Project Design Phase-I
Problem Solution Fit

Date	01 October 2022
Team ID	PNT2022TMID11759
Project Name	Smart Waste Management System for Metropolitan cities
Maximum Marks	

Problem Solution Fit:

1.CUSTOMER SEGMENTS(S)
Public people

2.PROBLEMS/ PAINS
Non disposal of solid waste is a major issue in metropolitan cities of most developing countries.

It poses a serious threat to healthy living of the citizens.

3.TRIGGERS TO ACT
Proper checking and disposal of the wastes from the bins on time using ultrasonic sensors using IoT platform.

4.EMOTIONS
(BEFORE/ AFTER)
Before-overflow of waste
After-Proper disposal of waste

6.CUSTOMER LIMITATIONS
They should properly dispose the waste separately as bio degradable and non bio degradable in the waste bins.

9.PROBLEM ROOT/ CAUSE
They are not aware of the health issues caused because of non disposal of waste properly.

MC's are also not checking the bins and dispose it on time.

10.YOUR SOLUTION
Ultrasonic sensor senses the filling level of dustbin. Gas sensor measures the toxicity level of dustbin. If level is less than 10 cm or toxicity of gases is high then message is sent to MC through GSM module. The data of dustbin is also sent to the website after a fixed interval of dustbin so this information remains store on the website. The information is saved with date and time. If MC get to know about filling of dustbin then it will send truck driver to clean it. In this way the dustbins are cleaned timely.

5.AVAILABLE SOLUTIONS
(PROS AND CONS)
IoT assisted Waste Collection and Management system using QR codes.

QR based tracking and monitoring of household waste were carried out. **7.BEHAVIOR-ITS INTENSITY**
Monitors and send data of the waste levels as they fills in the bins and gives alert messages to clear the bins on time.

8.CHANNELS OF BEHAVIOR *(ONLINE)* Monitor and send send data to the online platform.
OFFLINE
Using the information gathered MC's take needed actions.