

Project Design Phase-I - Solution Fit

Project Title: Gas Leakage Monitoring and Alerting System

Team ID: PNT2022TMID21596

TEAM MEMBERS :

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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.

2. JOBS-TO-BE-DONE / PROBLEMS

- ✓ Capability of the device to withstand in harsh environment is questionable.
- ✓ Due to network issue data couldn't be uploaded to the cloud at all times.

9. PROBLEM ROOT CAUSE

- ✓ Sometimes sensor doesn't work properly which can cause the major problem.
- ✓ Location of the device installation and the network plan used by the user are the root cause of the network issue.

7. BEHAVIOUR

- ✓ 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.
- ✓ To determine the gas characteristics and solve the issue, they will locate the leak and identify the warning.

3. TRIGGERS

- ✓ Accidents due to gas leakages and loss of physical property and life.
- ✓ Safe precautions for the workers to work without fear.

4. EMOTIONS: Before/After

- ✓ Before the action is taken the user feels deceived and cheated.
- ✓ After the problem is resolved user feels the sincerity of the developer

10. YOUR SOLUTION

- ✓ Low cost IOT based device that can be easily accessed and fixed by people.
- ✓ Network strength must be boosted in the device.
- ✓ Device can be manufactured in multiple standards based on the environment.

8. CHANNELS OF BEHAVIOUR

ONLINE

- ✓ Monitor the status of the sensors
- ✓ Notification incase of any gas leakage.

OFFLINE

- ✓ Prevent physical damage to sensor.
- ✓ Provide proper network and power supply to sensors.
- ✓ Complaint letters.