**[IP] C02 Monitoring IoT System via Sigfox Network Business Analysis**

**Business Issue:**

The rising concern over carbon dioxide (CO2) emissions and environmental sustainability has created a demand for effective monitoring systems. Businesses and organizations in various industries, such as agriculture, manufacturing, and transportation, need a reliable and efficient solution to monitor CO2 levels in real-time. However, existing monitoring systems often lack user-friendly interfaces, data analytics capabilities, and seamless integration with cloud platforms, limiting their effectiveness.

**Market Analysis:**

The market for environmental monitoring systems, particularly CO2 monitoring, is growing rapidly. Organizations are increasingly focused on reducing their carbon footprint and ensuring compliance with environmental regulations. The agriculture sector, in particular, faces the challenge of managing CO2 levels in greenhouses and indoor farming environments. There is also a demand for accurate and efficient CO2 monitoring in industrial settings to ensure worker safety and compliance with emissions standards.

**Solution:**

The proposed IoT CO2 Monitoring System addresses the business issue by providing a comprehensive solution. It offers the following key features and benefits:

1. **User-Friendly Interface:** The system includes a user-friendly dashboard that displays real-time CO2 levels, temperature readings, and customizable parameters. This allows users to easily monitor and analyze data, empowering them to take proactive actions when abnormal levels are detected.
2. **Local Data Storage:** The system ensures reliable data storage and access by storing collected sensor data locally. This allows for historical analysis, comparison, and generation of insightful reports.
3. **Cloud Integration:** By integrating with a cloud platform, the system enables remote access to real-time sensor data, ensuring scalability, and facilitating data analysis from anywhere at any time. It also enables seamless integration with third-party applications and services.
4. **Data Analytics and Visualization:** The system offers data analytics capabilities, allowing users to gain valuable insights from the collected sensor data. Visualizations such as charts and gauges categorized by year, month, and day provide a clear representation of CO2 levels and temperature trends.
5. **User Interaction and Alerting:** The system provides user interaction through a login/logout functionality, enabling users to customize alert parameters based on sensor types. Timely notifications and alerts are sent to users in case of abnormal CO2 levels, ensuring prompt action and preventing potential risks. Our team is going to use gmail to alert the farmers.

**Competitive Advantage:**

The IoT CO2 Monitoring System provides a competitive edge through its comprehensive features, user-friendly interface, and integration capabilities. It offers an all-in-one solution for CO2 monitoring, data storage, analytics, and visualization, making it a valuable tool for businesses in various industries. Additionally, its ability to connect with the cloud platform and enable user interaction sets it apart from traditional monitoring systems.

**Conclusion:**

The IoT CO2 Monitoring System addresses the growing market demand for accurate, efficient, and user-friendly CO2 monitoring solutions. By offering a comprehensive set of features, including local data storage, cloud integration, data analytics, and user interaction, the system provides businesses with a reliable tool to monitor and manage CO2 levels effectively. Its competitive advantage lies in its ability to provide real-time insights, facilitate proactive decision-making, and contribute to environmental sustainability efforts.