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

Date	15 October 2022
Team ID	PNT2022TMID54350
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**	- User Registration through Mail ID. - User Registration through Mobile Number.
FR-2	**User Confirmation**	- User Confirmation via One Time Password. - User- Conformation via E-mail.
FR-3	**User login**	- The user able to login in to their account. - The system must show an error message if the userenters inaccurate data. - On the login screen, a user has the option of savingtheir username and password.
FR-4	**Present map views**	- The system enables updated information on real-time location usingGPS, to view and access the maps. - User will be able to see the updated location of the smart bins. - The user can view the status of the smart bin. - The technology enables users to obtain the locationof the Garbage Truck.
FR-5	**Functionality of the system**	The Sensor Circuit of the system helps to measure the volume. The Transfer of data to the required database is done. Access of data from the database helps to identify the trash and satisfies the requirements for garbage collection and overall waste management. Hence producing real-time results.
FR-6	**User logout**	- User has the option to sign out from system. - This is a multiuser technology.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	- Easy to use. - Portable. - No special Requirements. - Easy to update.
NFR-2	**Security**	The registered mobile number, email address and one time password arerequired to access to the system and the required data.
NFR-3	**Reliability**	- The level and the volume of the garbage present in the bins are updated. - The maps are updated. - Reduces cost, energy and makes environment more sustainable. **Hence making the system more Reliable.**
NFR-4	**Performance**	The technology is available all the time, and is accessed everywhere. The system will be compatible with all devices.
NFR-5	**Availability**	The technology would be made available everywhere, anytime and anyhow. This is a cheaper method and available to all.
NFR-6	**Scalability**	This can be extended to each and every part of the country – rural or urban. More the users, vast waste management system. The maintenance of smart trash cans helps to prevent overflowing along roadsides. Once these smart become popular, they aid to manage and make the process efficient.