Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID16859
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Marks	2 Marks

Proposed Solution Template:

The following information is the proposed solution of our project.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Gas leakage is a major problem with industrial sector and gas powered vehicles like CNG (compressed natural gas) buses, cars. The increased concentration of certain gases in the atmosphere can prove to be extremely dangerous. These gases might be flammable at certain temperature and humidity conditions, toxic after exceeding the specified concentrations limits or even a contributing factor in the air pollution of an area leading to problems such as smog and reduced visibility which can in turn cause severe accidents and also have adverse effect on the health of people.
2.	Idea / Solution description	We have used the IoT technology to make a Gas Leakage Detector for society which having Smart Alerting techniques involving sending text message to the concerned authority and an ability performing data analytics on sensor readings. Our main aim is to proposing the gas leakage system for society where each flat have gas leakage detector hardware. This will detect the harmful gases in environment and alerting to the society member through alarm and sending notification.Most of the societies have fire safety mechanism. But it can use after the fire exists. In order to have a control over such conditions we proposed system that uses sensors which is capable of detecting the gases such as LPG, CO2, CO and CH4. This system will not only able to detect the leakage of gas but also alerting through audible alarms. Presence of excess amounts of harmful gases in environment then this system can notify the user. System can notify to society admin about the condition before mishap takes place through a message.It also monitors the amount of gas leaked in the atmosphere.

3.	Novelty / Uniqueness	The novelty of this system is this monitors how much amount of gas is leaked in the atmosphere/ in the industry and it'll send message directly to the admin once it detect the leakage .
4.	Social Impact / Customer Satisfaction	We all know about the bhopal tragedy, this system will be very much useful for the industries to detect the leakage and the amount of gas leaked , this system will create a great impact in the society as it is easier to find the how much gas leaked and it'll be a necessity to install this system in the industries.
5.	Business Model (Revenue Model)	IoT technology is developing rapidly as there are various gas sensors available in the market, the model can be created according to the gas used in the environment and can implement model with the sensor which is related to the gas. Based on the usage of gas type the gas sensors should be used in that model.
6.	Scalability of the Solution	We use IOT technology for enhancing the existing safety standards. While making this prototype has been to bring a revolution in the field of safety against the leakage of harmful and toxic gases in environment and hence nullify any major or minor hazard being caused due to them. We have used the IOT technology to make a Gas Leakage Detector for society which having Smart Alerting techniques involving sending text message to the concerned authority and an ability performing data analytics on sensor. This system will be able to detect the gas in environment using the gas sensors. This will prevent from the major harmful problem .