

Project Design Phase-I

Proposed Solution

Date	28 September 2022
Team ID	PNT2022TMID51107
Project Name	Smart Waste Management System For Metropolitan Cities
Maximum Marks	2 Marks

Proposed Solution:

S.NO	PARAMETER	DESCRIPTION
1.	Problem Statement (Problem to be solved)	This project addresses the issue of waste management in smart cities with inefficient garbage collection systems. This project helps the enterprises to fulfil their requirements for intelligent garbage management solutions. The authorised person can use this method to provide truck drivers with a time- and money-saving route by always knowing the level of fill in each garbage can in a neighbourhood or city.
2.	Idea / Solution description	<p>The key research objectives are as follows:</p> <ul style="list-style-type: none"> • The suggested system would be able to use IOT (Internet of Things) to automate the solid waste monitoring process and control of the whole collection operation. • The major components of the proposed system are the Smart Trash System (STS) and the Smart Monitoring and Controlling Hut (SMCH). • In the suggested system, the circuit is placed at the garbage bin to recognise when it is full. The circuit then communicates this information to the receiver, which is located at the desired location in the area or spot. • In the suggested method, the monitoring and control system's monitoring and controlling system receives a signal that shows the state of the trash bin.
3.	Novelty / Uniqueness	We intend to implement SWM in our college, but the real challenge is that the janitor (cleaner) doesn't know how to use this equipment practically. In this case, our team planned to build a wristband for them that alerts them when the dustbin is full via light blinking. This is another unique decision we made here in addition to the project's limitations.
4.	Social Impact / Customer Satisfaction	According to popular opinion, the direct social effects of current solid waste disposal procedures, such as the proximity of landfills to neighbourhoods, the development of pests, and the decline in property values, are the worst effects.

5.	Business Model (Revenue Model)	Solid Waste, which consists of the Company's waste collection, transfer, recycling, resource recovery, and disposal services. 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. recycling brokerage services and various corporate functions.
6.	Scalability of the Solution	In order to address this issue, smart city design is being researched and debated 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 suggested 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 visit to see whether the compartments are still available.