

Project Design Phase-I - Solution Fit

Project Title: Gas Leakage Monitoring and Alerting System

Team ID: PNT2022TMID42496

TEAM MEMBERS :

- 1.Nisha - Team Leader
- 2.Shiva
- 3.Sona
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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 <ul style="list-style-type: none"> ✓ 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 <ul style="list-style-type: none"> ✓ 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 <ul style="list-style-type: none"> ✓ 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.
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3. TRIGGERS <ul style="list-style-type: none"> ✓ Accidents due to gas leakages and loss of physical property and life. ✓ Safe precautions for the workers to work without fear. 	10. YOUR SOLUTION <ul style="list-style-type: none"> ✓ 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 <p>ONLINE</p> <ul style="list-style-type: none"> ✓ Monitor the status of the sensors ✓ Notification incase of any gas leakage. <p>OFFLINE</p> <ul style="list-style-type: none"> ✓ Prevent physical damage to sensor. ✓ Provide proper network and power supply to sensors. ✓ Complaint letters.
4. EMOTIONS: Before/After <ul style="list-style-type: none"> ✓ Before the action is taken the user feels deceived and cheated. ✓ After the problem is resolved user feels the sincerity of the developer 		