Project Design Phase-I
Problem – Solution Fit Template

Date	19 September 2022
Team ID	PNT2022TMID21717
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Marks	2 Marks

1. CUSTOMER SEGMENT(S)

- ✓ For the gas godown owner, it is necessary to assure the safety of the workers.
- ✓ It is a great process to identify the leakage of the gas from the particular cylinder.

6. CUSTOMER CONSTRAINT(S)

- ✓ Proper maintenance of the cylinders prevents it from leakage of gases.
- ✓ High cost of the cylinder makes the customers to move afar from this technologies.
- ✓ Proper delivery of cylinders without any faults.

5. AVAILABLE SOLUTIONS

- ✓ Using sensors and technology gives better solution than manpower.
- ✓ Using of buzzer or alarms helps the nearby people to get attention and take necessary steps.
- ✓ GSM module sends the message to the fire station so that they can arrive faster

2. PROBLEMS/PAINS

- ✓ Suffering numerous losses as a result of gas leaks.
- ✓ Not having a suitable mechanism in place to monitor or control the leak.
- ✓ Having significant financial difficulties while purchasing and implementing a monitoring and control system.

9. PROBLEM ROOT CAUSE

- ✓ Can cause high risk to the lives of the workers.
- ✓ If sensor doesn't work properly there occurs a major loss to the society.
- ✓ Proper information must be sent to the fire station through GSM module, and workers must be aware of every possible attacks.

7. BEHAVIOR

- ✓ High risks are associated with using human resources to monitor leaks, and if highly hazardous gas is released, there is a probability that inherited health problems may also result.
- ✓ Determines the gas characteristics and locates the leak area and solve the issue.

3. TRIGGERS

- ✓ Organisations must bring some of the mandatory precautionary measures when the gas smell is sensed.

4. EMOTIONS: BEFORE/AFTER

- ✓ They felt guilty because their products' reputation suffered as a result of the significant losses brought on by leaks.
- ✓ The user feels duped and deceived before taking the action.
- ✓ After the issue is fixed, the user gains more assurance and feels more comfortable since they can see the developer's sincerity.

10. YOUR SOLUTION

- ✓ Create a reliable system and application that can track and notify the workers.
- ✓ Low-cost, easily accessible, and repairable IoT-based device.
- ✓ The device needs to strengthen the network.
- ✓ Depending on the surroundings, a gadget can be produced to a variety of standards.

8. CHANNELS OF BEHAVIOUR

ONLINE:

- ✓ promoting on social networks. through the aid of social media influencers and entrepreneurs.
- ✓ Check the sensors' status to be alerted if there are any gas leaks.

OFFLINE:

- ✓ By adverts in newspapers.
- ✓ Ensure that sensors have a proper network and power supply to prevent physical harm.
- ✓ Dispute letters