PROJECT DESIGN PHASE-I - SOLUTION FIT

Project Title: SMART WASTE MANAGEMENT SYSTEM IN METROPOLITAN CITIES

Team ID: PNT2022TMID17949

1.CUSTOMER SEGMENT(S) `PB`	6. CUSTOMER CONSTRAINTS `PB`	5. AVAILABLE SOLUTIONS: `PB`
Government and corporates managing the public	✓ Indicating the waste level ✓ Alerting through buzzer system ✓ Low power requirement ✓ User portable	• **Recycling** - it has economic and environmental advantages. • **Incineration** - This disposal process can be a source of air pollution. •**Landfill** - significant cause of health and environmental problem Example: gas from these landfills is often incredibly dangerous • **Biological Reprocessing**- the ends of the stock is natural gas, which is used to produce heat an electricity. • **Animal Feed** - one of the ecological types of waste
2. JOBS-TO-BE-DONE / PROBLEMS `MS`	**9. PROBLEM ROOT CAUSE** `MS`	**7. BEHAVIOUR :** `MT`
➢ Managing the wastes in metropolitan cities. ➢ Providing a smart solution in the form of smart bin. ➢ Reducing the pollution caused by the trashes. ➢ Making the public more awared	1. Lack of Public Awareness 2. Refusal to Learn About Compliance 3. Insufficient Investment in Waste Management 4. Lack of Proper Machinery **NEEDS:** Saving money protect the environment creating jobs builds resilience reduce emission and promote community	▪ Proper installation of bins at regular interval. ▪ Providing enough awareness to people. ▪ Correct disposal of trashes in the bin. ▪ Standard discharging of wastes once the bin is filled ▪ Keeping for reloading of waste.

3. TRIGGERS:

PS

The amount of waste generated by an incident affects decisions regarding how to manage the waste, including the storage, treatment and disposal of the waste.

Available capacity is further limited if facilities still accept waste from daily activities during the incident response or choose not to accept incident-generated waste at all.

4. EMOTIONS: BEFORE / AFTER

MT

BEFORE:
1. Improper management of wastes
2. Less control of public in waste disposal

AFTER:
1. Efficient way of trash monitoring
2. Improvement in cleanliness and public hygiene
3. Quick action of emptying and refilling of bin

10. YOUR SOLUTION:

MT

To implement a smart bin built on a microcontroller based platform Arduino Uno board which is interfaced with GSM modem and Ultrasonic sensor which can gives the status of the waste present in the dustbin to the municipal authority.

8. CHANNELS of BEHAVIOUR:

PS

ONLINE:
Information about the level of trashes filled is indicated and the data is transferred to the control room for each bin including its specifications(GSM module).

OFFLINE:
Placement of bins in the main hubs of the cities, taking necessary action of discharging wastes by the municipals.