Project Design Phase-I
Proposed Solution Template

Date	06 May 2023
Team ID	NM2023TMID15707
Project Name	Smart City waste Management System with connected trashcans

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 current waste management system in cities is inefficient, leading to overflowing trash cans, irregular waste collection, inadequate recycling practices, and environmental hazards. There is a need for a smart city waste management system that addresses these challenges and improves overall waste management processes.
2.	Idea / Solution description	There have always been cases of overflowing trash from the bins, causing havoc in the surroundings. With the presence of this waste management system, the user is alerted when the trash can is full, so as to take necessary action. The bin status is sent to a web app through the cloud, which makes real-time monitoring a possible case for the users.
3.	Novelty / Uniqueness	Our system stands out due to its integration of various smart technologies. The real-time monitoring of trash can fill levels, intelligent waste segregation, and data-driven decision-making distinguish it from conventional waste management systems.
4.	Social Impact / Customer Satisfaction	The smart city waste management system brings several social benefits. It improves the cleanliness and aesthetics of the city by preventing overflowing trash cans and littered streets. Efficient waste collection reduces environmental and health hazards, leading to a safer and healthier living environment. Citizens gain access to user-friendly tools, information, and recycling facilities, increasing convenience and promoting sustainable practices.
5.	Business Model (Revenue Model)	• Sale/Lease of intelligent trash cans and related sensors to waste management authorities. • Subscription fees for waste management analytics and optimization services. • Advertising and sponsorship opportunities within the mobile

		application and public awareness campaigns. • Grants and funding from government bodies and environmental organizations supporting smart city initiatives.
6.	Scalability of the Solution	The smart city waste management system is designed to be scalable. It can be implemented in various cities, adapting to local waste management regulations and infrastructure. The modular design allows for easy integration with existing waste management systems, ensuring scalability and minimizing disruption. With proper customization and deployment, the solution can be replicated and expanded to address waste management challenges in different regions, thereby maximizing its impact.