

Project Design Phase-I
Proposed Solution Template

Date	16 October 2022
Team ID	PNT2022TMID35105
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">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • 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.