

# Air Quality Monitoring

## Phase 1: Problem Definition and Design Thinking

The scope of this document is to identify the problem and find the solution for public space air quality monitoring to the real time environmental data.

### Problem Definition:

The environment is filled with pollutant and harmful gas due to the modern civilization. Inhaling pollutants for a long time causes damages in human health.

Traditional air quality monitoring systems are expensive. In this project, we are going to make an IoT Based Air Pollution Monitoring System in which we will monitor the Air Quality over a webserver using internet and will trigger an alarm when the air quality goes down beyond a certain level, means when there are sufficient amount of harmful gases are present in the air like CO<sub>2</sub>, smoke, alcohol, benzene and NH<sub>3</sub>.

It will show the air quality in PPM on the LCD and as well as on webpage so that we can monitor it very easily.

### Design Thinking:

**Real Time Usage:** We can use Air Quality Monitoring system in public toilets and to control harmful gas from vehicles in subways.

**Detection:** We can use MQ135 sensor as the air quality sensor which is the best choice for monitoring Air Quality as it can detects most harmful gases and can measure their amount accurately.

**Correction:** In this IoT project, you can monitor the pollution level from anywhere using your computer or mobile. We can install this system anywhere and can also trigger some device when pollution goes beyond some level, like we can switch on the Exhaust fan or can send alert SMS/mail to the user.

