

## Project Design Phase-I Problem – Solution Fit Template

Date	15 October 2022
TEAM ID	PNT2022TMID04619
Project Name	Gas Leakage Monitoring and Alerting System for Industries
MAXIMUM MARKS	4 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

Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">CS</span> <small>Who is your customer? I.e. working parents of 0-5 y.o. kids</small>  <p style="text-align: center;">Here industrial worker is the user or customer, who are engaged with gas related production.</p>	<b>6. CUSTOMER CONSTRAINTS</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">CC</span> <small>What constraints prevent your customers from taking action or limit their choices of solutions? I.e. spending power, budget, no cash, network connection, available devices.</small>  <ul style="list-style-type: none"> <li>It is a high budget in installing other products make them to move far from modern technologies.</li> <li>Its difficult to know failures.</li> <li>Ability to detect the wide range of gases</li> </ul>	<b>5. AVAILABLE SOLUTIONS</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">AS</span>  <p>The monitoring and controlling of the leakage could be done by the manpower. Even though man power could reduce electricity cost and monitor properly, it may cause high risk for their life. There is also a cause of some errors due to manpower.</p>	Explore AS, differentiate
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">J&amp;P</span> <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small>  <p style="text-align: center;">Flammable gas leakage may lead to Secondary accident such as fire and explosion, while toxic gas.</p>	<b>9. PROBLEM ROOT CAUSE</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">RC</span> <small>What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations.</small>  <ul style="list-style-type: none"> <li>When the workers failed to monitor properly, the gas can cause high risk to their health or the properties of the industry.</li> <li>Behind this gas leakage problem there could be many reasons like atomic reactions between molecules and material quality.</li> </ul>	<b>7. BEHAVIOUR</b> <span style="float: right; background-color: #ffc107; padding: 2px 5px;">BE</span> <small>What does your customer do to address the problem and get the job done? I.e. directly related: find the right solar panel installer, calculate usage and benefits; Indirectly associated: customers spend free time on volunteering work (I.e. Greenpeace)</small>  <ul style="list-style-type: none"> <li>If the gas leaked is heavily toxic, there is a chance of causing hereditary health issues too.</li> <li>Monitor weekly sensors are active or not.</li> <li>Using manpower as the source of monitoring the leakage causes high hazards.</li> </ul>	
Identify strong TR & EM	<b>3. TRIGGERS</b> <span style="float: right; background-color: #28a745; color: white; padding: 2px 5px;">TR</span>  <p>The heavy damages or higher health issues due to the toxic gases urges them to find out a solution as soon as they could possible.</p>	<b>10. YOUR SOLUTION</b> <span style="float: right; background-color: #28a745; color: white; padding: 2px 5px;">SL</span>  <ul style="list-style-type: none"> <li>To develop an efficient system &amp; an application that can monitor and alert the workers in industries.</li> <li>If there is gas leak then it will send notification message to the owner.</li> </ul>	<b>8. CHANNELS of BEHAVIOUR</b> <span style="float: right; background-color: #28a745; color: white; padding: 2px 5px;">CH</span> <b>8.1 ONLINE</b> <small>In online, user can able to monitor the live report like its sensors like temperatures, humidity level Promoting through social media. With the help of social media entrepreneurs/influencer.</small>  <b>8.2 OFFLINE</b> <ul style="list-style-type: none"> <li>✓ It makes call to user</li> <li>✓ Manually check the leakage of gas.</li> </ul>	Extract online & offline CH of BE
	<b>4. EMOTIONS: BEFORE / AFTER</b> <span style="float: right; background-color: #28a745; color: white; padding: 2px 5px;">EM</span>  <p><b>Before:</b> The heavy losses due to the leakages made them feel of guilt due to reduced reputation of their products. <b>After:</b> Increased the level of confidence and feel secured</p>			