

## Project Design Phase-I - Solution Fit

**Project Title:** Gas Leakage Monitoring and Alerting System

**Team ID:** PNT2022TMID18426

### TEAM MEMBERS :

**P.Litheesh kumar (201903082)**

**G.Rishee kumar (201903123)**

**K.Udhaya kumar (201903170)**

**P.Chandru Vignesh(201903028)**

**K.Balaji(201903019)**

#### 1. CUSTOMER SEGMENTS

- ✓ For industry owner -Ensuring the safety of workers is the main thing.
- ✓ Sometimes it is hard to identify the area where the leakage occurs.
- ✓ The detection of leakage prevents the loss of lives

#### 6. CUSTOMER CONSTRAINTS

- ✓ Proper maintenance should be taken atleast once in a month and this prevents the customers from taking actions in gas leakage problem.

#### 5. AVAILABLE SOLUTIONS

- ✓ Usage of sensors to sense gas Leakage.
- ✓ Buzzer to indicate the leakage.
- ✓ GSM module helps us to get notification when there is a gas leakage.

<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <ul style="list-style-type: none"> <li>✓ Capability of the device to withstand in harsh environment is questionable.</li> <li>✓ Due to network issue data couldn't be uploaded to the cloud at all times.</li> </ul>	<b>9. PROBLEM ROOT CAUSE</b> <ul style="list-style-type: none"> <li>✓ Sometimes sensor doesn't work properly which can cause the major problem.</li> <li>✓ Location of the device installation and the network plan used by the user are the root cause of the network issue.</li> </ul>	<b>7. BEHAVIOUR</b> <ul style="list-style-type: none"> <li>✓ Network issue is very common as most of the industries are located at the country side. Here contact both the developers and the service providers.</li> <li>✓ To determine the gas characteristics and solve the issue, they will locate the leak and identify the warning.</li> </ul>
---	--	--

<b>3. TRIGGER</b> <ul style="list-style-type: none"> <li>✓ Accidents due to gas leakages and loss of physical property and life.</li> <li>✓ Safe precautions for the workers to work without fear.</li> </ul>	<b>10. YOUR SOLUTION</b> <ul style="list-style-type: none"> <li>✓ Low cost IOT based device that can be easily accessed and fixed by people.</li> <li>✓ Network strength must be boosted in the device.</li> <li>✓ Device can be manufactured in multiple standards based on the environment.</li> </ul>	<b>8. CHANNELS OF BEHAVIOUR</b> <p><b>ONLINE</b></p> <ul style="list-style-type: none"> <li>✓ Monitor the status of the sensors</li> <li>✓ Notification incase of any gas leakage.</li> </ul> <p><b>OFFLINE</b></p> <ul style="list-style-type: none"> <li>✓ Prevent physical damage to sensor.</li> <li>✓ Provide proper network and power supply to sensors.</li> <li>✓ Complaint letters</li> </ul>
<b>4. EMOTIONS: Before/After</b> <ul style="list-style-type: none"> <li>✓ Before the action is taken the user feels deceived and cheated.</li> <li>✓ After the problem is resolved user feels the sincerity of the developer</li> </ul>		

