

Smart waste management system

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STEP 1

Problem Solving Cards

-Basic question

#Problem Statement

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

smart waste management system 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 POCs. Due to lack of proper systems for disposal and collection of waste and garbage, it ends up in the roads and surrounding. According to a report from Google research, the amount of waste generated in 2010 was around 20,000 tons per day, and it is estimated that by 2025 it will be no less than around 47,000 tons per day. With 1 billion people, it is nearly impossible to manage such a large amount of waste in the future. As around 30% of waste ends up on the roads and public places due to inefficient disposal and collection methods. Not only that, but the seven most systematic methods of disposal for the collected garbage for drinking and recycling thus most of them end up in landfills and in the water, making the environment unhealthy. The prime impediment of implementing smart waste management system based on IoT is the development of the country itself. The initial stage of this system comprises of proper disposal and collection, which is the biggest challenge. In addition, to motivate the illiterate people to follow proper waste disposal methods is also important.

STEP 3

Ideas

Problem Solution

Example ideas:

AI-based smart waste bin designed for public places, enabling digital monitoring and management.

Reduction in the number of bins and improving the system.

Previously there were numerous issues 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 developed. To solve this problem, we have designed a process that ensures proper disposal and efficient waste collection. The procedures we designed involve creative initiatives that will inspire people to dump in designated areas or bins and innovative methods by using Decreasing Time algorithm or OTA for monitoring garbage generation and collection of the garbage's.