

Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID53005
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)	This project deals with the problem of waste management in smart cities, where the garbage collection system is not optimized. This project enables the organizations to meet their needs of smart garbage management systems. This system allows the authorized person to always know the fill level of each garbage bin in a locality or city, to give a cost-effective and time saving route to truck drivers.
2.	Idea / Solution description	The key research objectives are as follows: <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. • 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 circuits 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	The first step toward creating efficient, sustainable waste management system is learning why our current systems aren't working. The following technologies combine IoT data analytics with modern solutions to help identify challenges and improve as they go.
4.	Social Impact / Customer Satisfaction	From the public perception as worst impacts of present solid waste disposal practices are seen direct social impacts such as neighborhood of landfills to communities, breeding of pests and loss in property values.
5.	Business Model (Revenue Model)	Waste Management organizes its operations into two reportable business segments: <p>Solid waste, comprising the Company's waste collection, transfer, recycling, and resource recovery and managed locally by the Company's various subsidiaries which focus on distinct</p>

		geographic areas; and Corporate and other, comprising activities, including its development and operation of landfill gas to energy facilities in INDIA, and its recycling brokerage services, as well as various corporate functions.
6.	Scalability of the Solution	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 citizen perspective. The proposed system uses sensor and communication technologies where waste data is collected from smart bin, in real time.