

## Project Design Phase-I

### Problem – Solution Fit Template

Team ID	PNT2022TMID34601
Project Name	Project – Smart Waste Management System

#### Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioural patterns and recognize what would work and why

#### Purpose:

- ➔ Solve complex problems in a way that fits the state of your customers.
- ➔ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behaviour.
- ➔ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ➔ Increase touch-points with your company by finding the right problem-behaviour fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ➔ Understand the existing situation in order to improve it for your target group.

#### Template:



#### STEP 1

#### Problem Solving Cards

1. What's most valuable to the customer?

2. What are we the best at?

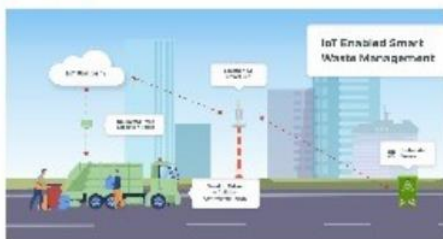
3. Where are we looking to improve?

## STEP 2

### Framing Statements

#### framing

How can we use our **Optimization** skills to increase the customer's value of **Saving Time** in order to improve the **Waste Management**?



The greatest problem regarding waste management in developing countries begins at the very starting point of the process. Due to lack of proper systems for disposal and collections, wastes and garbage's end up in the roads and surrounding. According to a report from Google research, the amount of waste generation in 2010 was around 20,000 tons per day, and it is estimated that by 2025 the amount will be no less than around 47000 tons per day. With the existing methods of collecting and disposal it is near impossible to manage such amount of waste in the future as around 30% of waste end up on the roads and public places due to ineffective disposing and collecting methods. Not only that, there is even no systematic methodology for the collected garbage for treating and recycling thus most of them end up in land filling and river water, making the environment unhealthier. The prime impediment of implementing smart waste management system based on IoT in a developing country is the social and economic infrastructure of the country. The initial stage of this system comprises of proper disposal and collection, which is the biggest challenge. In addition, to motivate and influence people to follow proper waste disposal methods is also important.

## STEP 3

### Ideas

### Problem Solution

Previously there were numerous initiatives on waste management and educating people to dispose waste properly, and as they failed to achieve significant results, we have figured out the scopes that could be develop. To solve this problem, we have designed a process that ensures proper disposal and efficient waste collection. The procedures we designed involves creative initiative that will inspire people to dump in designated area or bins, and innovative method by using Decreasing Time algorithm or DTA for monitoring garbage generation and collection of the garbage's.

Example ideas:

Ai-based smart waste bin, designed for public places, enabling them to Monitor and Manage

Reduce the number of bins required & DE-cluttering and improving the street scene