

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

Date	23 October 2022
Team ID	PNT2022TMID45346
Project Name	Project – Smart Waste Management System
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	Assign each dustbin a unique ID	Each dustbin must have unique ID for proper mapping of dustbins
FR-2	Geolocation of every Smart Dustbin	Location of each dustbin must be mapped to the ID of the dustbins
FR-3	Live status of each dustbin	Status or how much dustbin is filled should be monitored by the Collectors
FR-4	Notify filled dustbin to cloud	If the dustbin is filled for around 90-95%, then it must be entered in the cloud
FR-5	Notify to the collectors	If an entry is done in the cloud, it must be notified to the garbage collectors
FR-6	Tracking system in trucks	Trucks must have the tracking system to find a short and easy path for the truck drivers, in order to make efficient garbage collection
FR-7	Change of dustbins	If dustbin is damage or has some technical flaws, it must be changed and new dustbin ID must be entered in the cloud for the respective geo-location

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	This technology will be and can be used on the daily basis, in order to have clean and green environment
NFR-2	<b>Security</b>	This application need not be more secure as it does not contain any private information, but has many security precautions
NFR-3	<b>Reliability</b>	This is most reliable in the current situation as garbage is being increased day by day
NFR-4	<b>Performance</b>	Customers have provided data-driven decision making, optimisation of waste collection routes, frequency and vehicle loads resulting in route reduction

NFR-5	<b>Availability</b>	By developing & deploying resilient hardware and beautiful software we empower cities, businesses, and countries to manage waste smarter.
NFR-6	<b>Scalability</b>	Using smart waste bins reduce the number of bins inside town , cities coz we able to monitor the garbage 24/7 more cost effect and scalability when we moves to smarter.