PROJECT THREE: MILESTONE 1 – COVER PAGE

Team Number: Fri-35

Please list full names and MacID's of all *present* Team Members

Full Name:	MacID:
Buu Ha	Hab8
Harikashan Thayeswaran	thayeswh
Muhammad Danyal Afzal	azalm7
Zihao Song	songz64
Joshua Currie	currij15

MILESTONE 1 (STAGE 1) – WHY/HOW LADDERING

Team Number: Fri-35

1. Document both your conversation and a refined visual on a separate sheet of paper
2. Take a photo of both your rough work and refined visual
3. Insert each photo as a Picture (Insert > Picture > This Device)

Rough Work:

How to sort recycling?

-by container characteristics (colour, material, etc...)

-determine whether recyclable or not

Why do we need to sort recycling?

-reduce the amount of waste (environmental impacts)

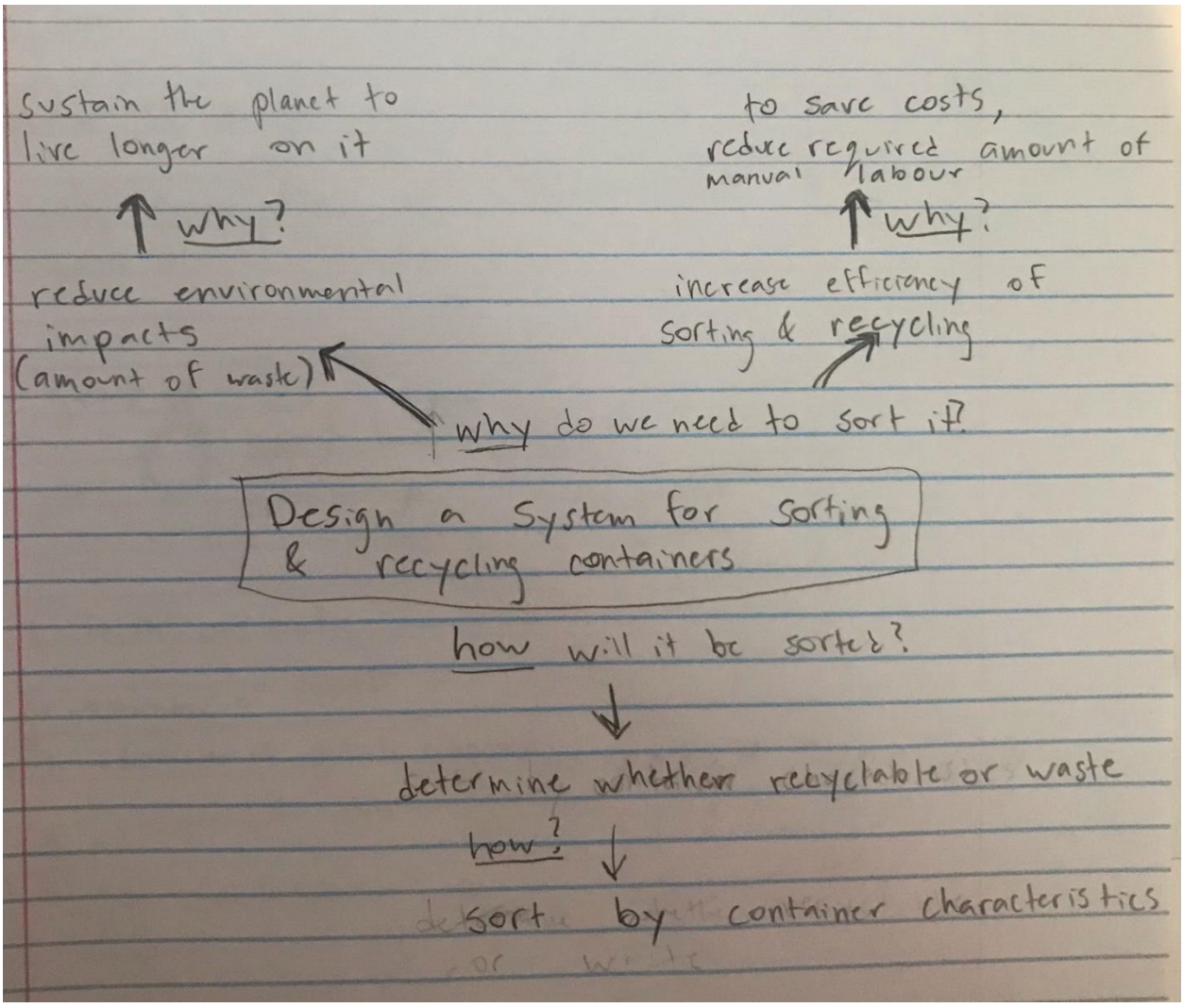
-for sustainability

-increase efficiency of sorting & recycling

-to cut costs

-less required manual labour

Final Visual:


sustain the planet to live longer on it
why?
reduce environmental impacts (amount of waste)
to save costs, reduce required amount of manual labour
why?
increase efficiency of sorting & recycling
why do we need to sort it?
Design a System for sorting & recycling containers
how will it be sorted?
determine whether recyclable or waste
how?
sort by container characteristics

MILESTONE 1 (STAGE 2) – LIST OF OBJECTIVES AND CONSTRAINTS

Team Number: Fri-35

As a team, create a list of objectives and constraints in the table below. The exact number you should have depends on what information you have gathered from the Project Pack as well your previously completed needs hierarchy.

Objectives	To sort containers based on given characteristics. To increase efficiency of recycling containers to reduce waste in landfills To design a device for to deposit containers into their respective recycling bin To design a computer program for transferring containers from the station to their specific bin
Constraints	The input (the actuator) of the device must fit the dimensions of 130.175mm by 101.600mm and should fit in a certain region. All 3 holes of the actuator must fit inside the baseplate. The weight of the container on the q-bot does not prevent the q-bot from moving The size of the container on the q-bot must be large enough to fit each container Device must be designed to include a hopper for holding containers during transfer The design of the hopper is such that it is required to hold upwards of 3 containers

MILESTONE 1 (STAGE 3) – REFINED PROBLEM STATEMENT

Team Number: Fri-35

Initial Problem Statement

1. Write the initial problem statement in the space below. This will have been defined in a previous lecture, prior to your scheduled Design Studio.

Design a system for sorting and recycling containers

Refined Problem Statement

2. Write the refined problem statement below. Kindly refer to the Refined Problem Statement rubric provided on Avenue (see P3 Rubrics). This will guide your group in creating a valid statement.

Design a system to identify, classify, and sort recycling material based on their characteristics and to ensure they are deposited in their respective recycling bins to reduce waste in landfills.