Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID47771
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 addresses the issue of waste management in smart cities with underperforming garbage collection systems. With the help of this project, businesses may get the intelligent garbage management solutions they require. This technology enables the authorized person to provide truck drivers with a time- and cost-efficient route by always knowing the level of fill in each garbage can in a neighborhood or city.
2.	Idea / Solution description	The following are the main research goals: • The proposed system would be able to use IOT to control the complete collection process and automate the solid waste monitoring procedure (Internet of Things). • The Smart Trash System (STS) and the Smart Monitoring and Controlling Hut are the two key components of the proposed system (SMCH). • The circuit at the garbage bin, which communicates it to the receiver at the desired location in the area or spot, is placed at the waste bin in the proposed system to acknowledge whenever the waste bin is filled. • In the suggested system, the waste bin status at the monitoring and regulating system is shown by the signal that is received.
3.	Novelty / Uniqueness	We intend to implement SWM in our college, but the hardest part is that janitors (cleaners) don't know how to use it practically. To solve this problem, our team decided to create a wristband for them that flashes a light to let them know when the trash bin is full. This is something unique that we were able to do here despite the limitations of the project.
4.	Social Impact / Customer Satisfaction	According to popular perception, the direct social effects of current solid waste disposal practices—such as the proximity of landfills to neighborhoods, the development of pests, and a decline in property values—are the worst effects.

5.	Business Model (Revenue Model)	The operations of Waste Management are divided into two reportable business segments: Solid Waste, which consists of the company's waste transfer, recycling, resource recovery, and disposal services, which are run and managed locally by its various subsidiaries, each of which focuses on a specific geographic area; Corporate and Other, which consists of the company's other activities, such as the development and operation of landfill gas-to-energy facilities in India, its recycling brokerage services, as well as various corporate functions.
6.	Scalability of the Solution	In order to address this issue, smart city design is being researched and discussed more and more globally. Following this methodology, this article proposed a powerful IoT-based, real-time trash management model with an emphasis on citizens to enhance urban living conditions. The proposed method makes use of sensor and communication technologies, collecting garbage information from the smart bin in real-time and sending it to an internet site that city residents may access to see whether the compartments are still available.