Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID46768
Project Name	Project – GAS MONITERING 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)	In gas industries there are some places that are too noisy . As we already known gas can spread easily in open atmosphere . In those areas workers can't hear the siren sound when the gas leakage alerting system alerts.And also there is no way for the neighbouring people to know when the gas leakage occurs. They have to know when the gas leakage occurs to get evaculate from the area to save themselves and to escape from fire explosion which can create damage 412 miles(660km). That shouldn't be happen. It will cause a large amount of damage and causes economic crisis for those people and people would be died by explosion. To avoid the explosion during the gas leakage we can alert the workers in the noisy areas with red flash alert and send alert messages to the neighbouring areas as a full screen notifications and also to place siren at the streets of neighbouring areas. By this way we can save the people from the explosion and we can alert them while gas leakage . So that people can move to a safe area. By this way we can help them to evaculate and move to a safe place.
2.	Idea / Solution description	The LCD screen has three colours with " gas leaking": *red *yellow *green Where the green colour indicates that there is no gas leakage occurs. Yellow colors denotes that the gas has leaked for a certain level but not the critical level. The red colour denotes that the gas has leaked for a

		wide range of area . So people need to evaculate.when the gas leakage reach the critical level(red colour) it'll turn on the buzzer to alert the people. When the red light turns on the red sirens in the whole factory. And also sends alert messages to the neighbouring people. Whereas the red siren wirks for the whole factory and alert messages will be send for the whole neighbouring people. The mq-2 gas detector works when gas volume range reaches between 200pp to 5000ppm. When the mq-2 detect the gas concentration reaches 250 and above the data will be sent to the esp32 to process the instructions. Esp32 will request authentication to the web server to communicate with the alert message gateway before the gas leak information sent to the user. Then the user will receive warning notification as a full screen notification via the number that has been registered and also the alerting siren will alert the people and the workers in the gas industries.
3.	Novelty / Uniqueness	• Using materials that are resistant to fire lowers the risk for combustion such as stainless steel • Fix product offset problems by choosing a more stable and good load detector • The position of the LCD and LED displays is placed on the conspicuous part • Improvemnent to the position of the gas detector that neede to be placed in the area close to the gas pipes. • The gas detectors detect gas leakes and delivers the signals to the alerting system by using ESP32 The OGI camera uses a unique spectral method that enables it to detect a gas compund.The filter is mounted in front of the detector amd cooled along with it to prevent any radiation exchange between the filter and the detector •

4.	Social Impact / Customer Satisfaction	The alerting system would keep the workers safety from dangerous accidents like explosions...The alerting sound would be audiable and it will alert people and keep them safe from fire explosion. The customers would feel safe and less stressed because of our alerting system. They don't need to worry all the time
5.	Business Model (Revenue Model)	Our top priority for our customer is to provide a high level safety through our product. Our AI alerts the people and the workers by siren and alerting messages. And the system is always needed to upgrade and to get serviced for a proper maintainance. We would get profit by selling and installing and upgrading our AI for the gas industries. They can't just installed and left they needed to get serviced. Because our product is most time efficient. And we can make profit by servicing ,upgrading, installing devices. And at some places some gases can freeze the sensor so that should be replaced. We can get profit forever just by upgrading and services. There is no way to face loss until there is no fuel and gas industries exist. Because there are many gas and fuel industries in this world we have a lot of customers around the world. No one wants to destroy their factory . so it's assured that our product will be sold and installed in every gas industries.
6.	Scalability of the Solution	Alerting system over this methods offers quick response time and sends alert to people in short period of time. So that people can evaculate as fast as they can and also the workers in the industries can fix before the explosion as fast as they can. Alerting through the red siren and alerting full screen message specifically mentioned in the program source code for alerting about the gas leakage to all people.