

Project Design Phase-I

Problem – Solution Fit Template

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| Date | 1 October 2022 |
| Team ID | PNT2022TMIDO5901 |
| Project Name | Project - Gas Leakage Monitoring & Alerting System for Industries |
| Maximum Marks | 2 Marks |

Problem – Solution Fit:

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|-------------------------|---|---|--|-----------------------------------|
| Define CS, fit into CC | 1. CUSTOMER SEGMENT(S) CS <ul style="list-style-type: none"> ✓ Industries working with inflammable gases. | 6. CUSTOMER CONSTRAINTS CC <p>Budget, Spending Power, Cost of Deployment, Reliability, Network connectivity.</p> | 5. AVAILABLE SOLUTIONS AS <ul style="list-style-type: none"> ✓ Hire any third party service providers to detect and control the gas leakage, if any. ✓ Appoint workers to frequently monitor for leakage of gases. | Explore AS, differentiate |
| | 2. JOBS-TO-BE-DONE / PROBLEMS J&P <ul style="list-style-type: none"> ✓ To create a Gas Leakage and Monitoring System. ✓ To detect the leakage of any harmful/inflammable gas. ✓ To notify the customers as soon as possible in case of any gas leakage. ✓ Alarming System for workers incase of any gas leakage. | 9. PROBLEM ROOT CAUSE RC <ul style="list-style-type: none"> ✓ Aging of gas pipelines. ✓ Improper maintenance of Industrial Infrastructure. ✓ No proper implementation of safety measures. ✓ Negligence. ✓ A threat to life. | 7. BEHAVIOUR BE <ul style="list-style-type: none"> ✓ Search for available service providers and get the service installed. ✓ Get any customized product to manage gas leakage and monitoring. ✓ Proper maintenance of Industrial Infrastructure. | |
| Identify strong TR & EM | 3. TRIGGERS TR <p>Accidents due to gas leakages and loss of physical property and life.</p> | 10. YOUR SOLUTION SL <ul style="list-style-type: none"> ✓ To use microcontrollers and sensors to detect and alarm incase of any gas leakage. ✓ To create a online dashboard portal to monitor the status of the devices in Industry. | 8. CHANNELS of BEHAVIOUR CH <p>8.1 ONLINE</p> <ul style="list-style-type: none"> ✓ Monitor the status of the sensors. ✓ Notification incase of any gas leakage. | Extract online & offline CH of BE |
| | 4. EMOTIONS: BEFORE / AFTER EM <p>Petrified, Insecure, Grievance, not in control, lost.</p> | | <p>8.2 OFFLINE</p> <ul style="list-style-type: none"> ✓ Prevent physical damage to sensors. ✓ Provide proper network and power supply to sensors. | |

References:

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>