**Project Title:** Smart Waste Management System For Metropolitan Cities **Project Design Phase-I** - **Solution Fit Template Team ID:** PNT2022TMID04344

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

**Explore AS, differentiate**

**Deﬁne CS, ﬁt into CC**

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.

**AS**

**5. AVAILABLE SOLUTIONS**

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

**CC**

**6. CUSTOMER CONSTRAINTS**

**CS**

1. **CUSTOMER SEGMENT(S)**

Municipality and Local authorities of

Metropolitan cities of India.

(Mumbai, Delhi, Chennai,

Banglore, Kolkata etc.)

**Explore AS, differentiate**

**Define CS, fit into CC**

b-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.

**BE**

**7. BEHAVIOUR**

**RC**

**9. PROBLEM ROOT CAUSE**

**J&P**

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

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

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

-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

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.

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| --- | --- | --- | --- | --- |
| **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. | **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 | 1. **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 #7and 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. | **Identify strong TR & EM** |
| **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. |

**Identify strong TR & EM**