

## Project Design Phase-I

### Problem – Solution Fit Template

Date	30 September 2022
Team ID	PNT2022TMID48397
Project Name	Smart Waste Management
Maximum Marks	2 Marks

#### 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 behavioral 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 behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior 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.**

Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right; background-color: #ff69b4; color: white; padding: 2px 5px;">CS</span> Our target users are Government and regulatory bodies, Smart waste solution vendors, Municipal corporations, Waste management associations, Platform providers Network solution providers Consulting firm, System Integrators and Managed service providers	<b>6. CUSTOMER CONSTRAINTS</b> <span style="float: right; background-color: #ff69b4; color: white; padding: 2px 5px;">CC</span> A reduction in the number of waste collections needed by up to 80%, resulting in less manpower, emissions, fuel use and traffic congestion Analytics data to manage collection routes and the placement of bins more effectively	<b>5.AVAILABLE SOLUTIONS</b> <span style="float: right; background-color: #ff69b4; color: white; padding: 2px 5px;">AS</span> Pneumatic Waste Pipes Garbage Truck Weighing Mechanisms AI Recycling Robots Waste Level Sensors Smart Waste Bins	Explore AS, differentiate
Focus on J&P, tap into BE, understand RC	<b>2. JOBS-TO-BE-DONE/PROBLEMS</b> <span style="float: right; background-color: #ffa500; color: white; padding: 2px 5px;">J&amp;P</span> Finding new landfills is seen as merely relocating the problem of garbage piles. It is noteworthy that waste management becomes challenging when segregation of the garbage is not performed and recyclables, organic waste and toxic wastes are all dumped together.	<b>9. PROBLEM ROOT CAUSE</b> <span style="float: right; background-color: #ffa500; color: white; padding: 2px 5px;">RC</span> <ul style="list-style-type: none"> <li>Non-uniform waste distribution of waste in bins</li> <li>Non-optimized truck routes</li> <li>Misunderstanding of the operations of smart sensors</li> </ul>	<b>7. BEHAVIOUR</b> <span style="float: right; background-color: #ffa500; color: white; padding: 2px 5px;">BE</span> The user needs to monitor the data continuously and update the data after completion of the task	Focus on J&P, tap into BE, understand RC
Identify strong TR & EM	<b>3.TRIGGERS</b> <span style="float: right; background-color: #6aa84f; color: white; padding: 2px 5px;">TR</span> It reduces the expense on fuel and labour cost, hence minimising the total expenditure than the usual.	<b>10. OUR SOLUTION</b> <span style="float: right; background-color: #6aa84f; color: white; padding: 2px 5px;">SL</span> <ul style="list-style-type: none"> <li>IOT platform to monitor the waste management network</li> <li>LED to indicate the waste levels in bins</li> <li>Waste level detection sensor</li> </ul>	<b>8. CHANNELS OF BEHAVIOUR</b> <span style="float: right; background-color: #6aa84f; color: white; padding: 2px 5px;">CH</span> <b>Online:</b> Data updated continuously about the requirements.  <b>Offline:</b> Current data will be stored and shown .Further communication is disconnected.	Extract online & offline CH of BE
	<b>4. EMOTIONS: BEFORE/AFTER</b> <span style="float: right; background-color: #6aa84f; color: white; padding: 2px 5px;">EM</span> <u>Before:</u> Poor waste management leads to labour cost ,wastage of fuel and pollution. <u>After:</u> Efficient routes for the trash collectors who empty the bins, but also lowers the chance of any bin being full for over a week!.			