Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID19147
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Marks	4 Marks

Solution Architecture:

- The system is a tiny attempt to connect existing primary gas detection technologies to a mobile platform coupled with IoT platforms.
- The gases are detected in a 1m radius around the rover, and sensor output data is continually sent to a local server.
- Because the accuracy of MQ sensors is inadequate, stray gases are detected, causing an amount of error in the sensors' outputs, particularly in the case of methane.
- Furthermore, the availability and storage of dangerous gases such as hydrogen sulphide complicates testing the built gear.
- Because the system functions outside the pipeline, it simplifies system maintenance and material selection in the case of corrosive gases.
- As a result, at this point, the system can only be utilised as a primary indicator of leakage within a plant.

Solution Architecture Diagram:

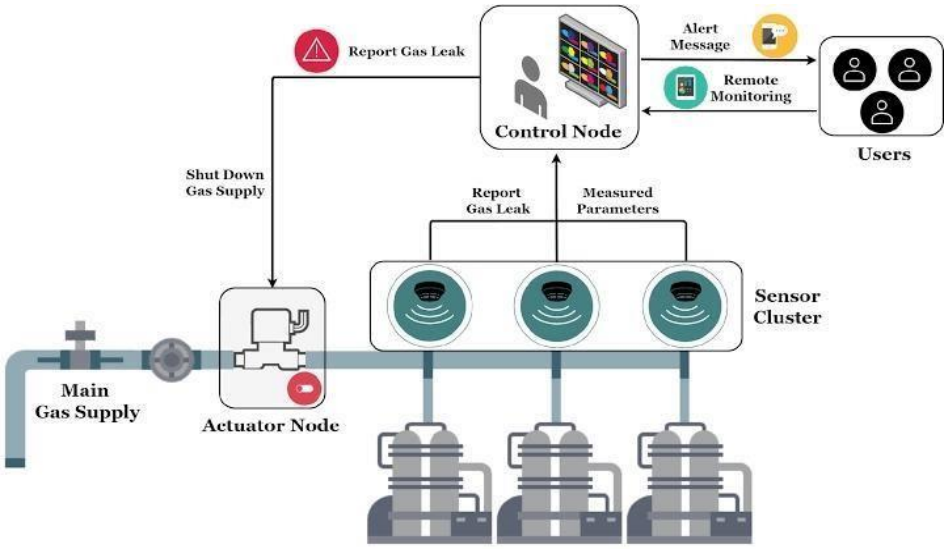

Figure 1: Architecture and data flow of the Gas Leakage Monitoring and Alerting System