

**Project Design Phase-I**  
**Proposed Solution Template**

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|---------------|--|
| Date          | 19 september 2022                        |
| Team ID       | PNT2022TMID22887                         |
| Project Name  | Gas Leakage monitoring & Alerting system |
| Maximum Marks | 2 Marks                                  |

**Proposed Solution Template:**

| S.No. | Parameter                                | Description   |
|-------|--|---|
| 1.    | Problem Statement (Problem to be solved) | <ul style="list-style-type: none"> <li>Develop an efficient Gas Leakage Monitoring &amp; Alerting System for Industries Such that The leakage of gases only can be detected by human nearby and if there are no human nearby, it cannot be detected. But sometimes it cannot be detected by human that has a low sense of smell. Thus, this system will help to detect the presence of gas leakage.</li> <li>Furthermore, gas leakage can cause fire that will lead to serious injury or death and it also can destroy human properties. This system was developed by using IOT to give real-time response to the user and the nearest fire station.</li> </ul> |
| 2.    | Idea / Solution description              | <ul style="list-style-type: none"> <li>Detect the presence of toxic gases and asphyxiants such as H<sub>2</sub>S, Methane, and CO in your industrial facilities or commercial buildings through gas sensor.</li> <li>Get alerts about presence of such gases or increasing temperatures through gas analyzers and monitors of our solution; and take immediate actions to curb fires and explosions</li> </ul>  |
| 3.    | Novelty / Uniqueness                     | <ul style="list-style-type: none"> <li>Instant detection of gas leakage</li> <li>Send SMS to the concerned user</li> <li>Easy to access and operate</li> <li>Get real-time alerts about the gaseous presence in the atmosphere</li> <li>Prevent fire hazards and explosions</li> <li>Supervise gas concentration level</li> </ul>   |
| 4.    | Social Impact / Customer Satisfaction    | <ul style="list-style-type: none"> <li>Get immediate gas leak alerts</li> <li>Cost-effective</li> <li>Real-time updates about leakages</li> </ul>   |

|    |                                |   |
|----|--------------------------------|---|
|    |                                | <ul style="list-style-type: none"> <li>• Prevent fires and explosions</li> <li>• Ease to access and operate</li> </ul>  |
| 5. | Business Model (Revenue Model) | <ul style="list-style-type: none"> <li>• By using this system, the user can detect Harmful Gas, Measure the level of toxic gases.</li> <li>• Mainly for Industries so we can visit to the industries and explain them about the benefits of our project and make aware about the gas leakage also .</li> <li>• We can also use this in household as well as industries</li> </ul>   |
| 6. | Scalability of the Solution    | <ul style="list-style-type: none"> <li>• By implementing this system, the people can efficiently and effectively to gain knowledge about the amount of gases at anytime around them. This system can also be integrated with the android application where the users can be notified real-time.</li> <li>• Our end to end wireless gas monitoring system uses wireless sensors to detect the presence of toxic gases . The solution can hence be scaled up for flexible functionality and offer great extendibility for multi-purpose usage.</li> <li>• We can also upgraded it in future like making exhaust fan on while gas is detected (or) like making automatically close the valve of gas cylinder when the gas is start to leaks</li> </ul> |