

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

Date	03 October 2022
Team ID	PNT2022TMID40462
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	The municipality have to register by creating id and password through webpage by using g-mail.
FR-2	User Confirmation	User can login through their id and password and the status can be monitored.
FR-3	Smart waste bins	If waste in the bins reaches 80%, then sensors in the bin gives an alert to the user and the user can monitor periodically so that we can collect some data.
FR-4	GPS	GPS is used to trace the actual location of the bin and helps to collect the filled smart bins from the particular location.
FR-5	Cloud	The data which are collected is stored under the IBM cloud.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The portal can be easily accessible and monitored. This is an user-friendly process.
NFR-2	Security	Data are more secured and only the user can login to the webpage. No other person can access the data except the user.
NFR-3	Reliability	Smart waste management provides better working conditions for drivers and waste collectors. They spend their time more efficiently by this technique.
NFR-4	Performance	Users are provided with decision-making and optimization of waste collection routes and vehicle loads resulting in at least 30% of route reduction.
NFR-5	Availability	The system is user-friendly. Failure percentage is much less and 24*7 support is available.
NFR-6	Scalability	Finally the filled smart bins can be easily managed from small towns to large metropolitan cities.