

Project Design Phase-I Proposed Solution Template

Date	28 September 2022
Team ID	PNT2022TMID05290
Project Name	Smart Waste Management in Metropolitan Cities Using IOT

Proposed Solution:

S. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To prevent overflow of waste from the dumpsters To notify the garbage collector to ensure timely disposal of the waste
2.	Idea / Solution description	Once the garbage level reaches 3/4 th of the dumpster, it must be detected by the sensors. Then it must immediately notify the garbage collector providing location details and efficient route to the dumpster.
3.	Novelty / Uniqueness	Without manual intervention, the dumpsters are sensed and the garbage collectors are alerted, thus ensuring efficient collection and disposal of wastes.
4.	Social Impact / Customer Satisfaction	Infra-red sensor enabled dumpsters prevents garbage overflow. Rotting of garbage and unpleasant odour due to the release of Methane gas is prevented thus promoting social health and improving air quality. Difficult, demeaning and dangerous job of human is replaced effectively by this technology.
5.	Business Model (Revenue Model)	This effective IoT based Smart waste management system can be an optimal solution for municipalities corporations, industries, residential areas by offering this automated waste management and disposal services. This can also generate income by producing biogas from the collected waste.
6.	Scalability of the Solution	The result of this project is that the sensor detects the level of the waste collected in the dumpsters, before the overflow starts the garbage trucks are meant to collect it. This is an efficient method as the trucks automatically segregates the different wastes so that it can be dumped directly to its corresponding places, ensuring less man power, increased air quality and an efficient waste management.