Project Design Phase-I
Proposed Solution Template

Date	06 May 2023
Team ID	NM2023TMID16327
Project Name	Gas Pipeline Monitoring system for hospitals
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)	Hospitals require a continuous and uninterrupted supply of medical gases such as oxygen, nitrogen, and carbon dioxide for various medical procedures. However, monitoring the gas pipeline network manually is not only time-consuming but also prone to errors. The current methods used to detect gas pipeline faults in hospitals are not reliable enough to provide a real-time solution for the medical staff to respond to potential gas leaks and avoid emergencies. Therefore, there is a need for an automated Gas Pipeline Monitoring System (GPMS) based on the Internet of Things (IoT) that can continuously monitor the gas pipeline network, detect any anomalies or faults, and provide real-time alerts to the medical staff.
2.	Idea / Solution description	The proposed Gas Pipeline Monitoring System (GPMS) for hospitals is an IoT-based system that continuously monitors the gas pipeline network, detects any anomalies or faults, and provides real-time alerts to the medical staff. The GPMS consists of various components, including sensors, gateway, cloud platform, and user interface..
3.	Novelty / Uniqueness	It provides a new approach for accurately classifying by IoT-based Monitoring, Real-Time Monitoring and Alerts, Analytics Capabilities, User-Friendly Interface, Customizable Alerting SystemOverall, the GPMS for hospitals t is a unique solution that provides advanced monitoring, analytics, and alerting capabilities to ensure a safe and continuous supply of medical gases to patients. It has the potential to improve patient safety, reduce downtime, and save costs associated with gas pipeline maintenance.

4.	Social Impact / Customer Satisfaction	the Gas Pipeline Monitoring System for hospitals based on IoT technology is expected to increase customer satisfaction by providing enhanced safety and security, real-time monitoring and alerts, predictive maintenance, a user-friendly interface, and reduced costs. These features will enable hospitals to provide high-quality care to their patients and ensure that their gas pipeline networks are always functioning at optimal levels.
5.	Business Model (Revenue Model)	the subscription-based model provides a predictable revenue stream for the GPMS, while offering hospitals the flexibility to adjust the level of service they require based on their needs and budget. The additional maintenance and support services, partnerships with gas suppliers, and data analytics services can provide additional revenue streams for the GPMS, making it a sustainable business model for the long term..
6.	Scalability of the Solution	the Gas Pipeline Monitoring System for hospitals based on IoT technology is highly scalable and can be easily expanded to meet the growing needs of hospitals. By adding more endpoints, integrating with other hospital systems, incorporating artificial intelligence and machine learning algorithms, making the system cloud-based, and adding additional features, the GPMS can provide a more comprehensive and efficient solution for hospitals.