 // Sets the trigPin HIGH (ACTIVE) for 10 microseconds
26 digitalWrite(trigPin, HIGH);
27 delayMicroseconds(10);
28 digitalWrite(trigPin, LOW);
29
30 duration = pulseIn(echoPin, HIGH);
31
32 distance = duration * 0.034 / 2;
```

The right side shows the 'Serial Monitor' tab with the following text output:

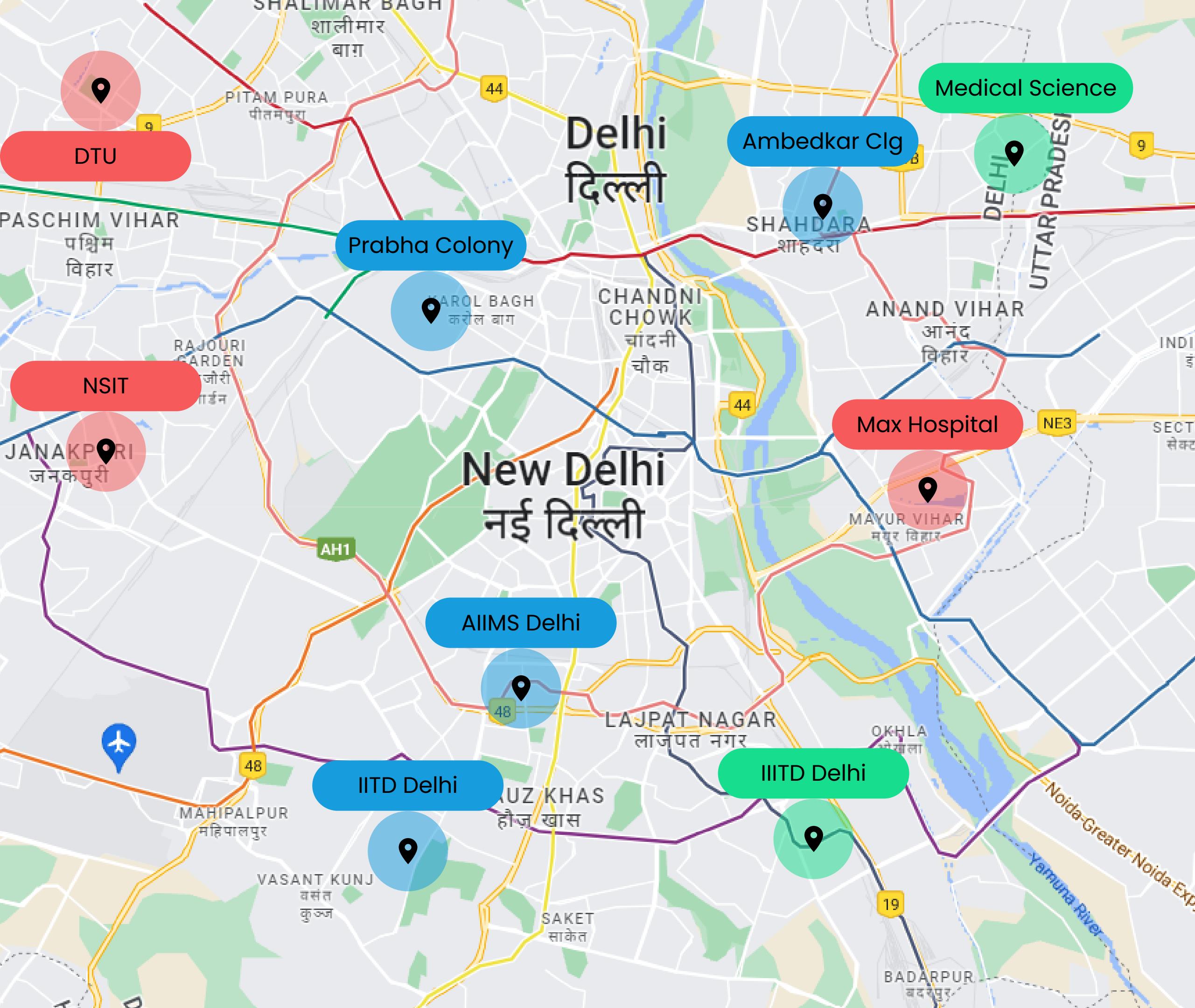
Message (Ctrl + Enter to send message to 'Arduino Uno' on 'COM7')

Identification of Wastage level  
with Arduino UNO R3  
Dustbin is About to fill  
80% is filled  
Dustbin is full: Please collect the waste from Dustbin at SNO: 13  
90% is filled  
Dustbin is full: Please collect the waste from Dustbin at SNO: 13  
96% is filled  
Dustbin is full: Please collect the waste from Dustbin at SNO: 13  
99% is filled

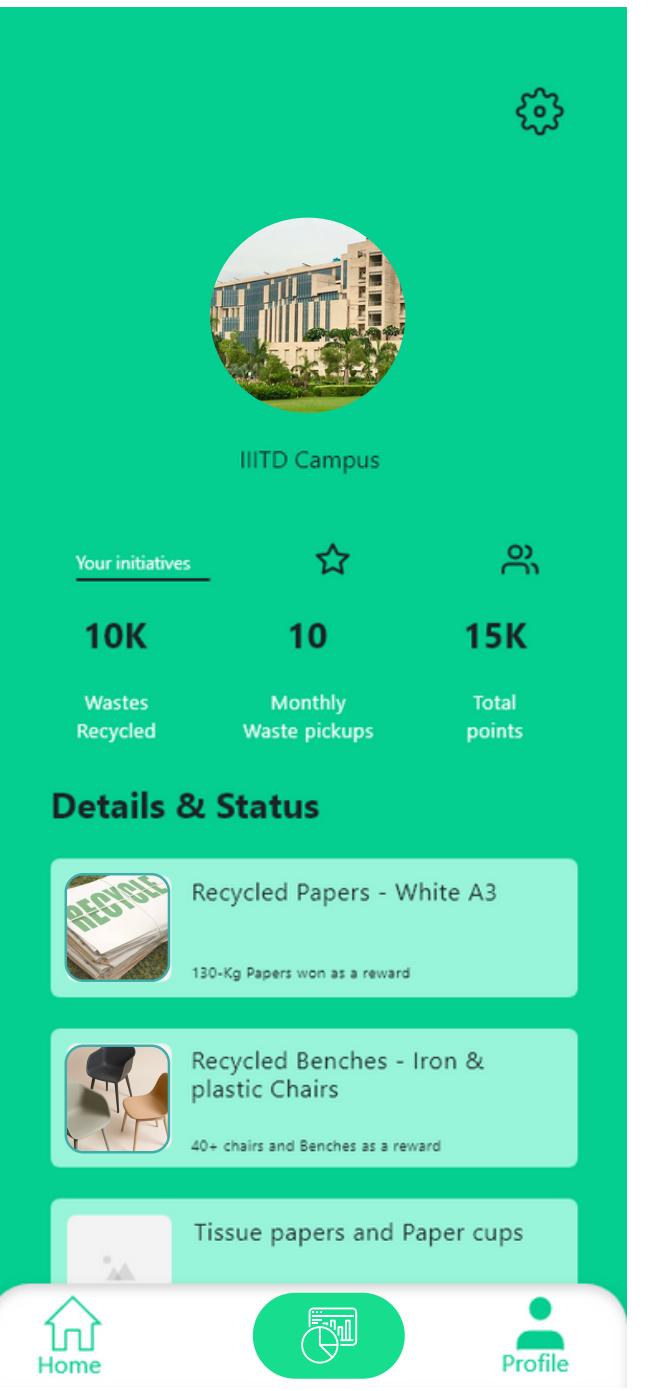
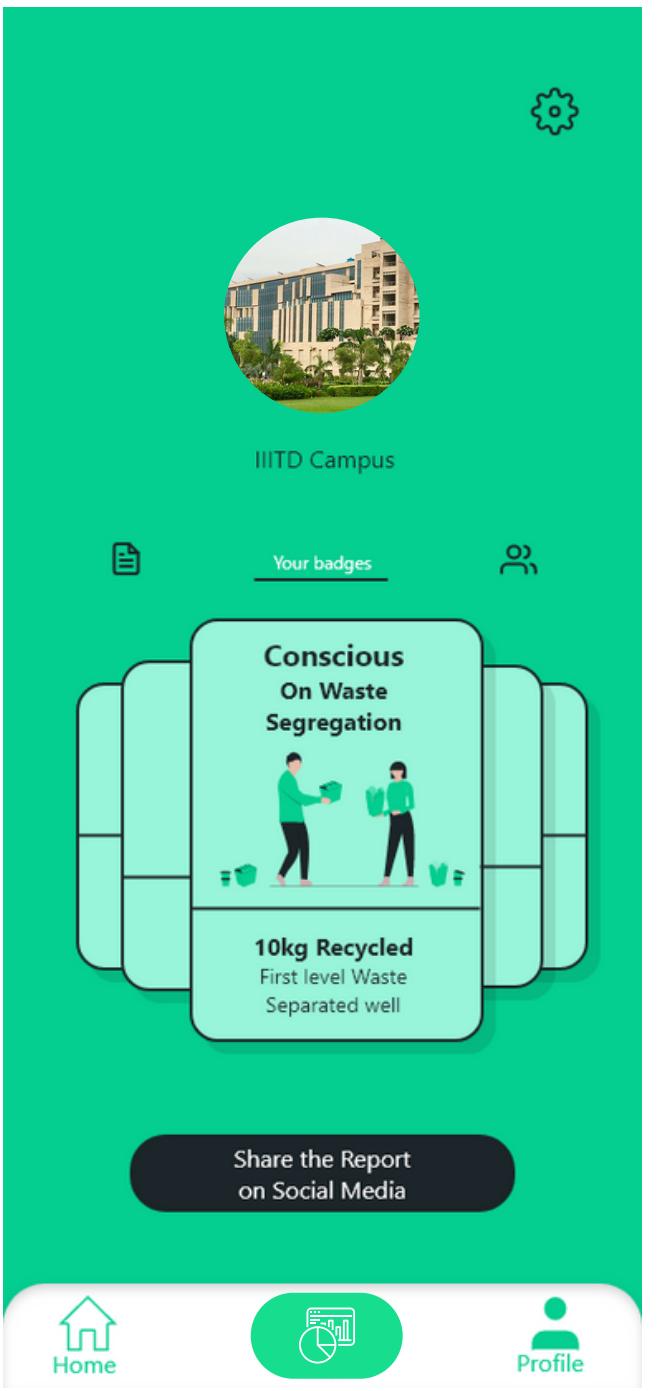
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Ln 68, Col 1 UTF-8 Arduino Uno on COM7 2



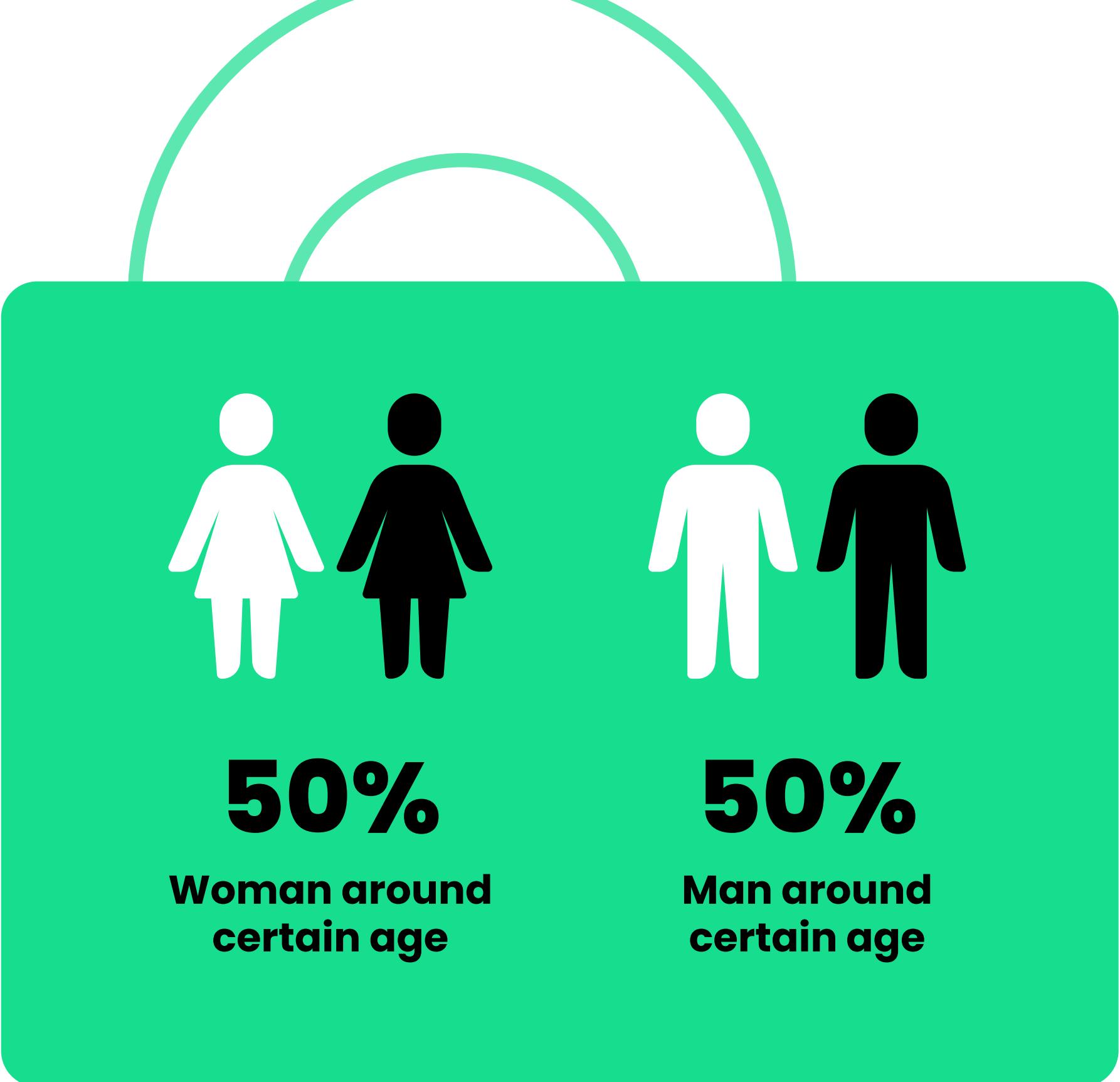
- The zones are assigned according to the waste generated daily.
- The Waste management unit works accordingly for regular pickups, and measures will be taken to reduce the waste according to the zones so that the waste will be recycled in a better way and leads to control of the waste.
- Everything will be notified from the **WASTO** to respective organizations/units, and will be given points accordingly for rewards and to control the waste in the respective locations.
- Every organization will have separate login in the WASTO APP/WEBSITE to track their waste, the measures, and reward points.



# Our Project Target Market

Write a short description explaining what this page is about.

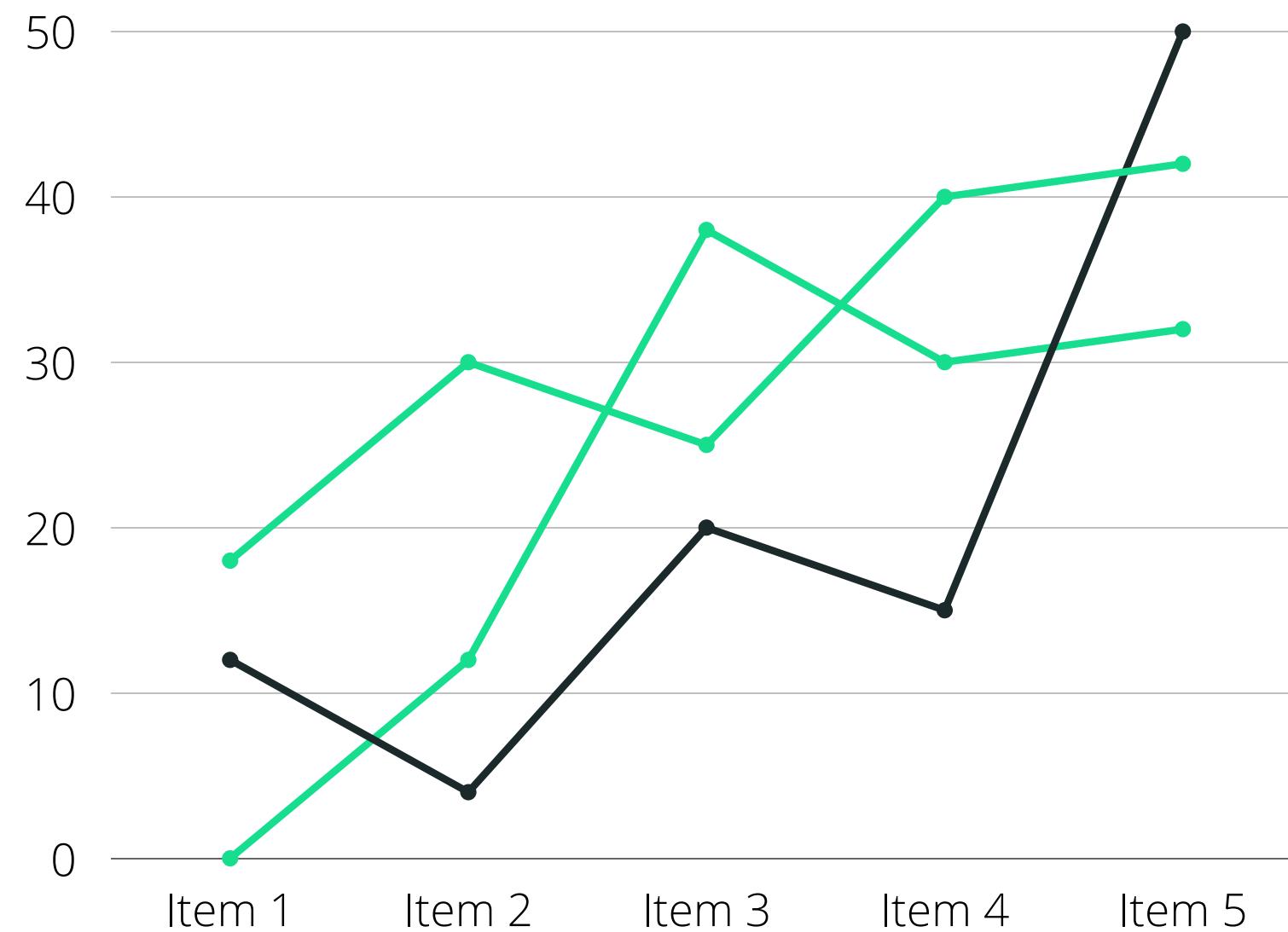
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PART 2

# How the Project Works?

Write a short description explaining what this page is about.



# Utilizing Company Customer Data

Write a short description explaining what this page is about.

## Write any related idea.

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## Write any related idea.

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# Marketing Strategy

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01

## Social Media Ads

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02

## Print Ads

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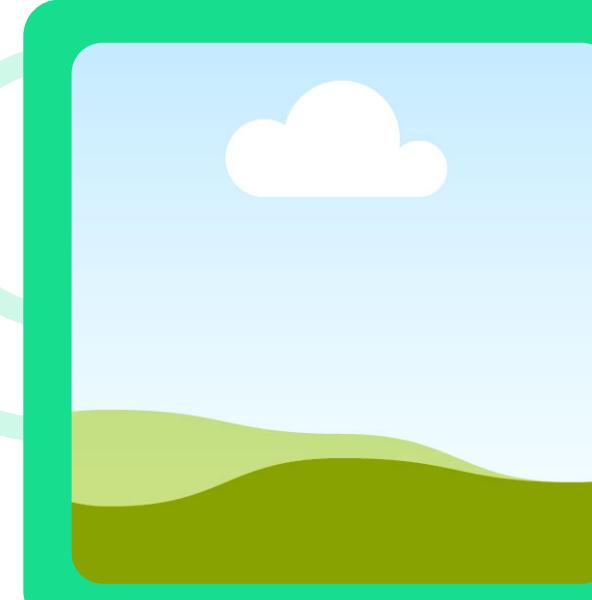
## Direct Marketing

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# Our Competitor

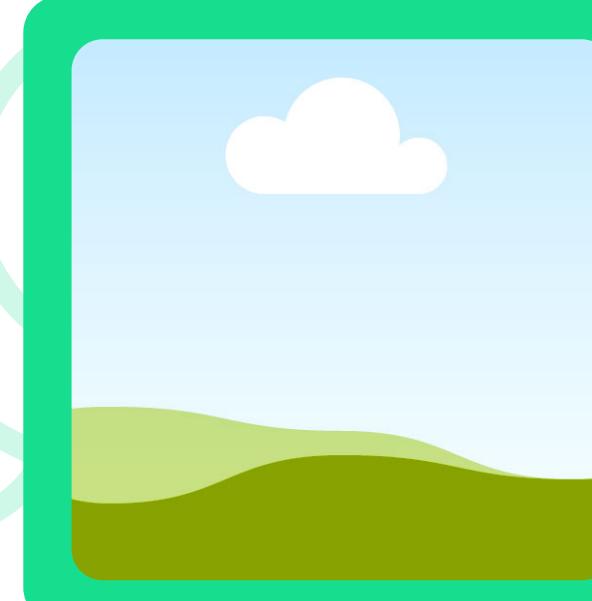
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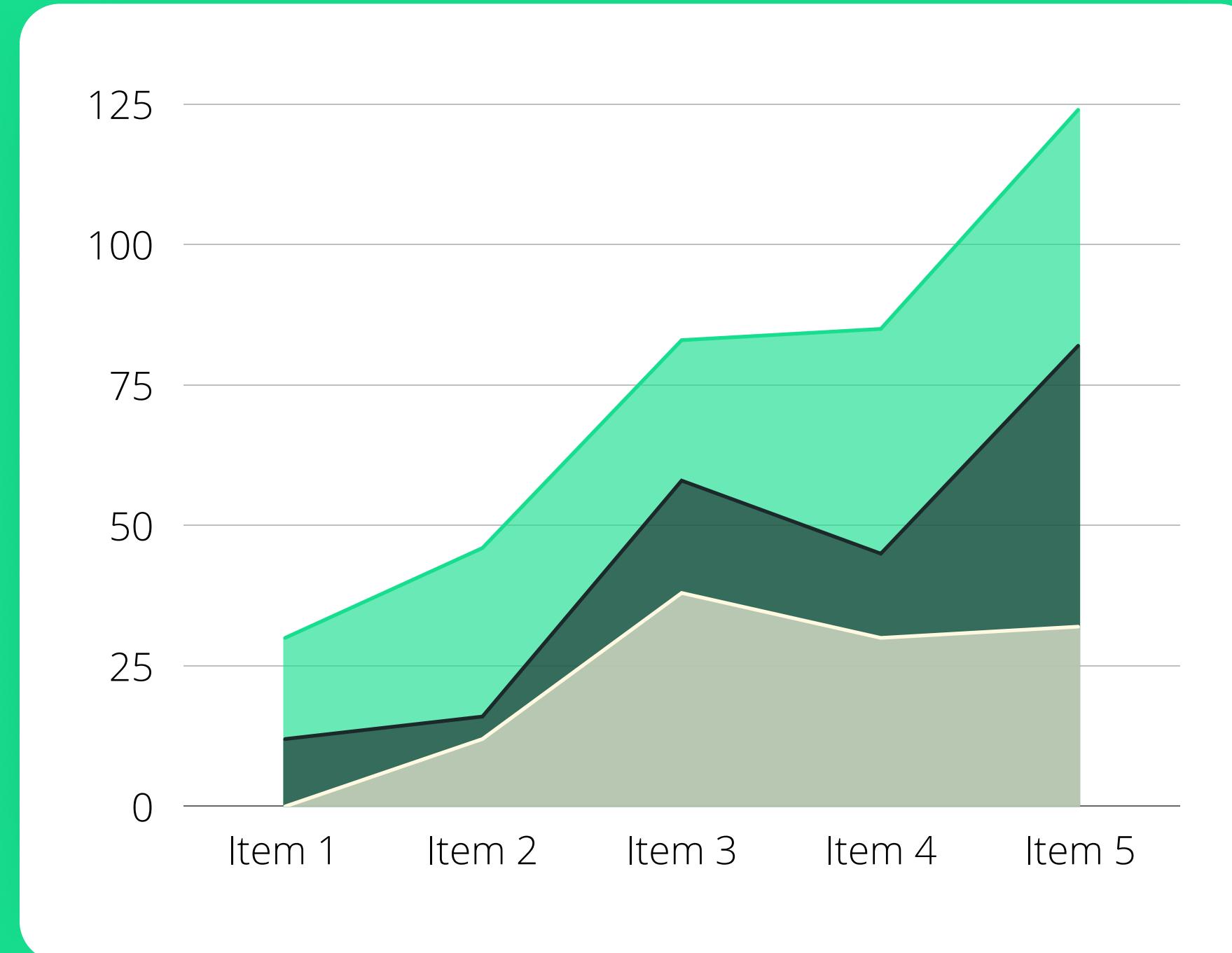
## Thynk Unlimited

Write about competitor's information.  
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## Studio Shodwe

Write about competitor's information.  
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## Investment & Funding

**50%**

**Write any related idea.**

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**50%**

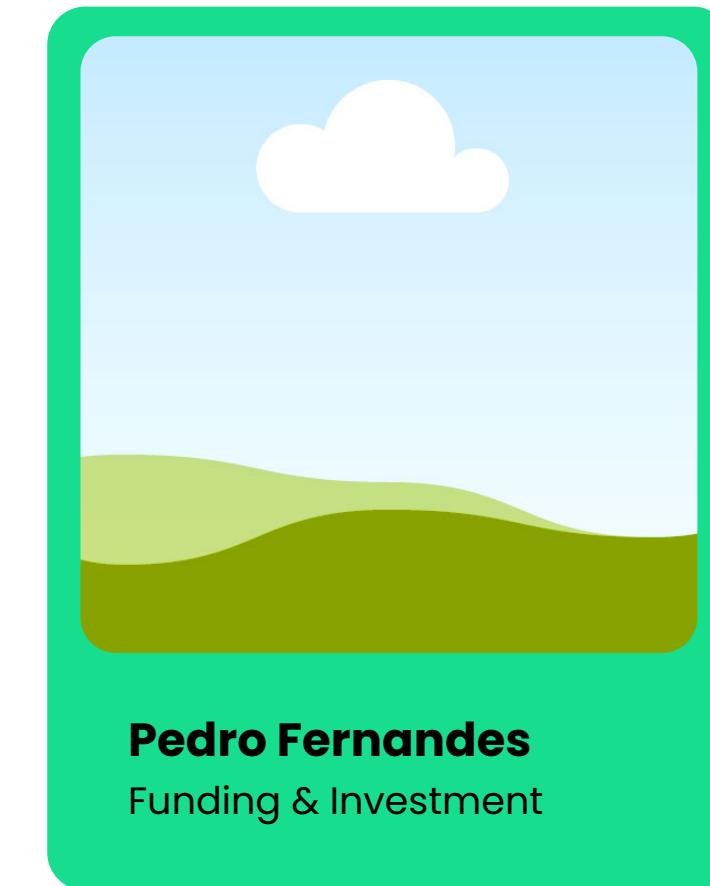
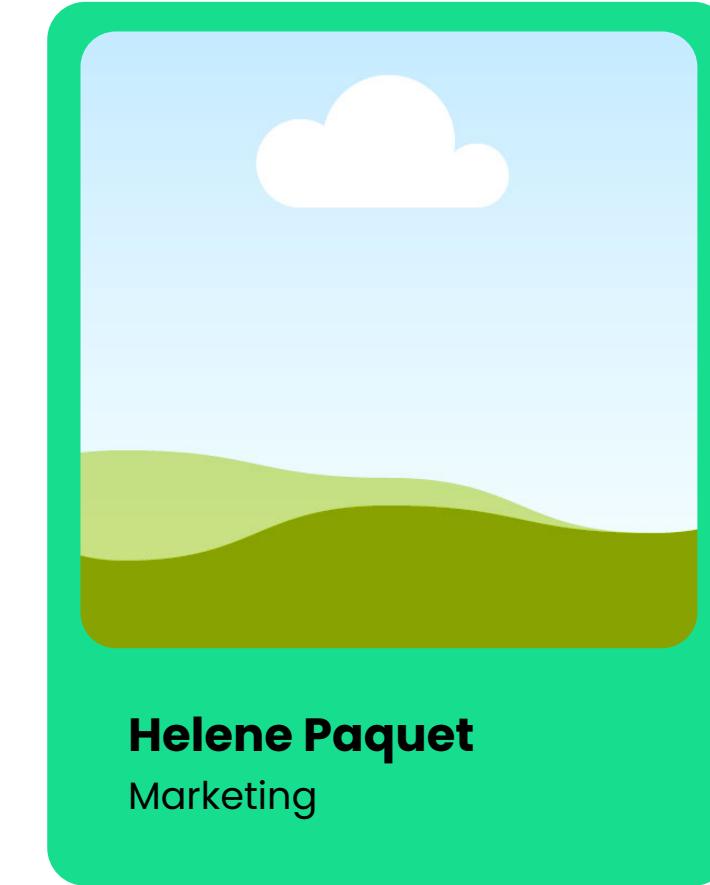
**Write any related idea.**

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# Our Teams

Write a short description explaining what this page is about.

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  dictum.





# End of the Presentation

I hope you are interested in  
investing in our project.

## Reach Us Out



**Address**  
qwerty



**Phone**  
qwerty



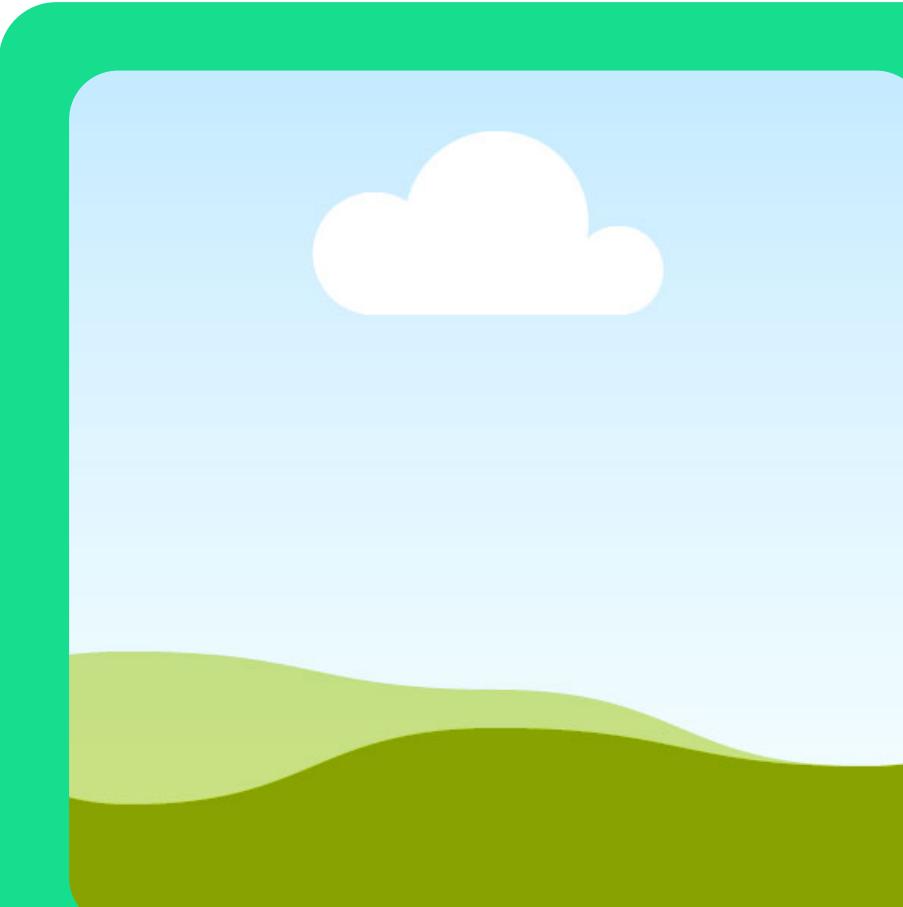
**Email**  
qwerty



**WASTO**

# Project Introduction

Wasto: We are an organization for better waste management in the society.



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**Write a subtopic or any related idea.**

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