

Project Design Phase-I
Proposed Solution Template

Date	19 October 2022
Team ID	PNT2022TMID23485
Project Name	Project - Gas Leakage Monitoring and Alerting System for Industries.
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Workers who are engaged with a busy industries packed with gas either harmful or harmless needs a way to monitor their gas pipelines continuously and detect early if there is any leakage of gas in their surroundings so that they can work efficiently on major crises rather than worrying about monitoring or leakage of gas, this will indeed reduce the manpower of that industry and create a peaceful environment
2.	Idea / Solution description	If the gas leaks, the sensor will send its data wirelessly to Arduino. Then, explosion prevention system will be activated.
3.	Novelty / Uniqueness	Even though there are many existing solutions for this problem they failed to satisfy the needs of customer. Some of the solutions are only detecting some particular gases where some others failed to alert the main department and other solutions are with some delays. Our solution not only notify the industry person but also notify the fire fighters so that can take control over the situation and our solution will alert the workers even there is a small leak of gases
4.	Social Impact / Customer Satisfaction	The sensor-enabled solution helps prevent the high risk of gas explosions and affecting any casualties within and outside the premises. The gas sensors help detect the concentration of the gases present in the atmosphere to avoid hazardous consequences like fire breakouts.
5.	Business Model (Revenue Model)	Gas leakage leads to various accidents resulting into both financial loss as well as human injuries. In human's daily life, environment gives the most significant impact to their health issues.

6.	Scalability of the Solution	<p>The result of this project is that the leakage is detected and stopped within 2 seconds, after the leakage starts. This system can detect even 0.001% of leakage.</p> <p>This is an efficient method for automatically detecting and controlling the LPG gas leakage. Moreover, the fire accidents are also prevented by switching off the power supply</p>
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