

AIR QUALITY SENSOR NETWORKS AND AIR CLEANING



The financial cost of air pollution in Europe stands at more than  $\in$  1.4 tn. a year



Every year 600 000 premature deaths in EU are linked with air pollution

**DID YOU KNOW?** 



Air pollution costs € 3 Bn. in lost crops and € 1 Bn. in buildings damage



Cutting air pollution can prevent at least 230 000 deaths and save € 2 tn. annually by 2020

# PRIMARY AIR AIR POLLUTANTS POLLUTION

Particulate Matter (PM)
Sulfur Oxides (SO)
Nitrogen Oxides (NOx)
Carbon Monoxide (CO)
Volatile Organic Compounds (VOC)

•Particulate matter (secondary) PM •Ozone O3 Air pollution occurs when harmful or excessive quantities of substances including gases, particulates, and biological molecules are introduced into Earth's atmosphere. It may cause diseases, allergies and also death of humans; it may also cause harm to other living organisms such as animals and food crops, and may damage the natural or built environment. Both human activities and natural processes can generate air pollution.

# WHAT'S IN INDOOR AIR?

### Airborne particles

Diesel exhaust, carbon black, dust, smoke, fibers, plant matter, hair, pollen Odors' and gases

Cooking odors, pet smell, cigarette smoke, chemicals, sink, or drain smells



**Volatile Compounds** 

Paints, glues and varnishes, wood preservatives, cleaning upplies, office equipment, furniture



#### **Microorganisms**

Bacteria, mold, yeasts, mites, and virus



People spend 90% of their time indoors - 65% of that in their homes – so ensuring the quality of indoor air shoud be a top priority for everyone!

# ABOUT US

**InsightAir** is an innovative European company whose purpose is to provide air quality sensors, in order to monitor and analyze permanently the air quality. This online and cloud based monitoring system is the central theme of InsightAir. Consequently InsightAir offers solutions to improve air quality. With a proven track record in manufacturing companies, medical institutes, clean room environments and university hospitals, InsightAir is your trusted partner in the field of air quality.



# InsightAir

Connected through Air Quality

# AIR QUALITY SENSOR NETWORKS:

**InsightAir Europe** provides its clients with air quality sensor networks which give 4D insights in the air quality (space and time), comprising at least 2 sensors for the same parameter. Air quality sensor network gives insight in the indoor climate and alerts via e-mail/sms when set limits have been exceeded. With this information, you can optimize ventilation or energy use. Types of air quality sensor:

- Industrial Air Quality Sensor
- Indoor Air Quality Sensor
- Clean-room Sensor
- Medical Air Quality Sensor
- Outdoor Air Quality Sensor





SENSOR	CONNECTION	GATEWAY	CONNECTION	CLOUD
Sensors. Each sensor is connected to 230 V 50 Hz power source, max. 1,5 m from the sensor.	Private LoRa network. Distance between	The gateway is connected to a 230 V 50 Hz power source.	Ethernet cable. (or Wifi) Alternatively GPRS	Data are made available via the website (online platform) dashboard.inisghtair.eu
Located in the place where the measurement should be done.	sensor and gateway: max. 100 meters.	The gateway receives the signal of the sensors and pushes the signal into the cloud. Located on a central place inside the builidng, within 100 meter rang of the sensors.	data (contract).	A login and password are required. Alarms and statistical reporting can be set.

## INSIGHTAIR SENSORS

#### **INDOOR AIR QUALITY SENSOR**

InsightAir's indoor air quality sensor measures T, RH, PM2.5, VOC, CO2. The sensor can connect with the local WIFI network or via GPRS data.

#### **BENEFITS:**

- Reduced overall cost for external companies;
- 24/7 monitoring of PM and other pollutants;
- Use reports for auditors and local authorities;
  - Care for the employees;







## AIR CLEANERS FOR INDUSTRIAL NEEDS

Problem: fine dust in the air

- Dirty environments
- Dirty production
- Malfunctions in electronic devices

Solved by HFE solutions with electrostatic filter.





## PLUG-AND-PLAY SOLUTIONS

A new generation of air cleaners filters pollution and / or unpleasant odors in every indoor air. Optimum comfort and easy to use. Advantages of air cleaning:

- Provides a fresh and pleasant working environment
  - Contributes to better health
  - Has a positive effect on productivity and absenteeism
  - Gives fewer headaches, concentration problems, fatigue and throat and nose complaints



#### CUSTOMER: CHEP, EUROPE

### CASE STORY DUST MONITORING

**Case:** Chep sites are heavily contaminated with dust because of its industrial processes. Because of employee wellness, PM100 (coarse dust) and PM10 (fine particles) are monitored.

"Maintaining low dust levels in Chep sites in Europe is a key performance factor. PM100 is legally limited to 3 mg/m<sup>3</sup> in Chep's sector. PM10 is even more hazardous to employees health. Several actions to reduce dust levels have been taken. The result is mornitored using industrial air quality sensors of InsightAir."

- Hugh Kempton

Safety Manager – Chep Europe

# **OUR PARTNERS**







Bulgaria Blvd. 88, ent. 3, floor 3, office 16

1680 Sofia, Bulgaria

www.insightair.eu

info@insightair.eu

+359 886821901 (BG) +324 76986990 (BLG.)