

Project Design Phase-I
Problem – Solution Fit Template

Date	20-SEP2022
Team ID	Team ID : PNT2022TMID46746
Project Name	Project – smart waste management for metropolitan cities
Maximum Marks	2 Marks

Problem – Solution Fit Template:

A growing population and economy, which means increased volumes of waste generated. This puts pressure on waste management facilities, which are already in short supply.

Growing pressure on outdated waste management infrastructure, with declining levels of capital investment and maintenance.

Waste management suffers from a pervasive under-pricing, which means that the costs of waste management are not fully appreciated by consumers and industry, and waste disposal is preferred over other options.

Template:

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) The Municipal corporate employees who are responsible for waste collection are our users CS	6. CUSTOMER CONSTRAINTS <ul style="list-style-type: none">Rough action of the user may damage the sensorThe product may have short lifespanProper network connection requiredThe one time cost of installation will be higher CC	5. AVAILABLE SOLUTIONS The maintenance and replacement of sensors is simple. By proper maintenance the lifespan of the product can be increased. It further reduces manpower requirements to handle the garbage collection process. Less amount of fuel consumed by vehicles because of optimal route planning AS	Explore AS, differentiate

Focus on J&P, tap into BE, understand RC		2. JOBS-TO-BE-DONE J&P Monitoring amount of waste present. Alerting the respective people incharge of this. Provide shortest and a fastest way for the collection of the waste.	9. PROBLEM ROOT CAUSE RC Municipal Solid Waste Management is of critical concern and needs attention. The rapid urbanization and industrialization has led to increased solid waste generation, about 2.1 billion tonnes of municipal solid waste is generated annually around the globe. So the traditional methods of waste collection have become inefficient and costly. The main objective is to maximize waste collection and optimize the work for municipal corporations.	7. BEHAVIOUR BE Find the required sensors based on the requirement and get the expected results
Identify strong TR & EM	3. TRIGGERS TR The efficient of the solution and the change to a better environment Type your text	10. YOUR SOLUTION SL Our solution is to provide a smart waste management system where sensors are fitted inside the dustbins which collect the waste in the locality and alert the respective people to collect and segregate the waste. The system also provides route planning for the collection of the waste.	8. CHANNELS of BEHAVIOR CH 8.1 ONLINE The customers can view the levels of the bins and shortest path routing. 8.2 OFFLINE Customers need to process their regular waste collection techniques.	
	4. EMOTIONS: BEFORE / AFTER EM Provides a better environment to the people living around the areas of the bins because it alerts the respective persons to take action and eliminates the possibility of overflow of the bins and hence cleanliness is always maintained.		Identify strong TR & EM	