Gas Leakage Monitoring and Alerting Systems
Problem Solution Fit

1. CUSTOMER SEGMENT(S) `CS`

Define CS, fit into CC

- Customers are industries, factories and hotels. This system was also used in domestic purposes.
- These are used who are struggling to work in industries and in some places where there is a gas usage.
- This helps to remove their fears in working and they thought as they are being in a safe place.
- This avoids several gas leakage accidents

5. CUSTOMER CONSTRAINTS `C`
What constraints prevent your customers from taking action or limit their choices of solutions?

- Not suitable for areas where CO and CO2 are present abundantly.
- Variety of gas sensors.
- Blinded by thick smoke, vapours, grease and oil deposits on the detector's window.
- Space constraints.
- Prone to false alarms.

6. AVAILABLE `AS`
Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have?

- Provides various sensors to monitor the concentrations of variety toxic gases.
- Smart alarming with latest messaging software to alert the people.
- Manageable as they need a medium knowledge about its working.

Explore AS, differentiate

2. JOBS-TO-BE-DONE / PROBLEMS `J&P`
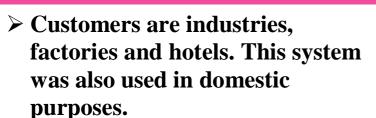Which jobs-to-be-done (or problems) do you

Focus on J&P, tap into BE, understand RC

- Faster Detection of gas leakage compared to conventional systems.
- Providing safer environment in working.
- Alerting system over the Internet.
- Accident Prevention.
- Monitoring toxic gas concentration periodically.

9. PROBLEM ROOT CAUSE `R`
What is the real reason that this problem exists? What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

- The main root cause of this is the improper maintenance of gas storing boilers and some unexpected cracks or leakages which leads to severe damage to lives as well as places.
- Nowadays many peoples who are working in factories, industries and even in domestic places gets affected due to severe respiratory diseases and some breathing problems.
- The main reason behind this was the inhalation of toxic gas which causes even cancer.

7. BEHAVIOUR `B`
What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- When the people require this system, most primarily is visiting the place where is the need and analyze whether the place suits for the requirements.
- If the place is suitable for installation, we will then give a demo of our service.
- If the customer is satisfied with our demo, then the installation is done within several hours.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS `TR`
What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

Define CS, fit into CL

- In gas based industries, there are many gas leakage accidents which are leading to several deaths.
- The increased awareness among public regarding the adverse effects of gas leakage during recent times has triggered the public in installing gas leakage detection and alerting system.

EMOTIONS: BEFORE / AFTER `EM`
How do customers feel when they face a problem or a job and afterwards?

- Before: They feel lost due to losses which occur due to improper monitoring of toxic gases.
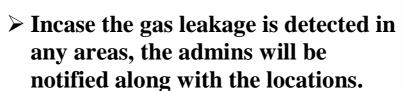- After: They feel like secured after making this gas concentrations monitoring and alarming, reducing the mistakes that happened in leakages in industries.

10. YOUR SOLUTION `SL`
What kind of solution suits Customer scenario the best?
Adjust your solution to fit Customer behaviour, use Triggers, Channels & Emotions for marketing and communication.

- Incase the gas leakage is detected in any areas, the admins will be notified along with the locations.
- In the web application, admins can view the sensor parameters.
- The parameters like hazardous gas levels, fire, humidity and temperature data are published to the Watson IOT platform.
- The device will subscribe to the commands from the application and take decisions accordingly to switch on the rainwater sprinkler in case of emergencies and sensor to avoid any accidents.
- The data is visualized in the Web Applications.
- Monitorization is periodically done.

8.1 ONLINE CHANNELS `CH`
What kind of actions do customers take online? Extract online channels from box #7 Behaviour

- Online gas monitoring systems for Gas related Industry experiences network issues and it may also contain a lot of ads. Security is not authenticated.
- But in online mode, the user can get alerting message to its current place

8.2 OFFLINE CHANNELS `CH`
What kind of actions do customers take offline?
Extract offline channels from box #7 Behaviour and use them for customer development.

- Manual logs are maintained for gas concentration monitoring.
- Separate employees are needed to monitor the concentrations and for alertion.

Explore AS, differentiate