Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	29-SEP2022
Team ID	PNT2022TMID46746
Project Name	Project -Smart waste management for metropolitan cities
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User waste categories.	User decay User non-decay
FR-4	User dustbin	User size User capacity
FR-5	Eliminate unefficient picks.	Eliminate the collection of half-empty bins. The sensors recognize picks
FR-6	Plan waste collection routes.	The tool semi-automates waste collection route planning

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	1.IoT device verifies that usability is a special and important perspective to analyze user requirements,which can further improve the design quality. 2. In the design process with user experience as the core, the analysis of users' product usability can indeed help designers better understand users' potential needs in waste management.
NFR-2	Security	1.Use a reusable bottles 2. Use reusable grocery bags 3. Purchase wisely and recycle

NFR-3	Reliability	1.Smart waste management is also about creating better working conditions for waste collectors and drivers. 2. Instead of driving the same collection routes and servicing empty bins, waste collectors will spend their time more efficiently, taking care of bins that need servicing
NFR-4	Performance	1.The Smart Sensors use ultrasound technology to measure the fill levels (along with other data) in bin several times a day. 2. Using a variety of IoT networks(NB IoT,GPRS), the sensors send the data to Smart Waste Management Software System, a powerful cloud-based platform, for data-driven daily operations, available also as a waste management app. 3. Customers are hence provided data-driven decision making, and optimization of waste collection routes,frequencies, and vehicle loads resulting in route reduction by at least 30%.
NFR-5	Availability	By developing & deploying resilient hardware and beautiful software we empower cities, businesses,and countries to manage waste smarter.
NFR-6	Scalability	Using smart waste bins reduce the number of bins inside town , cities bacause we able to monitor the garbage 24/7 more cost effect and scalability when we moves to smarter.