Project Title:
Gas Leakage Monitoring and Alerting System

Project Design Phase-I - Solution Fit Template

Team ID:
PNT2022TMID35867

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

1. Chemical Industry.

2. Semiconductor Manufacturing Industry.

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

1. Particular gases can only be monitored and detected by the device.

2. In case of network disconnectivity,continuous monitoring of gases and location may not be provided through alert sms and MIT App inventor.

5. AVAILABLE SOLUTIONS — 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? i.e. pen and paper is an alternative to digital notetaking

1. Alert message can be provided incase of the presence of hazardous gases in the industry with continuous monitoring.

2. By providing real-time updates about gas leakage with location.

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

1. Health issues like respiratory problems,eye and throat irritation.

2. Affects the growth of plants.

3. Financial loss

9. PROBLEM ROOT CAUSE — RC

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.

1. Improper installation of tube fittings.

2. Unfit material selection for piping.

3. Loose joints and sealings

4. Lack of inspection and maintenance of pipes.

7. BEHAVIOUR — BE

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)

1.Detect the gas leakage using appropriate sensors.

2.Provide continuous monitoring of leakage.

3.Provide real-time data with location.

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

Identify strong TR & EM

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.

1.Can identity the particular gas leakage.
2.Provide alert with the exact location
3.Provides continuous monitoring of gas leakage.

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

BEFORE:
No monitoring of gas leakage,
Causes Health issues & financial losses.

AFTER:
Continuous monitoring of gases and low risks of health issues and financial losses.

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

1. Detection of the gas leakage using gas sensor and measure the humidity and temperature which will be uploaded on the IBM cloud for cloud computation.

2. Determine the level of gas leakage and alert the concerned person depending upon the gas leakage via Node red Dashboard.

3. Additionally, send notification of gas leakage to intended/concerned person via MIT App inventor.

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

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

ONLINE:
Can monitor the real time gas leakage values through the mobile application and also alert message is provided in prior.

OFFLINE:
Gas leakage values is provided through sensor through continuous monitoring and financial losses and health issues can be overcomed.

Identify strong TR & EM