Problem-Solution fit canvas 2.0

GAS LEAKAGE DETECTION AND MONITORING USING IOT

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Our customers

Houses and residential buildings

Chemical Labs

Industrial sectors like

1) Semiconductor Manufacturing Industries
2) Wastewater Treatment Plants
3) Oil and Gas
4) Chemical Industry
5) Mining

6. CUSTOMER CONSTRAINTS — CC

There is no awareness among these systems

no advertising is done in this domain

reachability is less in this segment

Only one gas can be measured with each instrument.

5. AVAILABLE SOLUTIONS — AS

Various commercial companies such as hotels and takeaway joints utilize flammable gasses - for instance, carbon dioxide, LPG, ammonia, and so on to deliver the best customer service possible. The use of such gasses cannot be denied.

Others

1. THE PIPELINE LEAK DETECTION METHOD OF CHOICE

2. DISTRIBUTED TEMPERATURE & ACOUSTIC SENSING

Explore AS, differentiate

Focus on J&P, tap into

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Gasses have also brought about a greater risk and threat to human life. With safety a primary concern, businesses dealing with gas have to take certain precautions to ensure work is carried out in the most secure manner possible.

That is where a gas detection system is necessary at accident-prone locations including households, to continuously monitor any kind of leakage - regardless of the human senses - and send an alert to the end-user.

The gasses are toxic in nature, resulting in human unconsciousness and even death if consumed in larger quantities. Moreover, gaseous blasts are another disaster that everyone - working in a factory or at home - would want to avoid at all costs!

9. PROBLEM ROOT CAUSE — RC

A gas leak refers to a leak of natural gas or another gaseous product from a pipeline or other containment into any area where the gas should not be present. Gas leaks can be hazardous to health as well as the environment.

Unreliable metal-to-metal seals.

Improperly installed tube fittings.

Poor tubing selection/preparation

7. BEHAVIOUR — BE

It will have a great impact in society because gas leakage may lead to many problems to the people and will be affected by many diseases.

A gas leaks lead to personal and financial damage

In recent years, concerns about the safety of laboratories have been caused by several serious accidents in school laboratories.

Gas leaks in the laboratory are often difficult to detect and cause serious consequences.

the unsafe behavior of personnel has the greatest impact on the probability of gas leakage, and the concentration of toxic and harmful gases is the main factor affecting the consequences of accidents

Focus on J&P, tap int C

Identify strong TR & EM

3. TRIGGERS — TR

An explosion can occur when a gas pipe is leaking. In a confined space like a home or business, the gas will mix with the air, increasing the pressure of the space. When there is a spark or flame (even a static electricity spark might be enough) present, the gas will ignite, causing an explosion.

4. EMOTIONS: BEFORE / AFTER — EM

High levels of natural gas exposure can cause natural gas poisoning, which is characterized by fatigue, severe headaches, memory problems, loss of concentration, nausea, loss of consciousness, and suffocation.

Burning natural gas produces nitrogen oxide, carbon monoxide, and methane. These chemicals can trigger respiratory problems, depression, and decrease the quality of your health. Talk to your doctor if you believe the gas leak is affecting your health.

10. YOUR SOLUTION — SL

The idea is to the Gas Leakage detection with a Wifi connected so that the alert system will be at a quicker way through IoT. The sensor also should be in the latest upgraded version of MQ 135 sensor .The sensor is designed in a way it can have a huge radius of detecting the gas leakage. The board Arduino or ESP866Mod which has a inbuild Wifi so that the alert system works quick enough to alert the admin.

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE

customers search for products online and find buying options they look for product description and adds online based on the system

8.2 OFFLINE

customers enquire is shops and showrooms
they take a survey among the shops
they gain information in latest technology

Extract online & offline CH of BE

AMALTAMA