

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

Date	22 October 2022
Team ID	PNT2022TMID21348
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	Product Installation	Trash bin installation of embedded components such as sensors and Raspberry Pi
FR-2	Pushing data to Database	Getting the sensor readings from the ultrasonic sensor and load cell
FR-3	User Interface	Storing the data in cloud for backup When the threshold level is reached, 1. Notifies the user 2. Sends the GPS location

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The product is simple to use and install.
NFR-2	Security	All communication must use end to end encryption.
NFR-3	Reliability	The sensor data is monitored anytime and from anywhere on all devices.
NFR-4	Performance	The users are notified and get the location of bins in a very efficient way, which reduces human effort.
NFR-5	Availability	The data is monitored via a web app and notified 24/7 whenever the threshold level is reached.
NFR-6	Scalability	Capable of incorporating a large number of garbage sensors.