Project Design Phase-II

Solution Requirements (Functional & Non-functional)

Date	2 NOVEMBER 2022
Team ID	PNT2022TMID37138
Project Name	Smart waste management system in Metro politan 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	**Sensored bins**	• We are preparing bins with sensors and other devices.
FR-2	**Implementation of monitoring system**	•Bins can be seen on the map and it will be monitored and the trashes are collected once the bin gets filled up.
FR-3	**Segregation of different wastes**	•Segregation is the major step and its not only our responsiblity but also its people's responsibility to do so particular knowledge will be given to people.
FR-4	**Enroutingof trash collection**	•Trash is collected once the bin gets filled by the use of trucks or any comfortable vehicles by the actually planned route.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	•IOT technologies helps designers to understand user's product usability and starts focussed designing of the product to fulfill user needs.
NFR-2	**Security**	•Security depends on cloud services to maintain the collected data to be kept so confidentially.
NFR-3	**Reliability**	•In IOT applied to external and public environments, communication is important for service provisioning. In particular, since this type of IoT has a wide service domain, reliable communication is necessary for devices to communicate with each other.
NFR-4	**Performance**	•The sensor can perform its best to detect the weightage of bins and inform about the collection of trash in particular areas.
NFR-5	**Availability**	•With the usage of durable hardware and software cities are able to manage trashes in an efficient way.
NFR-6	**Scalability**	•Customization of bins in such a way to optimize the resource allocation and to increase sustainabilty of waste management.