AIR QUALITY MANAGEMENT

PHASE 1 : PROBLEM DEFINiTION AND DESIGN THINKING

PROBLEM DEFINITION :

Problem at hand is to design, develop, and implement an Internet of Things (IoT) solution for effective and real-time air quality monitoring and management. The project aims to address the growing concern of deteriorating air quality in urban and industrial areas, which poses significant health and environmental risks.

DESIGN THINKING:

1.Project objectives:Develop a robust and accurate real-time air quality monitoring system that continuously collects data on various air pollutants

2.IOT devices design:sensors such as optical particle counters, gas sensors, and environmental sensors.Ensure that sensors are calibrated to provide accurate measurements. Perform validation tests in controlled environments to verify sensor performance.Determine the best communication protocols for data transmission, such as Wi-Fi, cellular, LoRaWAN, or NB-IoT, based on the deployment location and network availability.

3.Data sharing platform: Design a web-based platform to display real-time air quality data to the public.

4.Integration Approach:Determine how IoT devices will send data to the data-sharing platform