Project Design Phase-I
Proposed Solution Template

Date	16 October 2022
Team ID	PNT2022TMID04607
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)	• The main Concern with our environment has been waste management which impacts the society in several ways. • The Detection, Monitoring & Management of waste is one of the major problem of present era. • The traditional way of manually monitoring wastes in waste bins is a cumbersome process and utilizes more human effort, time and cost which can easily be avoided with our proposed model.
2.	Idea / Solution description	• The system uses ultrasonic sensors placed over the bins to detect the garbage level and compare it with the garbage bins depth. • Garbage level of the bins can be monitored through a web App. • We can view the location of every bin in the web application by sending GPS location from the device.
3.	Novelty / Uniqueness	• Two ultrasonics sensors are placed, each in different position. • If any stick is placed in bin the system should not send an alert stating that the bin is full. • Since two sensors are at different positions these kind of false alarm can be avoided.

4.	Social Impact / Customer Satisfaction	• If bins are cleaned in proper interval of time , the surrounding environment can be made hygiene and disease free. • It also makes the work of garbage cleaners' easy. • Let's say street A is a busy street and we see that the garbage fills up really fast whereas maybe street B even after two days the bin isn't even half full. This example is something that actually happens in day to day life. • What our system does is it gives a real time indicator of the garbage level in a trashcan at any given time. Using that data we can then optimize waste collection routes and ultimately reduce fuel consumption. It allows trash collectors to plan their daily/weekly pick up schedule.
5.	Business Model (Revenue Model)	When it comes to the market, it earns a lot of money.
6.	Scalability of the Solution	Data manipulation is made very simple and it is scalable.