PROJECT DESIGN PHASE II

Solution Requirements (Functional & Non-functional)

Date	05 October 2022
Team ID	PNT2022TMID02546
Project Name	Project - Smart Waste management System 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	Admin Updation	Add to the database the specifics of every trash can in the city.
FR-4	Real Time Monitoring	The dashboard displays full trash cans.
FR-5	Bins Updation after Cleaning	Update the information about the containers that were cleaned

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**USABILITY**	Usability is a unique and significant perspective to examine user requirements, which can further enhance the design quality, according to IoT devices. Analysing how well people interact with a product can help designers better understand customers' prospective demands for waste management, behaviour, and experience in the design process when user experience is at the centre.
NFR-2	**SECURITY**	Since the module provides real-time data rather than stored data, changing the data of the bins is impossible.

NFR-3	**RELIABILITY**	The module tries to provide correct data and is very reliable because it operates around-the-clock.
NFR-4	**PERFORMANCE**	Ultrasound technology is used by the Smart Sensors to Bin fill levels should be measured together with other information. multiple times per day. Using different IoT networks The sensors provide the data via (NB-IoT, GPRS), The Smart Waste Management Software from Sensoneo strong cloud-based platform System for Everyday processes that are data-driven are likewise available as waste management software. Customers are thus given data-driven decision-making options. the creation and improvement of garbage collection routes, frequencies, and the route's resulting car loads decrease of at least 30%
NFR-5	**AVAILABILITY**	By creating and deploying durable hardware utilising gorgeous software, we enable enterprises, cities, and better waste management in nations.
NFR-6	**SCALABILITY**	Scaling the modules is fairly simple because they contain very little hardware and software.