

CTair

Air Quality Monitor

PRODUCT BROCHURE





Letter from Scentroid’s CEO

Scentroid’s mission is to empower our clients with vast in-depth knowledge, state-of-the-art instruments, and the most extensive customer support. To this end, we strive in every aspect of our operation to put our client first and to use our research expertise to develop the most innovative and effective products and services in the sensory industry. We envision a future where environmental impacts will be easily and accurately measured and mitigated.

Ardevan Bakhtari
Dr. Ardevan Bakhtari
CEO, Scentroid

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Why Choose CTair?

Compact, cordless, easy to use, high accuracy sensing. The CTair revolutionizes the air quality monitoring network industry. Understanding urban air pollution and the potential impact on health is fundamental to both city structure and planning.

The CTair monitoring station is a fixed unit that collects information from a variety of sensors and presents the data in an easy to understand graphical interface. By applying information collected from multiple data points, the CTair allows the user to gain a complete understanding of the chemical compounds being monitored. It has been designed to be dispatched into a network of CTair units. Due to its lightweight design the CTair unit can easily be installed and mounted to a light fixture or utility pole.

The CTair has been designed to monitor target gases (which can be specified at the time of ordering). A full list of sensors is available on our website.

Please contact us to learn more at
info@scentroid.com OR call us at **+1.416.479.0078**

CTair Overview

Solar Powered Option

No power? No problem! The CTair features an optional solar power generating system. Just angle the panel and turn on your unit!

Powerful Dust Analysis

High accuracy dust analysis (PM1, 2.5, and 10) using a patented multi-beam laser counter and heated sampler.

Small and Lightweight

The CTair is smaller than comparable analyzers minimizing cost and spatial real estate.

Smart Networking

CTair units work in tandem to predict and collect data for an accurate air quality assessment in a large urban landscape.

AI Compensation

The temperature and humidity compensation utilized by our AI modeler is able to predict pollutant levels to 96% of true concentration.

Wide Variety of Sensors

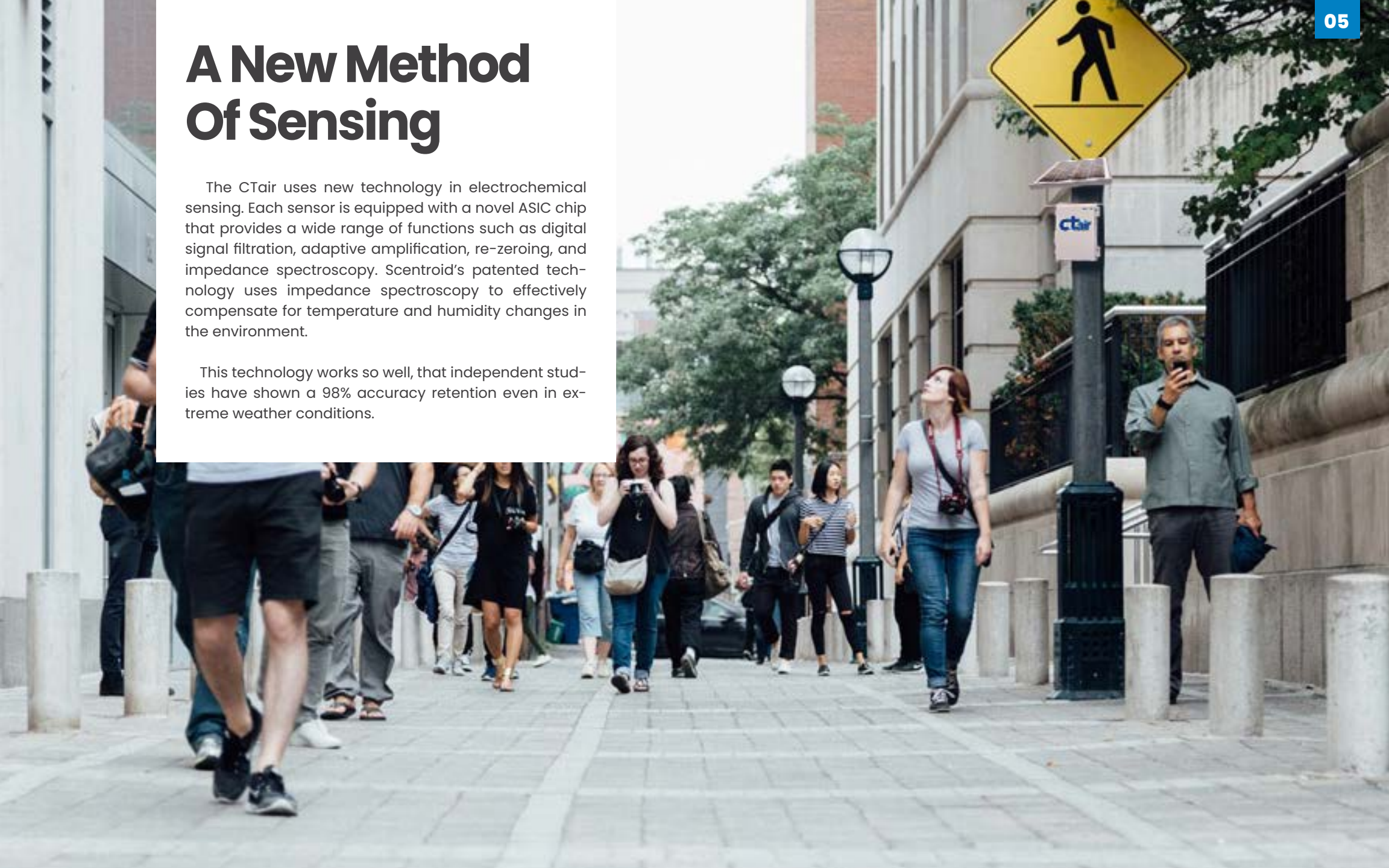
With over 300 million different sensor combinations available, no application is too big or too small. Scentroid has you covered!



A New Method Of Sensing

The CTair uses new technology in electrochemical sensing. Each sensor is equipped with a novel ASIC chip that provides a wide range of functions such as digital signal filtration, adaptive amplification, re-zeroing, and impedance spectroscopy. Scentroid's patented technology uses impedance spectroscopy to effectively compensate for temperature and humidity changes in the environment.

This technology works so well, that independent studies have shown a 98% accuracy retention even in extreme weather conditions.



Easy to Install and Operate

The CTair is smaller and lighter than comparable analyzers minimizing both costs and spatial real estate. Each unit is equipped with four mounting feet used to mount it to a wall or post. These mounts are shown as illustrated here. Should you require a different method of mounting the units, Scentroid can assist you and provide new and innovative solutions.

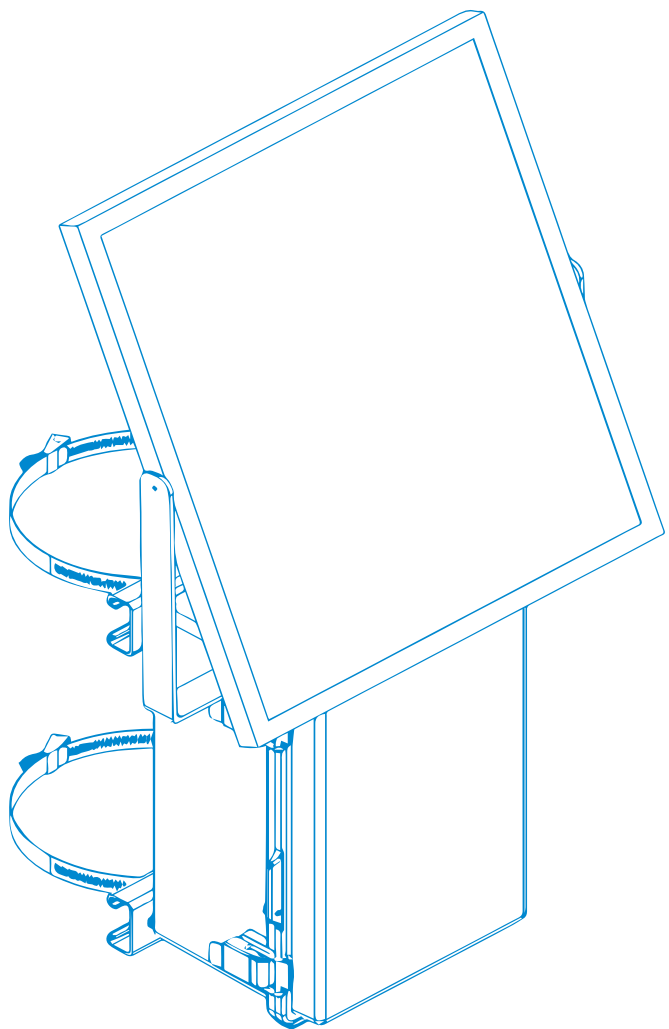




Specifications

Product Name	Scentroid CTair
Maximum # of Sensors	11 (4xEC, 1xCO2, 1xPID, 1xCH4, 1xPM, T, RH, Barometer)
Type of Sensors	PID, NDIR, EC, Laser Particulate counter, and MOS
Sampling rate	1 per minute
Weight	4.5 Kg with Solar Panel
Size	19 x 29 x 14 cm CTair Unit
LED Indicator	Color-changing LED Light Displaying Unit Status
Communication	Wi-Fi, 3G, 4G, LoRa, MODBUS (TCP/IP)
Power Requirements	100-240V, Solar Power Option Available
Cloud Server	SIMS3 Data Logging, Analysis, Alarms, Remote Management
Temperature Range	-40 to 40°C, can be equipped with AC Unit
Operating R. Humidity	10 - 90% RH
Device Health	Daily Sensor Health & Replacement Check and Reminders
Warranty	24 Months Full Warranty (Parts, Including Sensors)
Mounting	Configurable for Wall or Pole Mount
Battery Only Runtime	36 Hours (Base Model)
Internal Storage	64GB - SD Card
Design Rating	IP53
Security	Securable by Cable/Pad Lock
Calibration	Factory Calibrated to Fully Documented Procedures in Accordance with ISO 9001 QMS
Optional Components:	
Traffic Sensor	Vision-Based Traffic Classification and Count
Air Conditioning	Unit can maintain -40 to 50°C
Opacity Sensor	Opacity Monitor Wavelength of 500 nm to 700 nm
Wind Speed Sensor	Ultrasonic Sensor, 60m/s Max Detection Limit

For a full list of sensors, visit us at www.scentroid.com



CTair Features, Optional Components



Data Storage Reliability

The CTair provides **2 levels** of data storage:

1. Storage of data on pre-installed SD card
2. Transmission and storage of data on the cloud / Localized server

Flexible Sensing & Modular Design

The CTair can be equipped with up to 11 sensors from Scentroid's sensor list (**viewable at www.scentroid.com**)

There are 5 categories of sensors:

- Photo-Ionization Detector
- Non-Dispersive Infrared
- Electro-Chemical
- Laser Scattered Counter (for PM1-10)
- Metal Oxide Sensor

Each CTair can be customized with the specific sensors that are best suited for your industry. Our flexible pricing means you pay for exactly what you need. Based on pollutant concentrations or odor units - **All limits and activation conditions are set through the SIMS software.**

A Sensor for Every Situation

The CTair can be equipped with up to 12 sensor varieties, including pressure, temperature, relative humidity, dust (PM1, 2.5, and 10), noise, radiation, traffic, wind, and more. As a matter of fact, you can create up to 300 million different sensor combinations! No application is too big or small. Scentroid has you covered!

AIR CONTAMINANTS	HYDROGEN CHLORIDE	PARTICULATE MATTER 2.5	HYDROGEN
AMMONIA	HYDROGEN CYANIDE	PARTICULATE MATTER 10	OZONE
BENZENE, ETHYL-BENZENE	HYDROGEN SULFIDE	PHOSPHINE	VOCS
CARBON DIOXIDE	METHANE	RADIATION	HYDROCARBON
CARBON MONOXIDE	METHANE (LEL)	RADON GAS	OXYGEN
CARBON DISULFIDE	METHANOL & ETHANOL	SULFUR DIOXIDE	TSP (PM REQUIRED)
CHLORINE	METHYL MERCAPTAN	TERT BUTYLTHIOL	FORMALDEHYDE
CHLORINE DIOXIDE	NITRIC OXIDE	TETRAHYDROTHIOPENE	ORGANIC SOLVENTS
ELECTROMAGNETIC FIELD	NITROGEN DIOXIDE	TOLUENE	TRS AND AMINES
ETHYLENE	NITROUS OXIDE	XYLENE	PLUS MORE! SEE OUR WEBSITE

Benzene Detection

Benzene is typically formed from both natural processes and human activities. A few common sources may include volcanoes, forest fires, crude oil processing, gasoline production, and cigarette smoke. It is widely used in several manufacturing processes including plastics, resins, synthetic fabrics, lubricants, rubbers, dyes, detergents, and pesticides. Exposure to Benzene can be incredibly harmful, and lead to many adverse health effects, even death.

Scentroid has developed a unique solution for monitoring Benzene. Create a detection perimeter around your facility by utilizing a network of our CTair or Scentinal units.

- Ask about on-site support which involves the identification, labeling, and monitoring of all potential leak sources
- Use of infrared cameras enables the identification of large leaks
- A full report is provided upon completion of analysis





Alarms & Notifications

The Scentroid “Sensor Information Management System” (SIMS3) provides the capability for the CTair to **set up alarms and notifications**. Alarm levels can be set up based on individual pollutants or on the odor concentration. Breaching the designated alarm thresholds will trigger SMS and/or emails alerts to be sent out to the authorized operators. Additionally, Scentinal can be setup to provide localized audible alarms. An authorized user can remotely configure each CTair; providing it with the desired sampling rate, transmission rate, purging frequency and more. **CTair units can also transmit data over WIFI or LAN networks to a local server running a client SIMS database – providing additional security.**

CTair for Process Control

In addition to email and SMS alarms, **CTair units can be used to control a variety of equipment.** For example, it can be used to:

- Provide audible alarms
- Engage odor control technologies (e.g. misting systems) when fence-line pollutants exceed designated thresholds
- Secondary polishing filter only when needed; reduce operating costs
- Activate external sampling pump for collecting an air sample using a PTFE or nalophan bag

The limits and conditions for engagement of each relay can be set based on pollutant concentrations or odor units. All limits and activation conditions are set through the SIMS software.



Traffic Counters

Upon request, our CTair units will be equipped with a full, non-contact vehicle counter. A proprietary target tracking algorithm allows simultaneous tracking of multiple vehicles traveling in adjacent lanes, further facilitating accurate counting.

Our sensors offer the greatest value in traffic counting and speed detection available. These sensor systems are easy to install and priced right for any budget. They will allow you to collect and view traffic details in real time from anywhere.

Our counter also features a passerby, bicycle, and scooter counter resulting in accurate direct speed measurement and readings. The built in vehicle classification system recognizes more than 4 vehicle size classes. A counter in conjunction with our AI system will provide you with a direct correlation between traffic and pollution.



Sampler Synergy

The integration of the Scentroid CTair with the Scentroid VC20 Vacuum Chamber Sampler marks a significant advancement in air quality monitoring technology. This synergy allows for a dynamic response to pollution concerns.

When pollutant levels exceed established thresholds or community complaints arise, the CTair triggers the VC20 to automatically acquire an air sample. The VC20's precision ensures the collection of accurate ambient air, filling sample bags for further analysis. This enhances our ability to swiftly identify pollution sources and respond proactively to safeguard both public health and environmental integrity.





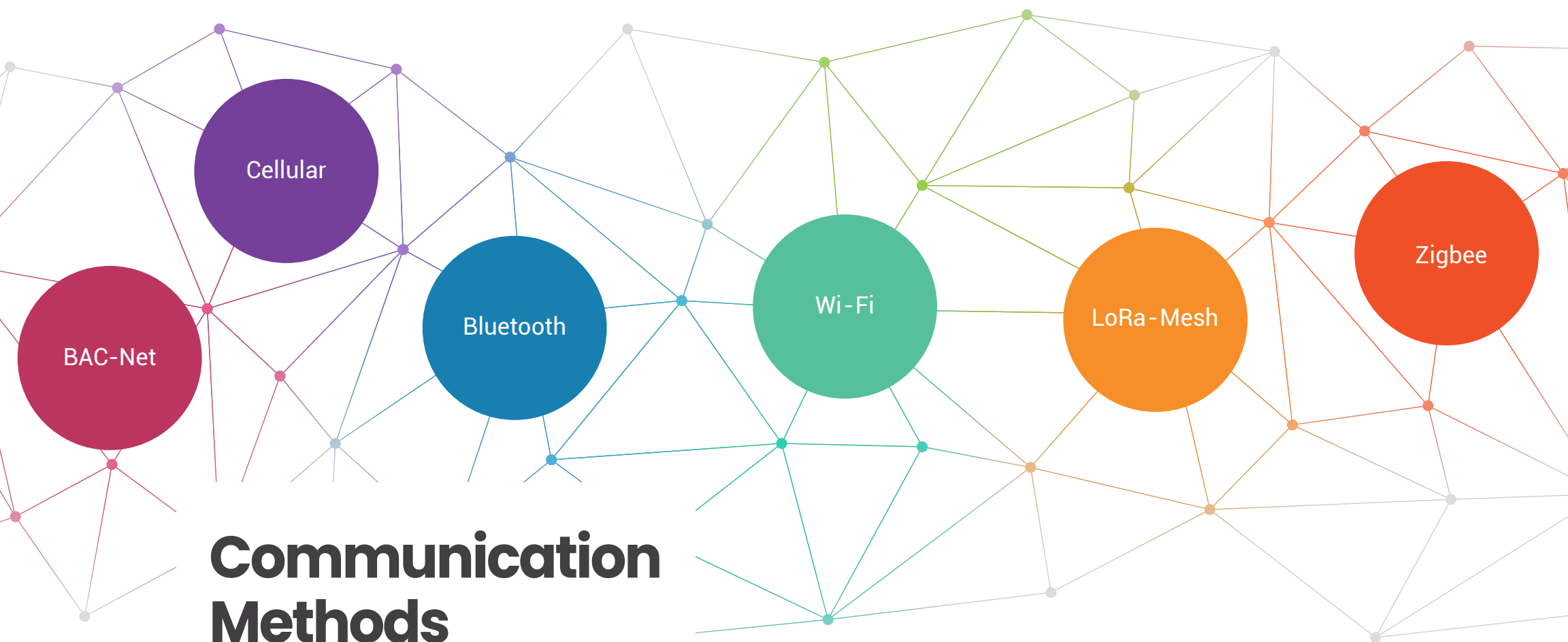
Data Server & Communication Protocol



Installation & Connectivity

Each CTair has a micro controller; allowing the unit to record its GPS positioning. This position is sent to the central server during each data transfer. At the time of the installation, the technician simply needs to mount the CTair and power it on. **The central computer will automatically identify the unit and know of its exact location.** To reconfigure the network, the physical unit can be moved, and the system will automatically adapt to this change. Multiple CTair units can be configured within one monitoring area.

The system can either connect to a local server or Scen-troid's cloud-based SIMS3 server.



Communication Methods

The Scentroid CTair will arrive pre-configured to work with multiple communication protocols. We can easily integrate it into your system, whether it's through Bluetooth, cellular, or wifi. Cross product integration has never been easier! If you required a connection between multiple CTair units, or if your facility required some form of communication between a different Scentroid Analyzer, for instance, the AQSafe or the Scentinal SL50, Scentroid has you covered!

Mesh Networking

If you happen to purchase multiple Ctair units, they can be deployed as a network mesh. This allows you to monitor an entire perimeter or a facility as a singular, coherent unit. Each individual Ctair form a mesh based connection with one another through a LoRa network.

Individual communication protocols can be costly with the required purchase of multiple modems and operational SIM cards. By utilizing a LoRa-Mesh network, you eliminate costs associated with having each unit communicate with our cloud server independently.

Each analyzer network will only require 1 or 2 gateways, and the gateway will communicate directly with our cloud service, SIMS2. As mesh networking encourages multi node hopping, if any node were to be disabled or if a communication path were to be broken, the Ctair units will automatically communicate with one another in order to find a different pathway to a gateway.

This robust and sophisticated system ensures your data is always live and frequently updated. When the encrypted LoRa-mesh data reaches SIMS2, we can then visualize data, and apply AI to determine patterns, heat maps, and trends..

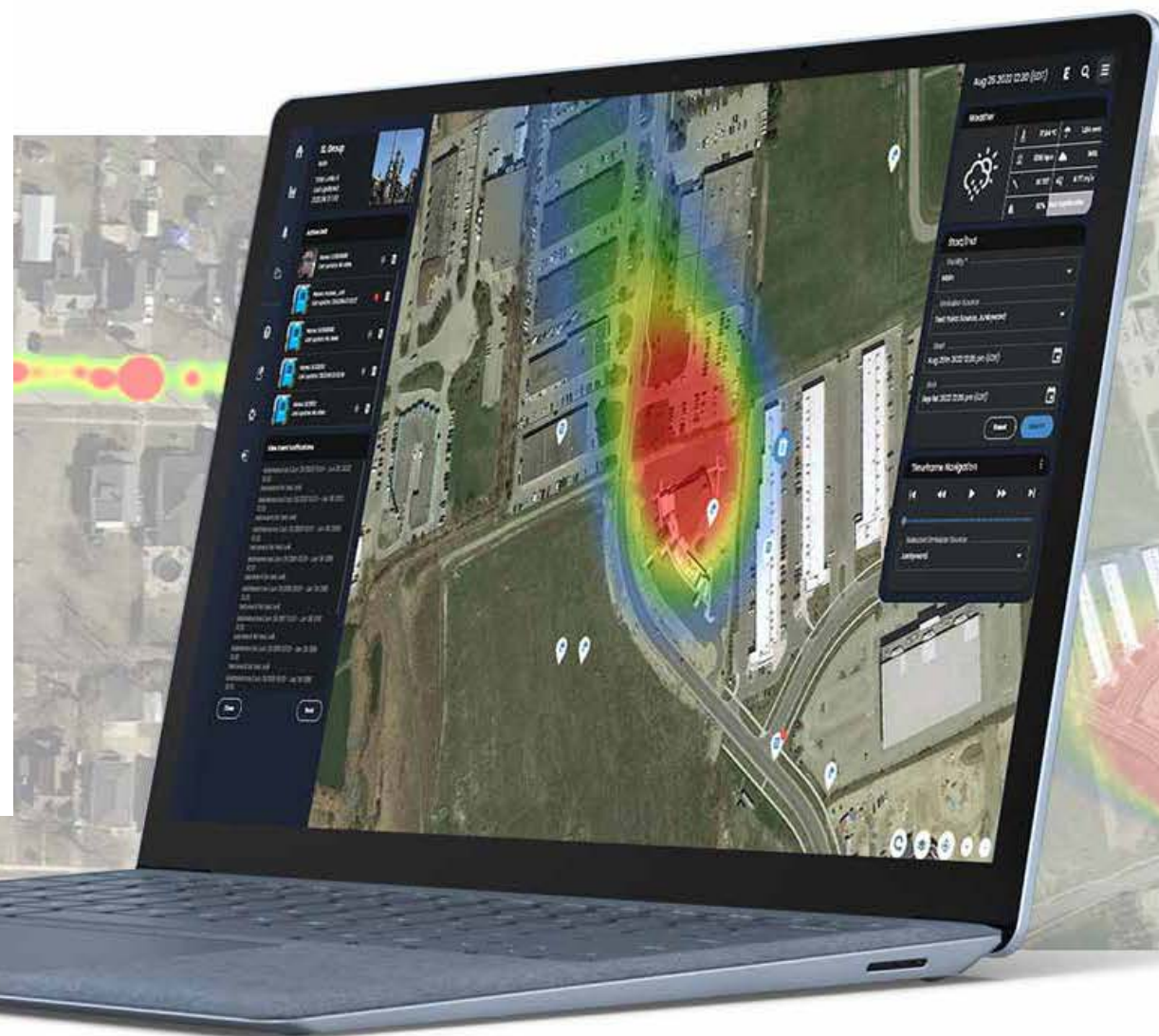
Cloud Based Hosting

The central monitoring station is hosted on a **secure cloud-based server**; allowing remote access with any smart device that is connected to the internet. The access is restricted, and the **data is encrypted for maximum security**. Users are given an identification and password combination which will define their permission level. For example, a standard user who accesses the platform is only able view and download the results, while a user with administrator access can reconfigure the system and redefine parameters.

The monitoring station is designed to collect all data from the sensors and present the sensor data in an **easy to understand graphical interface**.

Introducing SIMS3: Sensor Information Management System

The sensor information management software, SIMS3, is our all-inclusive software used to view and analyze historical data, run diagnostics, make predictions, and configure various settings for your supported Scentroid device. It offers a complete and integrated suite for ambient air chemical analysis and odor management. SIMS3 can collect data from thousands of devices covering an entire area, using a unique and highly intuitive facility control system.



Facility Organization

All facilities are separately organized so that the users of each will only see data from their own units. Regulators will have an overall view of all facilities within their monitoring scope.

SIMS3 AI

SIMS3 AI utilizes both continuous pollution monitoring and live weather data to calculate a real-time odor plume model, displaying an exact location and spread of odor emissions.

Complaint Designation

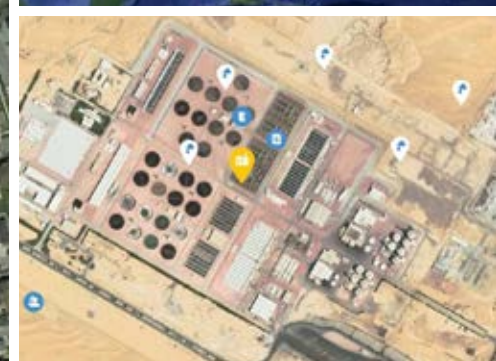
Nearby complaints are automatically assigned to facilities, and even sources within facilities, so that the system provides a perfect blend of real-time odor impact estimation, with the registration and further management of odor complaints from neighboring residents.

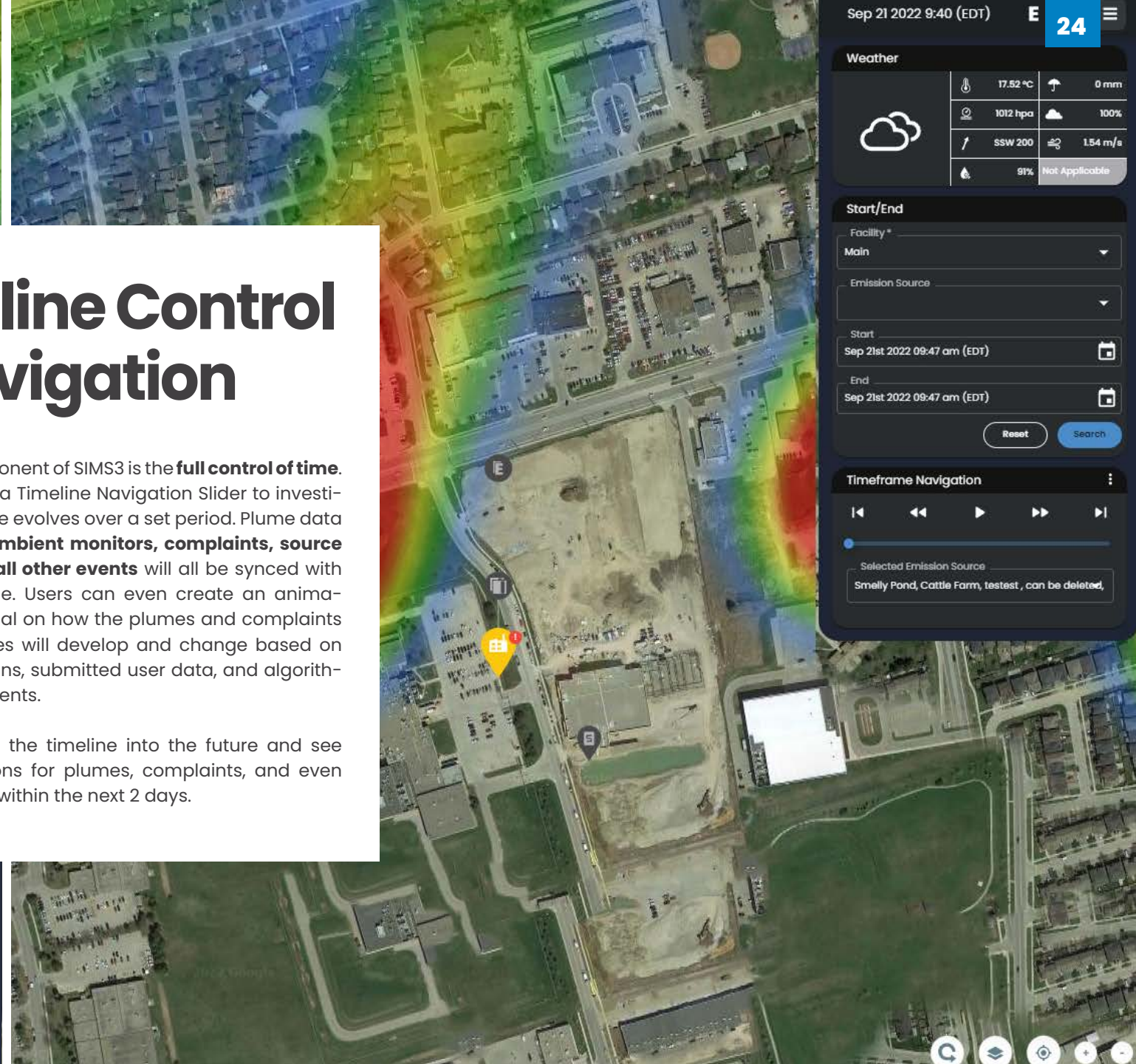
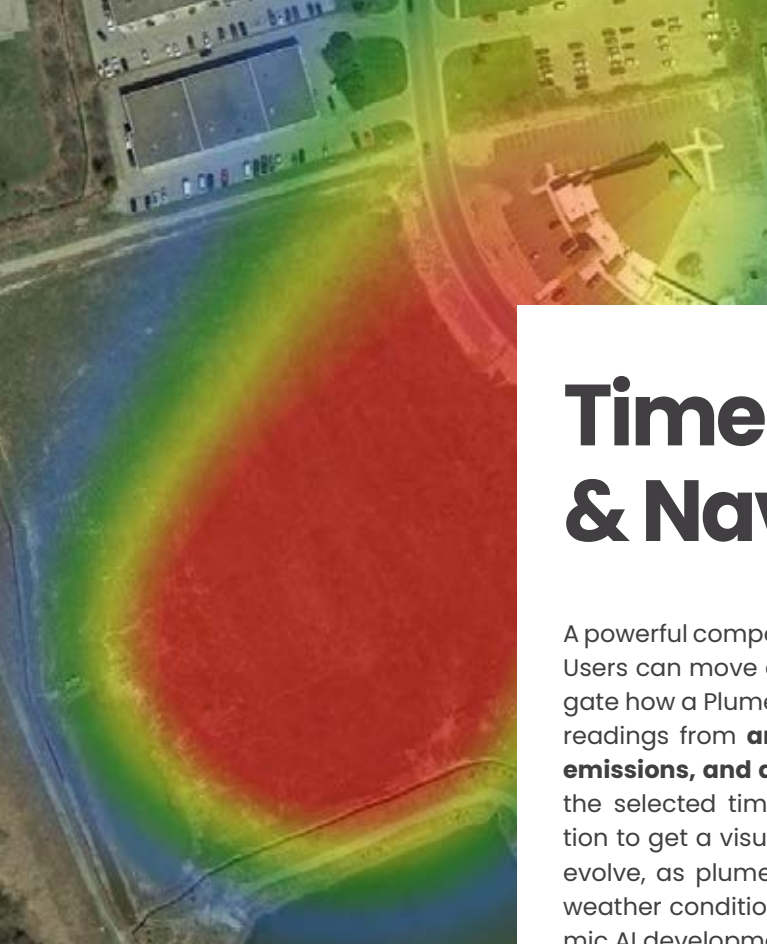
Modules

The map module itself displays a wealth of information including locations of your air quality monitoring devices, their live sensor readings, the location of sensitive receptors, odor complaint locations, and their justification status. The map module is complemented by a diverse series of user analytics to assist you with determining a wealth of parameters with the click of a button!

User Settings

The system is further supported by a robust settings component, allowing the quick change of user permissions, access privileges, notifications settings and more, all in one convenient window!





Timeline Control & Navigation

A powerful component of SIMS3 is the **full control of time**. Users can move a Timeline Navigation Slider to investigate how a Plume evolves over a set period. Plume data readings from **ambient monitors, complaints, source emissions, and all other events** will all be synced with the selected time. Users can even create an animation to get a visual on how the plumes and complaints evolve, as plumes will develop and change based on weather conditions, submitted user data, and algorithmic AI developments.

Users can move the timeline into the future and see SIMS3's predictions for plumes, complaints, and even sensor readings within the next 2 days.

Sep 21 2022 9:40 (EDT)

E24

Weather

17.52 °C

1012 hpa

SSW 200

91%

0 mm

100%

1.54 m/s

Not Applicable

Start/End

Facility *

Main

Emission Source

Start

Sep 21st 2022 09:47 am (EDT)

End

Sep 21st 2022 09:47 am (EDT)

Reset

Search

Timeframe Navigation

Selected Emission Source

Smelly Pond, Cattle Farm, testest , can be deleted,

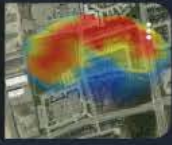
Timeframe Navigation

Selected Emission Source

Cattle Farm

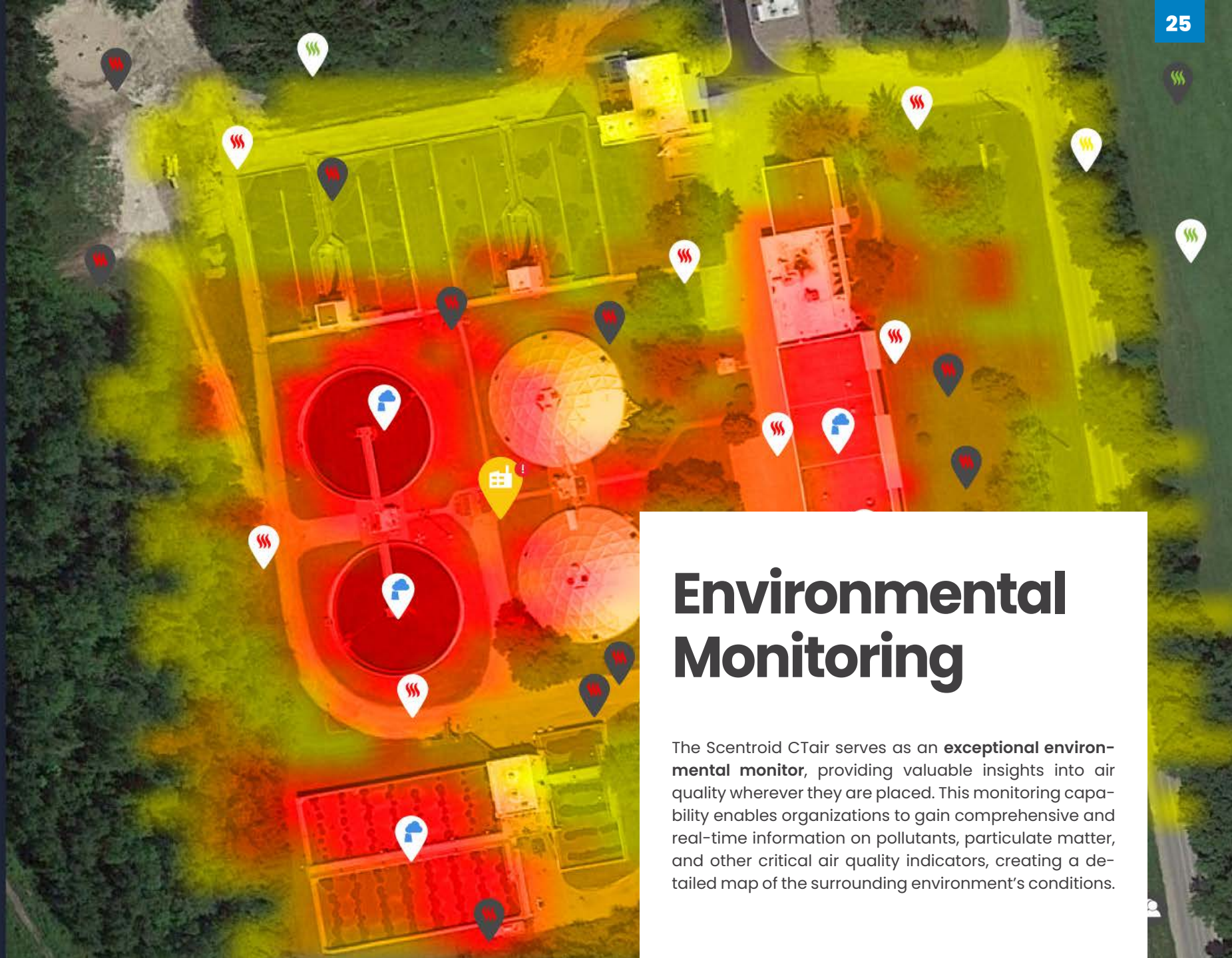
Dust Event Group

Facility: FacilityName
Events: 224
Justified: 24
Not Justified: 100
Not Yet Justified: 100



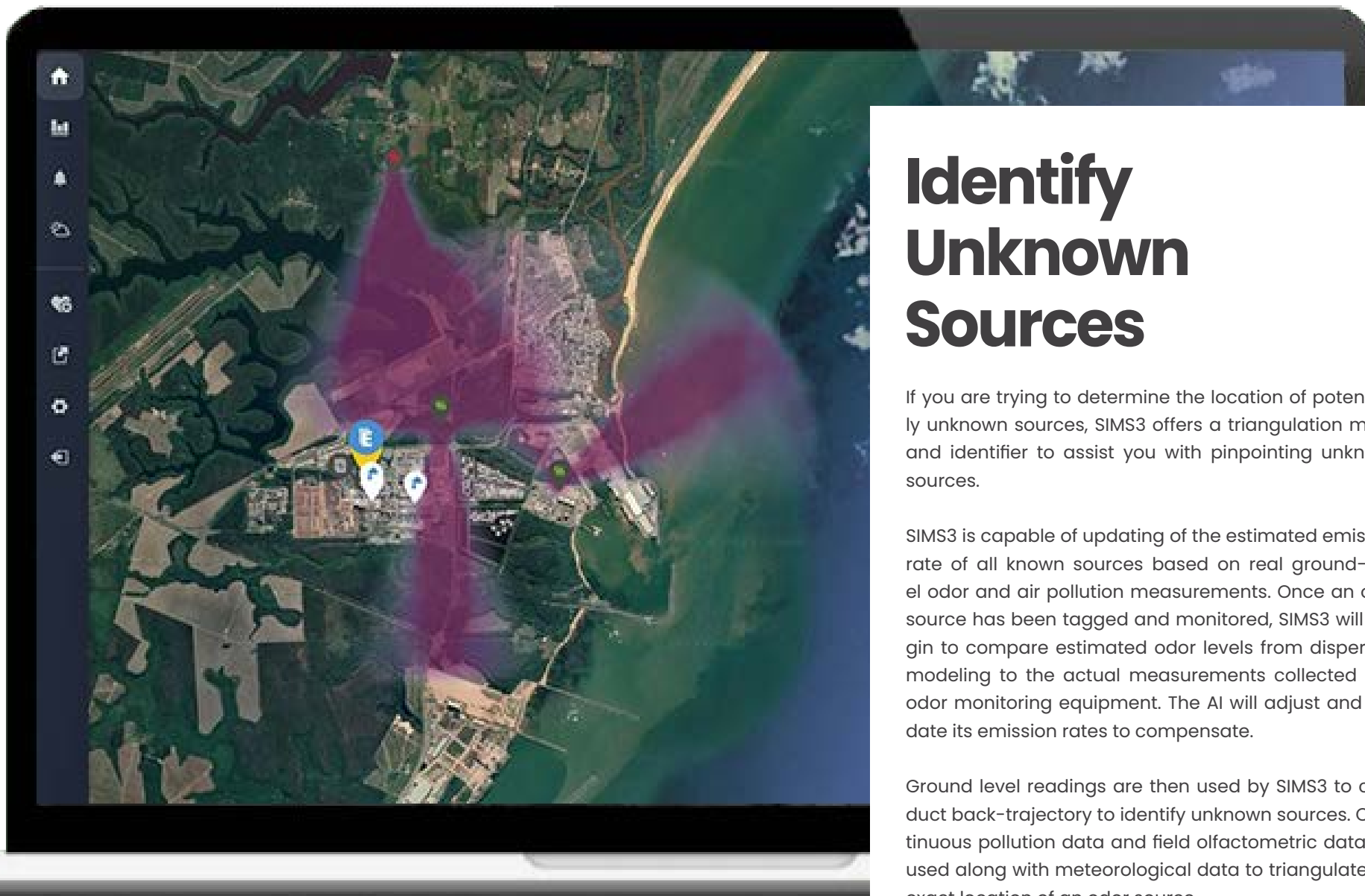
Event Notifications

- SO2 | 12.24.2021 23:00 - 12.24.2021 23:45
Bad smell, almost musty. Like Matches
- NO2 | 12.24.2021 22:45 - 12.24.2021 23:34
Noticed reddish-brown stain on tank
- NO2 | 12.24.2021 22:35 - 12.24.2021 22:45
Bad coughing fit, air felt heavy
- SO2 | 12.24.2021 21:45 - 12.24.2021 23:34
Trouble Breathing, odour was very heavy
- System | 12.24.2021 21:24 - 12.24.2021 21:24
NO2 levels moderate
- SO2 | 12.24.2021 18:40 - 12.24.2021 18:50
Recieved complaint
- NO2 | 12.24.2021 17:45 - 12.24.2021 19:20
Recieved complaint
- SO2 | 12.24.2021 15:30 - 12.24.2021 15:30
Smelled bad on roadway this morning
- NO2 | 12.24.2021 15:28 - 12.24.2021 17:30
Itchy eyes
- System | 12.24.2021 15:20 - 12.24.2021 16:34
NO2 Levels High
- SO2 | 12.24.2021 15:20 - 12.24.2021 15:55
Recieved complaint of poor smells from 6th...
- NO2 | 12.24.2021 15:15 - 12.24.2021 15:30
Received complaint from Edrick
- NO2 | 12.24.2021 13:45 - 12.24.2021 16:34
Acrid, ammonia-like odor near tank 5
- System | 12.24.2021 13:45 - 12.24.2021 16:20
SO2 levels high
- System | 12.24.2021 12:45 - 12.24.2021 12:50
NO2 Levels moderate
- NO2 | 12.24.2021 11:30 - 12.24.2021 12:50
Smelled a bit like cleaning products?
- SO2 | 12.24.2021 11:20 - 12.24.2021 12:25
Hard to breathe due to smell
- NO2 | 12.24.2021 10:20 - 12.24.2021 14:34
Smell lingering in wind
- NO2 | 12.24.2021 09:45 - 12.24.2021 9:45
Windy day today, ammonia smell in air
- SO2 | 12.24.2021 8:50 - 12.24.2021 12:00



Environmental Monitoring

The Scentroid CTair serves as an **exceptional environmental monitor**, providing valuable insights into air quality wherever they are placed. This monitoring capability enables organizations to gain comprehensive and real-time information on pollutants, particulate matter, and other critical air quality indicators, creating a detailed map of the surrounding environment's conditions.



Identify Unknown Sources

If you are trying to determine the location of potentially unknown sources, SIMS3 offers a triangulation mode and identifier to assist you with pinpointing unknown sources.

SIMS3 is capable of updating of the estimated emission rate of all known sources based on real ground-level odor and air pollution measurements. Once an odor source has been tagged and monitored, SIMS3 will begin to compare estimated odor levels from dispersion modeling to the actual measurements collected with odor monitoring equipment. The AI will adjust and update its emission rates to compensate.

Ground level readings are then used by SIMS3 to conduct back-trajectory to identify unknown sources. Continuous pollution data and field olfactometric data are used along with meteorological data to triangulate the exact location of an odor source.



The **built-in weather forecasting module** allows the user to see any future weather events, determine complaint risk probability, view temperature, and more. **Complaint risks are displayed underneath each individual forecast**, whether daily or hourly, to assess the potential of receiving an odor complaint at that time, or for that date. Clicking on any date within the forecasted period will let the user **generate a plume** based on changing weather patterns, along with a complaint risk probability rating.



- Odor: 35
- OCU Maint.: 19
- Sludge Delivery: 15
- Settling Tank Mnt.: 17
- Mister 1: 8
- Mister 2: 4

46
New Events

23

29

Events

Event & Notification Log

The SIMS3 **Event Log** contains event data, time frame, justification, occurrences, intensity, and a brief description. At a glance, users can determine the **most logged event types**, determine the weekly **frequency of logged events**, and track the **most active day, most active time**, and **total events registered**. A series of filters allows users to quickly find a specific event, notification, event type, new or read status, event time, justification status, occurrences, intensity, and more.

Our **notification center** allows you to quickly view your instrument's alarms through a clean and organized interface. Here, you can access your device, look up a specific sensor, display all of your established alarms, and obtain a detailed breakdown of your alarm status.

Event Notification List

Status :	Type :	Registrant :	Event Time :	Justification :	Correlation :	Description :	event types, determine the weekly frequency of logged events, and track the most active day, most active time, and total events registered. A series of filters allows users to quickly find a specific event, notification, event type, new or read status, event time, justification status, occurrences, intensity, and more. Our notification center allows you to quickly view your instrument's alarms through a clean and organized interface. Here, you can access your device, look up a specific sensor, display all of your established alarms, and obtain a detailed breakdown of your alarm status.			Intensity :	mark :
New	Odour	SR: Stanley Homes	2022.06.14 7:30 - 14:25	Manual Not Justified	View Correlation	Stanley Homes re sensitive recept				5	☒
New	Alarm: H2S	System	2022.06.16 14:05 - 15:30	Manual justified	None	Exceedance alarm consecutively wi				N/A	☒
New	OCU Maint.	Benjamin	2022.06.16 15:00 - 17:00	Auto Justified	View Correlation	Scheduled main				N/A	☒
New	OCU Maint.	Benjamin	2022.06.17 5:00 - 7:30	Auto Justified	View Correlation	Emergency main				N/A	☒
New	Sludge Del...	Benjamin	2022.06.18 18:30 - 20:30	Auto Justified	View Correlation	Scheduled proce				N/A	☒
New	Settling Ta...	Benjamin	2022.06.21 8:45 - 11:00	Auto Justified	View Correlation	Scheduled weekly maintenace	N/A	1	N/A	☒	
New	Odour	SR: Stanley Homes	2022.06.21 9:30 - 14:25	Manual not yet justified	View Correlation	Stanley homes filed a complaint, recorded immediately.	Might be a result of plant. do not mark as justified pls - Benj	1	4	☒	
Read	Odour	EXT: Leslie	2022.06.21 9:40 - 17:00	Auto Justified	View Correlation	HI It smell bad outside today very hot day pls remove smell thank you	Caused by settling tank maint today. - Benj	1	7	☒	
Read	Odour	EXT: Paolo	2022.06.21 10:20 - 13:20	Auto Justified	View Correlation	Automatically provided by: Neighborhood Odor Watch App	Caused by settling tank maint today. DO NOT DO THIS ON WINDY DAY! - Benj	1	4	☒	



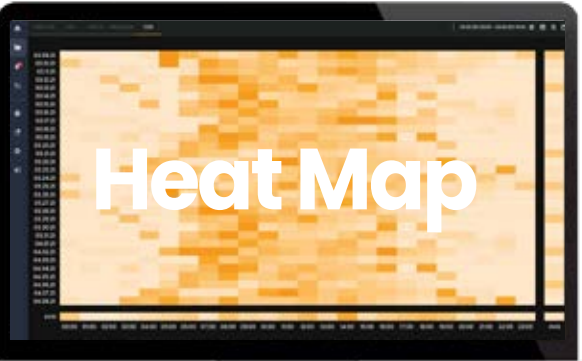
Temporal



Statistical



AQI



Heat Map



Events



Justification

For more details on our SIMS3 platform, please see our [SIMS3 Brochure](http://www.Scentroid.com) available at www.Scentroid.com

Robust User Analytics

The **SIMS3 analytics module** provides you with the tools you need to make informed decisions regarding your monitoring projects. This module allows you to view data in several formats including **temporal view, statistical view, AQI Analysis view, and heat map**. Take your analytic capabilities even further by analyzing your **recorded events, event types, and overall event activity**.



Odor Monitoring

Our Approach To Odor Management

Sensors are selected based on the application, and therefore, are **customized to individual industries, plants, facilities, sites, etc.** This allows the CTair to find the real tracer that can be used to correlate chemical readings to odor concentration.

1. A large number of calibration points (minimum of 30) are collected using the **SM100 infield olfactometer**. The initial readings along with periodic measurements ensure the system has enough data points to develop an accurate model reflecting all changes to process, pollutants, and sensors.

A sophisticated **machine learning algorithm** is used to find the complex correlation between odor units and pollutants measured. The software provides quality of the fit and the expected error range to ensure reliable data is used.





Measuring Odor Concentration

CTair measures concentration levels of pollutants in the ambient environment and simultaneously, outputs odor concentration levels as well. Data from individual sensors are processed by Scentroid's chemical and olfactometric correlation system in order to determine the **odor concentration** in an OU/m³ annotation. The system uses a deep learning algorithm to determine an odor concentration based on existing readings from the chemical sensors.

Olfactometric measurements, sampled using Scentroid's SM100 Field Olfactometer, are collected periodically (monthly, bi-monthly, or semi-annually) and are input into the learning algorithm along with the recorded chemical composition. This sophisticated algorithm will create a non-linear relationship between chemical readings and odor concentrations. This data will be used to update the network and enhance the accuracy related to the prediction of odor concentrations.

SM100i Support

With Scentroid technology, it is possible to identify potentially unknown odour sources by using the Scentroid Intelligent and portable Olfactometer SM100i, and the CTair ambient air quality monitor. Data collected can be used to create a dispersion model based on source testing, through creating an odour emission inventory of an area, and capturing any fugitive sources.

The SM100i Intelligent olfactometric device can be utilized to collect samples at selected locations and assessed for odour concentration levels. Through data collected on the analysis of existing emission sources, potential complaint locations, dispersion modeling results, and odour patrol routes with the SM100i can be determined. Patrollers Collect ambient odour concentration data at determined locations, and upload it to our Cloud-based SIMS3 software.

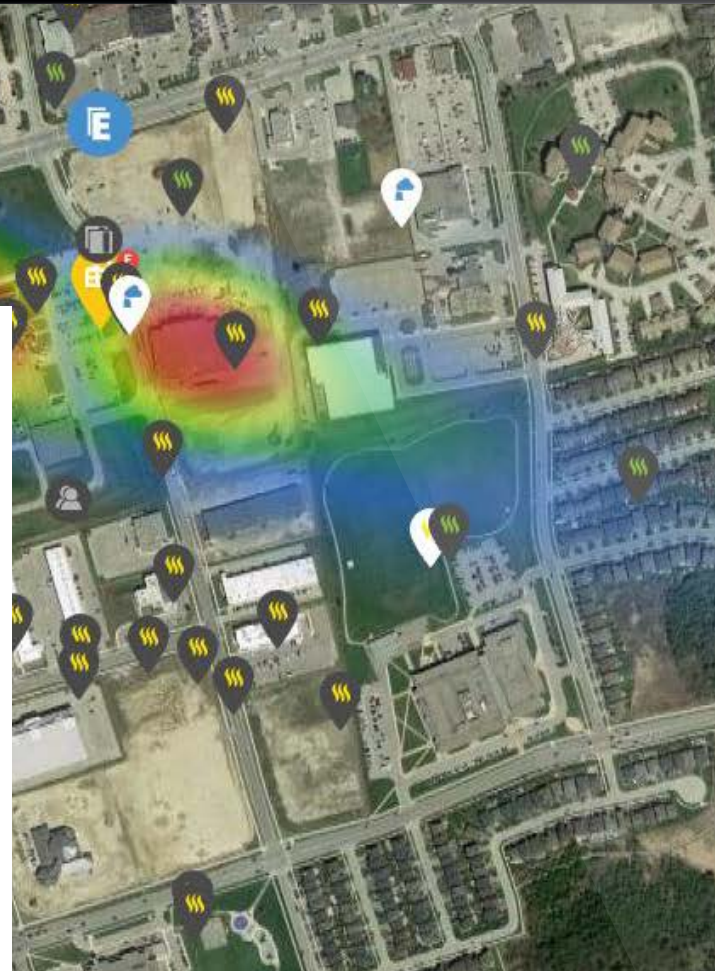
SIMS3 integrates all information related to odour impact including stationary AQM data, source monitors, and field olfactometric data, potential odour complaints, meteorological data, and even images in one complete GIC software solution. Advance AI algorithms are used to create dispersion models of all located sources and continuously update their emission rates based on AQM and SM100i data. This complete software solution can be used by facilities to monitor their emission rate and complaints related to their activities without having access to data from other facilities. Automatic reports are generated and sent to your team showing emission reduction or increase, and the overall odour impact of each source on a regular basis.



Odor Complaint Management

Within SIMS3, **Odor complaints** are automatically analyzed to determine the individual validity of each against a known **odor source or event**. They're then visually marked as justified (red), not justified (green), and to be justified (yellow). For each complaint the user will receive a list of all contributing sources and events. **Complaints with no known sources will be analyzed to determine validity and to identify possible locations of the unknown contributing source.**

A location that has a potential for an odor complaint – for instance, a person who'll complain frequently or a company that'll be directly affected by an odor, can be marked as a **Sensitive Receptor**. Odor or pollutant concentrations at Sensitive Receptor locations are estimated and modeled every 10 minutes, and users can create alarm levels and view historic odor concentrations at all Sensitive Receptor locations.





CTair Applications

Urban

Urban air pollution is a significant threat to human health and the quality of life of all people around the world. Minimizing urban air pollution not only serves as a healthy buffer for people in their everyday lives but also encourages reducing the emissions of harmful compounds. Scentinal is a perfect fit for air quality monitoring of the cities.

Recommended Sensors:

- Carbon Dioxide – (Low Concentration)
- Carbon Monoxide – (Low Concentration)
- Oxidizing Gases Ozone
- Nitric Oxide – NO (Low Concentration)
- Nitrogen Dioxide – (Low Concentration)
- Oxygen
- Total VOCs (ppb) – PID
- Sulfur Dioxide – (Low Concentration)
- Particulate PM 1, 2.5, 10 (Simultaneous)



Tunnels

Robust, accurate, and easy to use, the CTair revolutionizes the air quality monitoring network industry. Built to the highest standards, CTAIR follows ISO 23431:2021 for Measurement of road tunnel air quality. Using the latest sensing technologies, it provides continuous real-time measurements of:

Carbon monoxide (CO), Nitrogen Oxide (NO), Nitrogen Dioxide (NO₂), Opacity, Temperature, Humidity, and Tunnel air speed.

All measurements are transmitted to the central monitoring station using MODBUS (TCP/IP) as well as through 4-20 mA analog output. Data is also stored on the device SD card and can be retrieved in case of emergencies.

A dry contact relay provides programmable set-points to activate fans, alarms, or other external devices. Housed in a stainless steel casing the CTAIR is rated against dust and water ingress to IP66, making it the most durable and robust instrument on the market.

ctair

SCENTROID

controllo
elettronico



Equipped with Opacity Sensor!

Using this electro-optical device, you can measure the opacity of suspended particles, gas emissions and more!

Odor

Environmental odor is among the highest sources of nuisance; festering the largest amount of complaints from residents. Environmental odor can be generated from a variety of industries including food processing, tobacco products manufacturing, chemical plants, paint plants, asphalt plants, pulp and paper, WWTP, and etc. Scentinal can be used to monitor odor emissions in order to help plants optimize processes and reduce odor impact.

Recommended Sensors:

Ammonia

Hydrogen Sulfide - (Low Concentration - ppb)

Organic Solvents (Ethanol, Iso-Butane)

Total VOCs (ppb) - PID

General Purpose Odors (VOCs)

TRS and Amines

Air Contaminants (Ammonia, Ethanol, Toluene)



Wastewater

One of the most prominent issues of concern from wastewater treatment plants (also known as sewage treatment plants) is odor. Many chemicals in these facilities generate odor; the majority are sulfur-based. At the start of the process H_2S , DMS, and other sulfur compounds are abundant, while at the trailing end of the process (sludge processing), VOCs are more predominant.

Recommended sensors include:

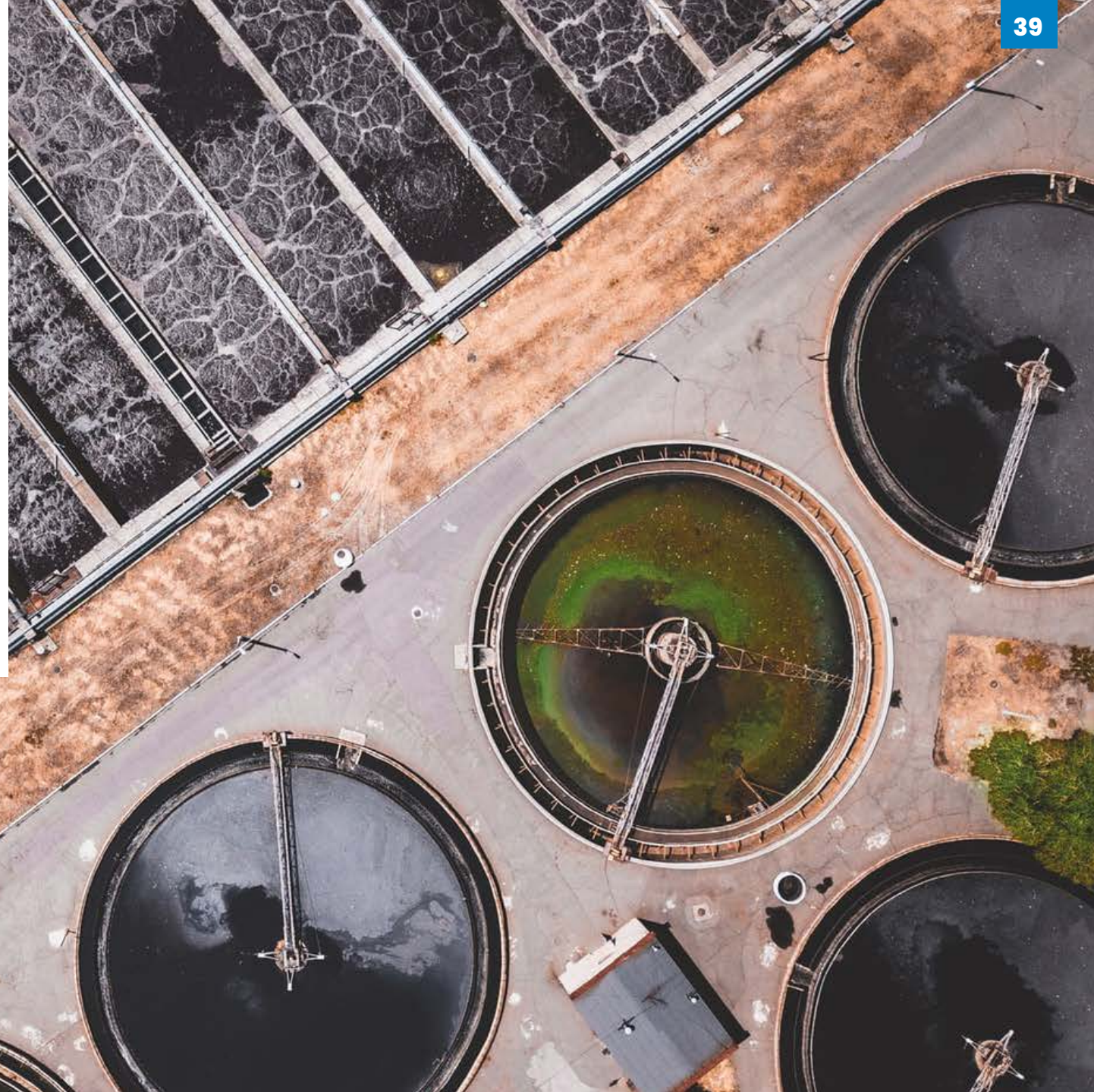
Ammonia

Hydrogen Sulfide - (Low Conc. Ppb) (High Conc. ppm)

Total VOCs (ppb) - PID

TRS and Amines

Air Contaminants (Ammonia, Ethanol, Toluene)



Indoor Air Quality Monitoring

Indoor air quality plays an important role in human health and comfort. Scentinal provides a solution to monitor and control indoor air quality. Scentinal can also provide continuous monitoring of any selected chemical compound(s), this includes CO₂, CO, O₂, PM 1-10 as well as pollutants such as H₂S, CH₂O, SO₂, VOC, and Odor. The system can be programmed to activate mitigative technology or central HVAC systems if pollutant levels are found to exceed set threshold limits. This active monitoring and mitigation approach will ensure fresh, healthy air for all staff, laborers, and nearby residents and businesses.

Recommended sensors include:

- Carbon Dioxide - (Low Concentration)
- Carbon Monoxide - (Low Concentration)
- Hydrogen
- Hydrogen Sulfide - (Low Concentration, ppb)
- Nitric Oxide - NO (Low Concentration)
- Nitrogen Dioxide - (Low Concentration)
- Oxygen
- Total VOCs (ppb) - PID
- Sulfur Dioxide - (Low Concentration)
- Formaldehyde
- Particulate PM 1, 2.5, 10 (Simultaneous)



Oil & Gas

Pollutant and Odor monitoring in the petrochemical and oil and gas industry is critical due to the number of hazardous air pollutants released in these processes. Fence line and in-plant monitoring allows the plant to not only ensure adherence to emission regulations and standards, but also to detect issues within the process such as tank leaks, loading spills, and other unexpected events.

Recommended Sensors:

Carbon Dioxide - (Low Concentration)

Carbon Monoxide - (Low Concentration)

Chlorine

Ethylene Oxide

Hydrogen Sulfide

Hydrogen Chloride

Hydrogen Cyanide

Ammonia

Oxidizing Gases Ozone and Nitrogen Dioxide

Phosphine - (Low Concentration)

Phosphine - (High Concentration)

Hydrogen Sulfide - (Low Concentration - ppb)

Organic Solvents (Ethanol, Iso-Butane, H₂)

Methane (LEL)

Nitric Oxide - NO (Low Concentration)

Nitric Oxide - NO (High Concentration)

Nitrogen Dioxide - (Low Concentration)

Oxygen

Total VOCs (ppb) - PID

Total VOCs (ppm) - PID

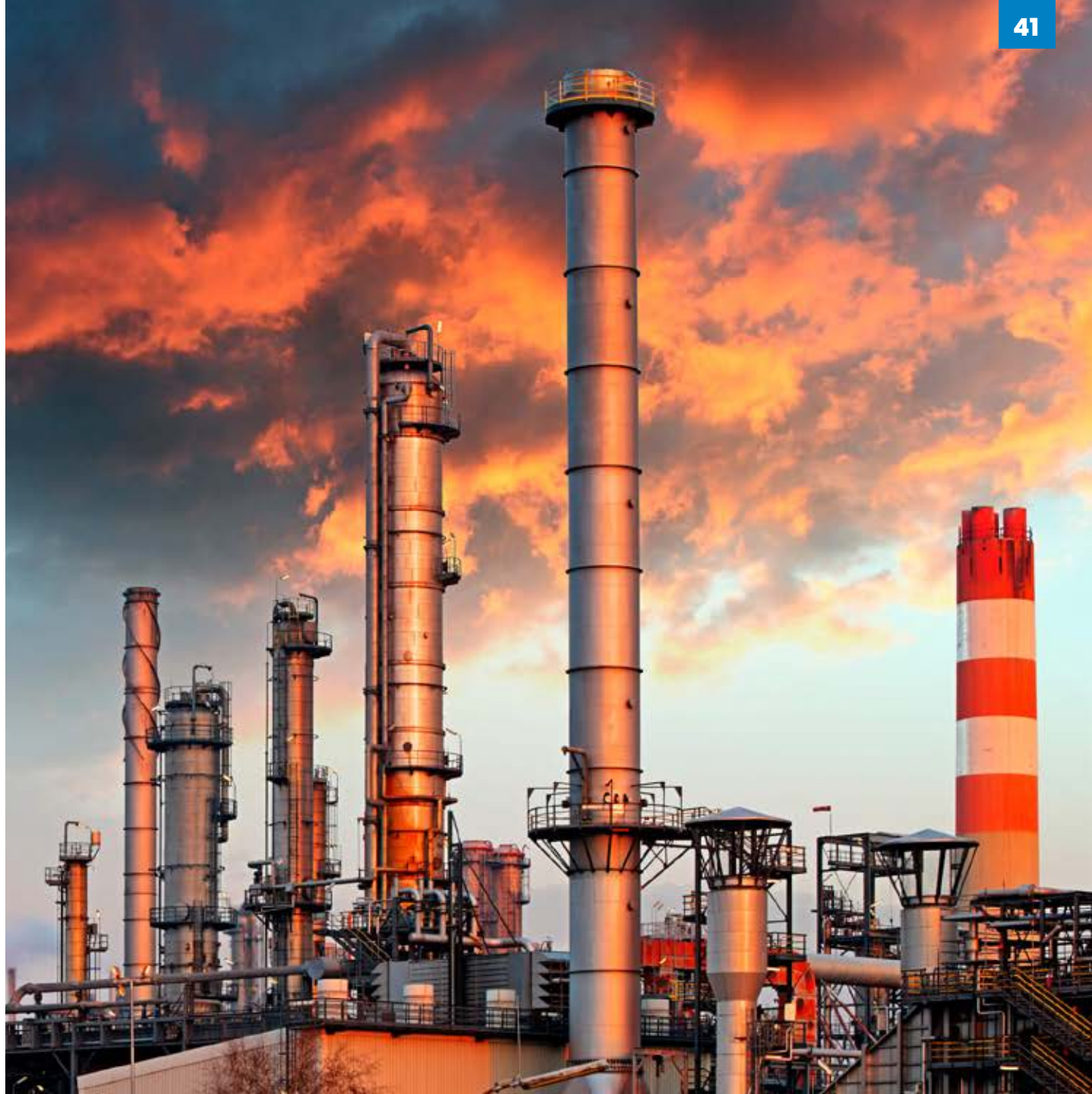
Sulfur Dioxide - (High Concentration)

Sulfur Dioxide - (Low Concentration)

Formaldehyde

Particulate PM 1, 2.5, 10 (Simultaneous)

Air Contaminants (Ammonia, Ethanol, Toluene)



Agriculture

Agricultural facilities emit a wide array of pollutants that must be monitored. The majority of these pollutants are not hazardous but are odorous and therefore a source of nuisance. Scentinal can provide monitoring of both odor and pollutants in agricultural facilities.

Recommended sensors include:

Ammonia
Carbon dioxide
Methane
Particulate PM 1, 2.5, 10 (Simultaneous)



General Safety

Workers from many industries are exposed to multiple harmful gases every day. These chemicals can lead to fatigue, respiratory decline, illness, and a general decrease in the overall quality of life. Industries need to monitor their air quality and ensure safety for their workers.

Recommended sensors include:

- Carbon Dioxide - (High Concentration)
- Carbon Monoxide - (High Concentration)
- Chlorine
- Ethylene Oxide
- Hydrogen
- Hydrogen Chloride
- Hydrogen Cyanide
- Ammonia
- Oxidizing Gases Ozone and Nitrogen Dioxide
- Phosphine - (Low and High Concentration)
- Hydrogen Sulfide - (High Concentration - ppm)
- Methane (LEL)
- Nitric Oxide - NO (High Concentration)
- Nitrogen Dioxide - (High Concentration)
- Total VOCs (ppm) - PID
- Sulfur Dioxide - (High Concentration)
- Formaldehyde



Compost

Workers in compost facilities are exposed to chemical and biological risks. Additionally, nearby neighborhoods may also be affected by the same contaminants. It is critical to monitor air quality in these type of facilities in order to ensure proper operation and uphold adherence to pertinent regulations.

Recommended sensors include:

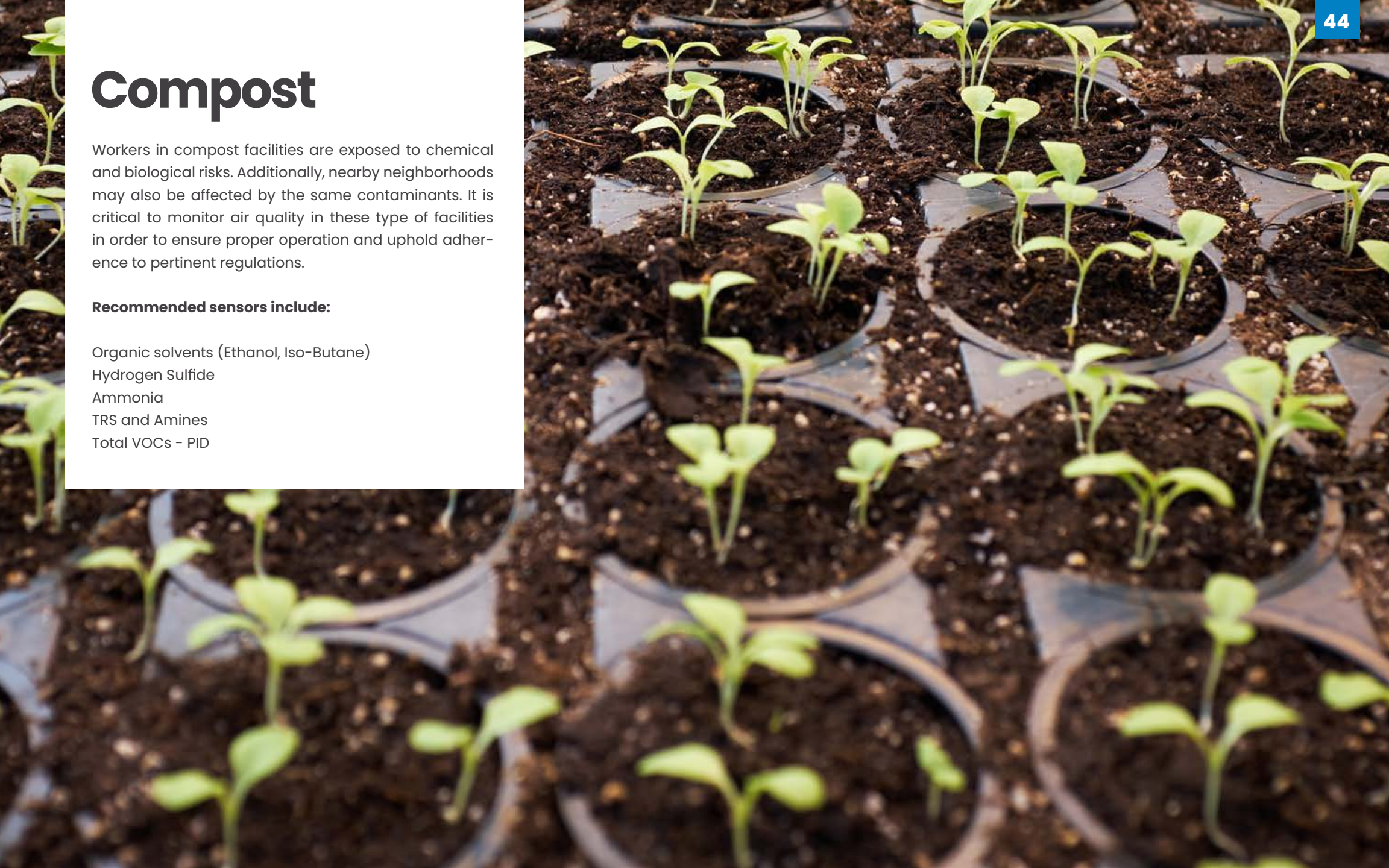
Organic solvents (Ethanol, Iso-Butane)

Hydrogen Sulfide

Ammonia

TRS and Amines

Total VOCs – PID



Training

Scentroid provides worldwide training programs for our clients and distributors. Training can be conducted by Scentroid or your local distributor. Scentroid training tools include: online training, videos, brochure, operation manual and on-site workshops. We also offer a hands-on training program using our high-tech simulation room. Scentroid's state of the art simulation room is located at our headquarters in Toronto, Canada. You are more than welcome to visit us and meet with the people behind these products

Warranty

We are so confident of the reliability of our products, that we are glad to offer our clients a comprehensive 24 month warranty for your equipment. Additionally, warranties can be extended for the 3rd, 4th and 5th year. For more information about our extended warranties, speak to us today.

Technical Support

We are responsible for any products that exit from our manufacturing warehouse! Our support team offers different ways to help you. Choose the one most convenient for you below!



Local Support

We have developed a vast growing network of distributors and repair facilities. To find your local support please check our distributors map.



Phone Support

Our highly professional customer services are here to serve you, for any technical issue reach them easily via phone: 416.479.0078 – Ext 210



SME Support

Connecting you to the Subject Matter Experts! Our customer support is unique in that you can talk directly to the designer or programmer of each product.



Live Chat

If you feel more convenient to solve your technical issue via chat, No problem! Reach our highly professional customer services through our website-hosted Live Chat.



Email Support

For any technical issue you our engineers are happy to assist via email. For fast and efficient support, simply email our team at support@scentroid.com

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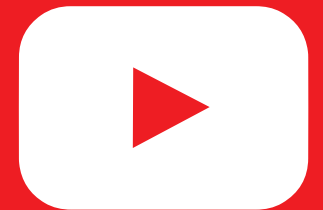
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