

# Project Design Phase-I - Solution Fit

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

**Team ID:** PNT2022TMID24453

## TEAM MEMBERS :

- 1)ESWARAVAKA SUMANTH(TEAM LEADER).
- 2)PONUGOTI MOHAN KRISHNA
- 3)POLAMREDDY DHANUSH
- 4)PALLAMALA CHANDRASEKHAR

### 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>
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<b>3. TRIGGERS</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>		