Project Title: Smart Waste Management systems for metropolitan cities

Project Design Phase-I – Solution

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

Who is your customer?

Citizens of urban cities.

People of highly populated areas.

6. CUSTOMER CONSTRAINTS CC

Overflowing bins

Rise in pollution

Unhygienic living condition

Increase in number of diseases

5. AVAILABLE SOLUTIONS AS

Smart Waste Bins
Waste Level Sensors
AI Recycling Robots
Garbage Truck Weighing Mechanisms
Pneumatic Waste Pipes
Solar-Powered Trash Compactors
E-Waste Kiosks
Recycling Apps

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS J&P

Make source segregation mandatory.

Route optimization for trucks for efficient pickup.

Using recovers for collection of wastes in public parks.

9. PROBLEM ROOT CAUSE RC

The rate at which solid waste are produced in most developing countries is becoming alarming.This increase is due to population growth and rural-urban migration.Garbage bin seen around which appear overfull to the point of spilling out,leading to offensive odour and causes environmental pollution.As a results, there is increase in diseases because it gives rooms for insects to breed.So we need a smart system that effectively manage the waste .

7. BEHAVIOUR BE

Install load cell and sensors for weight and level measurements in trash bins.

Use GPS for garbage locations.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS

TR

Serious threat to the healthy living of citizens triggers the customers.Water, air and soil are all subject to being polluted by improper waste disposal, leading to health epidemics like Cholera or Dysentery in a population.

4. EMOTIONS: BEFORE / AFTER

Customers are highly prone to diseases due to an unhygienic environment caused by solid waste.

Once the proposed solution is installed,it improves public health and reduce environmental pollution

10. YOUR SOLUTION

Smart alert system for garbage bins that are full and efficient route system for garage collection trucks

Using load cell and sensors for weight and level measurements and GPS for garbage locations

8.CHANNELS of BEHAVIOUR

CH

Offline

Consult with interested stakeholders.

Create a waste management-focused community outreach plan.

Determine locations or criteria for waste management sites..

Online

Search for companies with the appropriate solutions.

The detection, monitoring and management of wastes through sensors.

Developing recycling apps.