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

Date	16 October 2022
Team ID	PNT2022TMID06150
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	Bin level analysing	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 the area.
FR-5	GPS access	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**	• 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 system will provide accurate

		reports,thus increasing efficiency of the system. • 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. • This will reduce the total expenditure associated with 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.