

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

Date	03 October 2022
Team ID	B7-1A3E
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	Detect Dustbins Volume	Taking sensor reading from the Ultrasonic and weight sensor
FR-2	Data Transfer	The data collected from the sensors are pushed to IBM cloud so the data can be streamed real time
FR-3	User access	Concerned authorities should be able to access the webpage regarding bins status and location Real time monitoring of bins is required
FR-4	SMS alert	Once the garbage bin fulfils the condition for garbage collection when it reaches certain level, SMS alert should be sent to garbage collectors
FR-5	Empty the fully filled bins	By using the bin status (not filled/filled). It is efficient to clear only non-empty bins

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The web application requires a user-friendly user interface while makes it convenient for the user to use.
NFR-2	Security	The web application can be only accessed by Authorised user.
NFR-3	Reliability	The application should always be reliable and allow for information streaming to the concerned authorities.
NFR-4	Performance	The application must be designed such that it has a quick response time, including page load and refresh time.
NFR-5	Availability	IOT device integrated smart dustbin must be cheap and easily available.
NFR-6	Scalability	We can monitor the bins 24/7 ,therefore smart dustbin and the application can be used in large scale

