

Define CS, fit into

### 1. CUSTOMER SEGMENT(S)

CS

Who is your customer?

Municipality and Local authorities of Metropolitan cities of India. (Mumbai, Delhi, Chennai, Bangalore, Kolkata etc.)

### 5. CUSTOMER

CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

- Lack of proper waste management technology within budget
- concerns relating to the maintenance if such a technology is employed
- A robust cloud service to analyse and process the data acquired from the garbage bins

### 6. AVAILABLE SOLUTIONS

AS

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? i.e. pen and paper is an alternative to digital notetaking

Routine collection of garbage from the trash bins by the trucks each morning. If the garbage bins are not filled it will be a waste of manpower, fuel and time. If waste collection is scheduled less frequently it will lead to overflowing waste and polluting the environment.

Explore AS,

Focus on J&P, tap into BE, understand

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

J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

The fixed routine for waste collection is inefficient as the average citizen may not dispose the same amount of waste everyday leading to overflowing bins and no proper communication channel to alert the municipality of this issue and schedule pick-ups.

### 9. PROBLEM ROOT CAUSE

RC

What is the real reason that this problem exists?  
What is the back story behind the need to do this job?  
i.e. customers have to do it because of the change in regulations.

- Alarming generation of waste due to population growth and urbanization.
- There is no way for us to know when the garbage cans are full
- This leads to overflowing of the garbage cans and unhygienic environment

### 7. BEHAVIOUR

BE

What does your customer do to address the problem and get the job done?  
i.e. directly related: find the right solar panel installer, calculate usage and benefits;  
indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- People wait for the garbage to be cleared by the trucks until next day
- There is no direct way to contact the truck drivers for the people.

Focus on J&P, tap into BE, understand

Identify strong TR & EM

### 3. TRIGGERS

TR

- People want to make their environment cleaner and also prevent the spread of health hazards in their community
- waste tend to decay faster, and if not carefully managed, decomposition can lead to bad odour
- piled up waste also serves as a breeding place for mosquitos and other insects.

### 4. EMOTIONS: BEFORE / AFTER

EM

The people of the community feel irritated to see their environment completely polluted and also at the same time are unable to take any actions to clean the garbage. This garbage cans also get filled up fast due to the tremendous increase in waste generation. They have to wait for the truck drivers to arrive the next day to empty the garbage cans

Once the trash is removed people feel much relieved and can continue on their daily activities like taking a walk, jogging or cycling without having to worry about the smell of garbage.

### 10. YOUR SOLUTION

SL

A Web app is built where the level of the garbage cans, its weight and location are monitored. Sensors are fitted in the garbage bins and the required data is collected and acquired from it. The real-time monitoring system indicates when the bin is full and alerts the authorized person to empty the bin

### 8. CHANNELS of BEHAVIOUR

CH

#### 8.1 ONLINE

What kind of actions do customers take online? Extract online channels from #7

The customer might complain about waste piling up on online forums, share pictures and videos on social media to raise awareness

#### 8.2 OFFLINE

What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

File complaints to local authority, invite press to write about this issue or may employ private waste disposal company to clear the garbage.

Extract online & offline CH of BE