

Project Design Phase-I Proposed Solution Template

Date	19 October 2022
Team ID	PNT2022TMID13797
Project Name	Smart Waste Management System For Metropolitan Cities
Maximum Marks	2 Marks

Proposed Solution Template:

The project team shall fill in the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	This project deals with the problem of waste management in smart cities, where the garbage collection system is not optimized. This project enables organizations to meet their smart garbage management system needs. This system allows the authorized person to know the fill level of each garbage bin in a locality or City at all times, to give a cost-effective and time-saving route to the truck drivers.
2.	Idea / Solution description	<p>The key research objectives are as follows:</p> <ul style="list-style-type: none"> • The proposed system would be able to automate the solid waste monitoring process and management of the overall collection process using IOT (Internet of Things). • The Proposed system consists of main subsystems namely Smart Trash System (STS) and Smart Monitoring and Controlling Hut (SMCH). • In the proposed system, whenever the waste bin gets filled this is acknowledged by placing the circuit at the waste bin, which transmits it to the receiver at the desired place in the area or spot. • In the proposed system, the received signal indicates the waste bin status at the monitoring and controlling system.
3.	Novelty / Uniqueness	We are going to establish SWM in our college but complex thing is that janitor (cleaner) doesn't know to operate these things practically so here our team planned to build a wrist band to them, that indicates via light blinking when the dustbin is full of waste and this is Uniqueness we made here besides from project constrain.
4.	Social Impact / Customer Satisfaction	From the public perception as worst impacts of present solid waste disposal practices are seen as direct social impacts such as neighborhoods of landfills to communities, breeding of pests, and loss in property values

5.	Business Model (Revenue Model)	<p>Waste Management organizes its operations into two reportable business segments:</p> <p>Solid Waste, comprising the Company's waste collection, transfer, recycling, resource recovery, and disposal services, which are operated and managed locally by the Company's various subsidiaries, which focus on distinct geographic areas; and Corporate and Other comprise the Company's other activities, including its development and operation of landfill gas gas-to-energy facilities in INDIA, its recycling brokerage services, and various corporate functions.</p>
6.	Scalability of the Solution	<p>In this regard, smart city design has been increasingly studied and discussed around the world to solve this problem. Following this approach, this paper presented an efficient IoT-based and real-time waste management model for improving the living environment in cities, focused on a citizen perspective. The proposed system uses sensor and communication technologies where waste data is collected from the smart bin, in real-time, and then transmitted to an online platform where citizens can access and check the availability of the compartments scattered around a city.</p>