Project Design Phase-I

Problem Solution Fit

Date	26 SEPTEMBER 2022
Team ID	PNT2022TMID42277
Project Name	Gas Leakage Monitoring and Alerting System

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

The industrialists are the users or customers, who are engaged with the production of gases for their manufacturing. Here industrial worker is the user or customer, who are engaged with gas related production.

6. CUSTOMER — CC

High cost of installing the products make them to move far from recent technologies. It is difficult to know failures. Ability to detect the wide range of gases

5. AVAILABLE SOLUTIONS — AS

The monitoring and detecting the leakage of gas could be done by the manpower. Automatic cut off gas supply. In early days they used to identify the leakage of gas by sensing the smell of particular gas.

Even though man power could reduce electricity cost and monitor properly, it may cause high risk for their life.

Explore AS, differentiate

Focus on J&P, tap into BE, understand

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

- Gas leakage leads to many diseases and also increases the fatality rate.
- Heavy budget problems on buying and installing a gas detecting system
- Having no proper maintenance or monitoring the system
- Flammable gas leakage may lead to Secondary accident such as fire and explosion, while toxic gas.

9. PROBLEM ROOT CAUSE — RC

- Improperly installed tube fittings /poor tubing selection.
- Improper use of gas furnace, stove, or appliance, including leaking due to gas lines being hooked up incorrectly.
- Use of defective equipment.
- Behind this gas leakage problem there could be many reasons like atomic reactions between molecules and material quality.
-

7. BEHAVIOUR — BE

- If the gas leaked is heavily toxic, there is a chance of causing hereditary health hazards.
- Monitoring the system regularly.
- To determine the gas leakage area and alerts through by warning message or alerting sound.
- Using manpower as the source of monitoring the leakage causes high hazards.

Focus on J&P, tap into BE, understand

Identify strong TR & EM

3. TRIGGERS TO ACT

TR

Identification of gas leakage will be done immediately and urges them to find out a solution as soon as possible.

Health issues due to the toxic gases urges them to find out a solution

4.EMOTIONS: BEFORE / AFTER

EM

Before: The leakage of gases causes heavy losses and made them feel depressed & guilt and also lose the recognition of their products.

After: Creating awareness and safety precautions to the workers to work without any fear.

10. YOUR SOLUTION

SL

- Develop a cost efficient IoT based gas leakage detecting system which can be easily accessed by the workers.
- If there is gas leak then it will alert the workers by sending SMS.

8. CHANNELS OF BEHAVIOUR

CH

ONLINE:

Promoting through social media, With the help of social media influencer. Users can also easy to monitor the live reports.

OFFLINE:

Identifying the leakage area and take precautionary actions manually. It makes call to user. Frequently check the leakage of gas

Extract online & offline CH of BE