Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID27888
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)	The objective of the project is to utilise sensors, intelligent monitoring systems, and mobile applications to address the challenges of waste management in metropolitan cities. Sensors are the first smart waste management technology to improve the effectiveness of the garbage collecting process. These devices help optimize the best possible route containing fully filled containers and create smart schedules for drivers.
2.	Idea / Solution description	The key research objectives are as follows: ➢ The proposed system will be able to monitor and supervise garbage collection management process using IoT(Internet of Things) and be able to segregate different types of waste with the use of sensors. ➢ The proposed system contain a circuit board. So, when the garbage bin reaches its capacity it will send the notifying signal to the garbage collection truck. Also the components used in the circuits are powered by the solar panel.
3.	Novelty / Uniqueness	In order to reduce trash in metropolitan cities, we're planning to establish a combination of employee and citizen participation. In order to make it easier for the garbage collection truck to collect the garbage, residents can provide pictures and the location of the garbage in their neighbourhood via mobile app.
4.	Social Impact / Customer Satisfaction	➢ The worst possible impact from the perspective of the general public would be how this smart waste management system will help in dramatically reducing the already overwhelming landfills that are ravaging the environment. ➢ What will be done with trash that cannot be recycled?
5.	Business Model (Revenue Model)	➢ Selling end-of-life products and materials for reuse on online material marketplaces can convert their value from lost to acquired. By engaging in what is known as "circular material

		trading," businesses can create new sources of income and profit from their waste resources. ➢ By offering different waste management and disposal services as well as recycling options to clients in the residential, commercial, industrial, and municipal sectors, Waste Management generates revenue. The Business earns a variety of fees related to its service offerings as a source of income.
6.	Scalability of the Solution	This project solution gives a glimpse of a large-scale application that may be found in several smart cities across India. This project's implementation has been broken down into several phases. In later phases, it will also cover small towns and tier III cities, starting with metropolitan areas and working toward the idea of smart cities. We're here right now to show how the model is actually working and to provide some context for the actual ramifications.