

Project Design Phase-I
Proposed Solution Template

Date	28 September 2022
Team ID	PNT2022TMID02664
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)	Solid waste management is a major problem in India's growing cities due to urbanization and industrialisation. The vast amount of garbage modern society produces should be disposed of in an environmentally conscious manner. We often see overflowing garbage cans in our streets, and these flooded bins only contribute to an unhygienic society and lead to potentially hazardous health situations. There is a need for developing a smart waste management system that can solve this problem efficiently.
2.	Idea / Solution description	A Web app is built where the level of the garbage cans, its weight and location are monitored. Sensors are fitted in the garbage bins and the required data is collected and acquired from it. The real-time monitoring system indicates when the bin is full and alerts the authorized person to empty the bin. By making use of this technology the huge hassle of waste management can be handled easily.
3.	Novelty / Uniqueness	The system promotes the idea of dynamic waste collection which is prompted only when there is a need for it. This prevents the wastage of various resources like fuel, labour and time.

4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • Improves hygiene because of timely waste collection • Control the level of pollution and gases • Clean and healthy environment • Effective waste management system at low cost
5.	Business Model (Revenue Model)	Smart waste management generates revenue by offering services to government which can also be extended to private sectors. The customers can be charged for the providing of services from waste management to its safe disposal and recycling.
6.	Scalability of the Solution	The proposed system can be further developed to accommodate smart waste segregation in an effort to reduce waste production and automate the process of waste classification. This will ease the process of recycling. Future changes can include renewable sources of energy to power the system which will increase its lifetime.