

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

|               |  |
|---------------|--|
| Team ID       | PNT2022TMID22821                                       |
| Project Name  | Smart Waste Management system for Metropolitan Cities. |
| Maximum Marks | 4 Marks  |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

| <b>FR.NO</b> | <b>Functional Requirements</b> | <b>Sub Requirement (Story/Sub-Task)</b>         |
|--------------|--------------------------------|---|
| FR-1         | User registration              | Registration through e-mail id & Mobile number. |
| FR-2         | User confirmation              | Confirmation via email Confirmation via OTP.    |
| FR-3         | Web application                | Node-Red -Service.                              |
| FR-4         | Configure to Device            | IBM Watson IOT Platform.                        |
| FR-5         | Database                       | Detailed database of bins and stands.           |
| FR-6         | Python Script                  | IBM IOT Platform.                               |

## Non-Functional Requirements:

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

| FR.NO | Non-Functional Requirement | Description  |
|-------|----------------------------|--|
| NFR-1 | Usability                  | The reduction of waste.  |
| NFR-2 | Security                   | Prediction in bin fulness.   |
| NFR-3 | Reliability                | Effective waste disposal.  |
| NFR-4 | Performance                | Optimize source allocation, reduce running costs and increase sustainability of waste services.  |
| NFR-5 | Availability               | Available for the allocated time by the municipality or the private companies.   |
| NFR-6 | Scalability                | This is very effective in managing waste in big city. Here priority system is used to clean the city all the time without any overflowing dumpsters. |