# Air Quality Monitoring (AQM)

Air Quality Monitoring is an important tool for monitoring air quality, Protecting public health and ensuring compliance with regulations. It can also be used to identify the sources of pollution, monitor climate change, verifying the problem facing , and designing a tool. As consequences, the present instruments was typically high cost, high power consumption, large volume and High weight Here's a step-by-step problems were facing by Air quality monitoring.

**Objectives:**

Nowadays, ” Air Pollution” is one of the major environmental issues that should be addressed wisely. Harmful Pollutants can causes many damages to our environment as well as human health.

**Innovated system:**

Traditional Air Quality Monitoring methods such as, constructing an Air Quality Monitoring Stations are highly expensive. Ensure to search alternate methods which is cost-effective and more compact.

**Designing tool:**

Require to Design a tool which can sense the quality of “Air” and display it, in the format of percentages & Alert us through SMS and Alarm.

**Problem facing:**

Monitoring and Protecting high-level air in urban regions with increasing Businesses, Enterprises, and Populations have become a critical problem. As the population is increasing, travel, energy, and fuel uses are increasing. The air is heavily polluted, which threatens all types of living creatures in the world more seriously.

**Improve air quality :**

Monitoring helps to identify areas with poor air quality and the pollutants responsible for it. This information can be used to implement air pollution control measures to improve air quality. Reducing the levels of pollutants in the air can lead to improved health outcomes for the population and a better quality of life.

**Monitor climate change :**

Changes in weather patterns, such as increased frequency of heat waves and wildfires, can affect the levels of pollutants in the air. By monitoring these changes, air quality monitoring can help to identify the impact of climate change on air quality and take action to mitigate it.

**Needs regular maintenance***:*

These systems require frequent maintenance to ensure they function properly, which can be time-consuming. Photo chemical and optical sensor systems has Low sensitivity.

**Public awareness:**

Air Quality Monitoring data is often made accessible to the public to raise awareness and encourage individuals to take precautions when air quality is poor, such as reducing outdoor activities or using air purifiers.

**Health and Environmental Impact:**

Poor air quality can have adverse effects on human health, including respiratory and cardiovascular problems. It can also harm ecosystems, water bodies, and vegetation. Air Quality Monitoring helps in understanding these impacts and taking preventive measures.

**Data Accuracy:**

Ensuring the accuracy of data collected from monitoring stations is crucial. Factors like sensor calibration, maintenance, and data transmission can impact data quality.

Air Quality Monitoring is an essential tool in the effort to reduce air pollution and its associated health and environmental impacts. Advances in sensor technology, data analysis, and communication have made it increasingly effective in recent years, helping to raise awareness and drive positive changes in air quality management. Hope, this project will be very useful for Air Quality Monitoring in Real-lifetime consequences…..