

## Project Design Phase-1

### Proposed Solution

Team ID	PNT2022TMID06036
Project Name	Smart Waste Management System For Metropolitan Cities

### Propose Solution Template:

S.No	Parameter	Description
1.	Problem statement	Dumping garbage in public areas is a common thing found in all developing countries and this mainly end up affecting the environment and creating several unhygienic conditions. In this project we're aimed to develop an smart waste bin with cost effective manner.
2.	Idea/Solution description	<p>It helps to keep track of the waste management system.</p> <p>The proposed system requires very minimal hardware components for implementation process.</p> <p>Here, we're using ultrasonic sensor to detect the level of the bin which is connected to a microcontroller. Once the level of the bin attains a certain threshold limit, the GSM will notify the central hub.</p> <p>When the central hub has been notified by GSM, it will glow the LED which makes the</p>

		workers to understand that the bin has attained the maximum limit.
3.	Novelty/Uniqueness	All the existing systems and proposed papers has too many electrical and mechanical components which is hard to maintain as well as it is not cost effective. The main ideology of this project is to be implemented in real-time. So, we can implement this in apartments, schools, college. The uniqueness is, it has a very simple user interface which can be understood by illiterate people too and requires only 4 components. It is way more easy to maintain.
4.	Social impact/Customer satisfaction	People don't have to worry about overflowing of bin especially in apartments where fifty plus houses are in same compound. This system helps to track and maintain it effectively.
5.	Business Model (Revenue model)	As the system we're proposing is cost effective, at first it can be implemented in apartments because there is a certain amount are given by each individual for maintenance, this system can be implemented within that amount. And it can be implemented in organizations too.
6.	Scalability of the solution	Easy understanding of the work flow , easy maintenance , cost effective.