In Metropolitan Cities

# 1. CUSTOMER SEGMENT(S)

Project Title: Smart Waste System

Who is your customer?

The aim the research is to make the society clean the smart waste management perform a important role. The major concern of the environment that impact on the health and well being of society by smart waste management

## 5. AVAILABLE SOLUTIONS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?

The main solution is to empty the bin on time by using GPS location, weight monitoring sensor and bin level monitoring sensor. The cons are cost and the proper internet connection.

## 8. CUSTOMER CONSTRAINTS

What constraints prevent your customers from taking action or limit their choices

A lack staff capability, local architecture, much need of manpower and lack of standard process for data collection and analysis. There is usage of sensor in bins, the user may cause damages to the sensors. And proper maintenance by peoples.

J&P

# 2. JOBS-TO-BE-DONE / PROBLEMS

Which jobs-to-be-done (or problems) do you address for your customers?

In this era the waste level of the bin is not indicated to the authorized person in frequent manner. By this smart waste management the level of the bin, location by the ID name of the bin and the weight of the bin.

### 6. PROBLEM ROOT CAUSE

What is the real reason that this problem exists? What is the back story behind the need to do this job?

Lack of Public Awareness. Refusal to Learn About Compliance. Insufficient Investment in Waste Management. Lack of Proper Machinery.

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# 9. BEHAVIOUR

What does your customer do to address the problem and get the job done?

Municipalities are the responsible for organizing the management if waste generated in dwellings and by service function. As a practice, waste management should be a responsible and a duty of each citizen.

#### 3. TRIGGERS



What triggers customers to act?

The pickup of the bin should be on time. If the bin has been filled then it should give alert to the responsible person.

# 4. EMOTIONS: BEFORE / AFTER EM



How do customers feel when they face a problem or a job and afterwards?

The customer got the idea how we are going to pull to pull it off, And Before introducing this project the cuthey got the idea how the project will work. Before presenting this ccustomer faced many problems they have no solution for it. After introducing this project their problems are cleared.

#### 7. YOUR SOLUTION



The solution of this project is, it

should be energy efficient, able to communicate, share information across the extended coverage. GSM communication is used to perform data transmission to the server. Android application are developed to monitor the bin. The smart bin using LoRa technology for long range transmission. The process is done by interfacing various

modules such as GPS, camera, buzzer and sensors.

#### 8. 10. CHANNELS of BEHAVIOUR



#### ONLINE

What kind of actions do customers take online?

By creating a web application through this the peoples can able to post their queries, and the organizing person should solve their problems.

#### **OFFLINE**

What kind of actions do customers take offline? use them for customer development.

Waste management methods are different in different environment, while the waste produced by the industries, management, and living areas is their responsibilities and managed themselves. And they will maintain the proposed solution by their municipalities.