Project Design Phase-II
Solution Requirements (Functional Requirements and Non Functional Requirements)

Date	29 October 2022
Team ID	PNT2022TMID28587
Project Name	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	**Analysing the Bin level**	Acquire the levels of Waste bins in a regular interval of time.
FR-4	**Transport Router**	To make a efficient route for the collection of garbages around a area.
FR-5	**GPS Access**	To Know the location.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	➢ It aims to optimize ease of use while offering maximum functionality. ➢ A smart solution has been proposed to make the waste sorting more simple and accurate,and improve the user experience, usability, and satisfaction.
NFR-2	**Security**	➢ The information of the users will be highly secured, the accounts are verified with Gmail. ➢ If the products are misplaced then the GPS driven sensor gives an alert.
NFR-3	**Reliability**	➢ Operates in a defined environment without failure resulting in less manpower, emissions, fuel use and traffic congestion.

NFR-4	**Performance**	➢ The real-time monitoring of the garbage level with the help of sensors and wireless communication will reduce the total number of trips required of Garbage collecting truck. ➢ The system will provide accurate reports, thus increasing the efficiency of the system. ➢ This will reduce the total expenditure associated with the garbage collection.
NFR-5	**Availability**	➢ The smart waste bins are available in Convention centers, buildings, stadiums, and transportation facilities and captures high-quality waste data and informs staff when it gets full.
NFR-6	**Scalability**	➢ A versatile scalable smart waste-bin system based on limited waste management could potentially lead to great improvements. ➢ Once these smart bins are implemented on a large scale by replacing the traditional bins, the waste can be quickly managed to its efficient level as it avoids unnecessary lumping of wastes on roadside.