

PROJECT DESIGN

PHASE-I PROPOSED SOLUTION TEMPLATE

Date	01-11-2022
Team ID	PNT2022TM24249
Project Name	Smart Waste Management System For Metropolitan Cities
Maximum Marks	2 Marks

PROPOSED SOLUTION TEMPLATE:

Project team shall fill the following information in proposed solution template.

S.NO.	PARAMETER	DESCRIPTION
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none">➤ Trashes from bin is collected at fixed interval of time whether the is empty or full➤ If trash is overfilled, it may lead to several health problems to human➤ Difficult to identify location of trash bin➤ Excessive use of resources including manpower, vehicle and fuel
2.	Idea / Solution description	<ul style="list-style-type: none">➤ Ultrasonic sensor is interfaced with Arduino to identify the level of the dustbin➤ GPS module is used to identify the location of the bin➤ With the help of moisture sensor, it separates dry and wet waste➤ DC motor is used for segregating dry and wet waste➤ The status of the bin and location is sent to drivers with the help of GSM module
3.	Novelty / Uniqueness	<ul style="list-style-type: none">➤ It communicates information about fill level of bin and ensure collection only when the bin is full➤ It sends location of the bin to garbage truck. They spend less time on road so that traffic congestion can be reduced➤ In this project, 24x7 monitoring system is used for monitoring dumpsters➤ Compare to other system, it is less cost

4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> ➤ Reduces environmental pollution – if trash in bin is full, workers collect trash at correct time ➤ When people come nearer to bin, it opens automatically ➤ Truck drivers can easily identify the location of the bin ➤ Administrator can know the status of bin in all cities
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> ➤ This system is designed by government to people. ➤ Government provides this system to ensure public health and environmental safety
6.	Scalability of the Solution	<ul style="list-style-type: none"> ➤ Efficient collection management ➤ Increase efficiency ➤ Keep the environment clean and fresh ➤ Ensure physical safe