**Project Design Phase-I**

**Proposed Solution Template**

| Date | 24 September 2022 |
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| Team ID | PNT2022TMID42279 |
| Project Name | Smart Waste Management System For Metropolitan Cities |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

| **S.No.** | **Parameter** | **Description** |
| --- | --- | --- |
|  | Problem Statement (Problem to be solved) | The amount of garbage that humans generate is rapidly increasing, and it will be impossible to control without radical adjustments.  The uncollected garbage when the dustbin is full is a common and serious issue at all places. This project offers a waste collection system based on the Internet of Things (IOT). |
|  | Idea / Solution description | The garbage collection system allows to monitor the garbage levels in all of the smart trash bins in the defined region, as well as provides updates on which bins are full and need to be collected in every round of garbage collection. Moreover, the system also shows the efficient path between the driver and the  bin and provides navigation for fetching waste from the smart trash bins which are filled. |
|  | Novelty / Uniqueness | * Solar power in recent trends is leading and being in use as it is easily available, vast and eco – friendly form of energy. * It has all of the characteristics of a perfect energy source. * It simple to convert solar energy into useful electrical energy and thermal energy with the help of solar panels. * The system also develops an efficient automatic fire detection and fire suppression system. * The systems can be placed/located at various places in huge dumping grounds. |
|  | Social Impact / Customer Satisfaction | we power the system by the help of the most abundant source of energy, that is the solar  energy. This energy can be used to charge the battery and inturn power the system, making the smart trash bins and the waste  management system eco – friendly. The unpredictability of fires in dump yards arises with garbage disposal in them. |
|  | Business Model (Revenue Model) | Waste Management generates revenue through the provision of various waste management and disposal services and recycling solutions to residential, commercial, industrial, and municipal clients. The Company derives its revenue in the form of various fees associated with its service offerings. |
|  | Scalability of the Solution | This garbage collection system provides the optimized route and navigation system ,thereby reducing the travel distance and travel cost making it more efficient. The entire system is powered using the solar energy. Thus, making the system eco–friendly. |