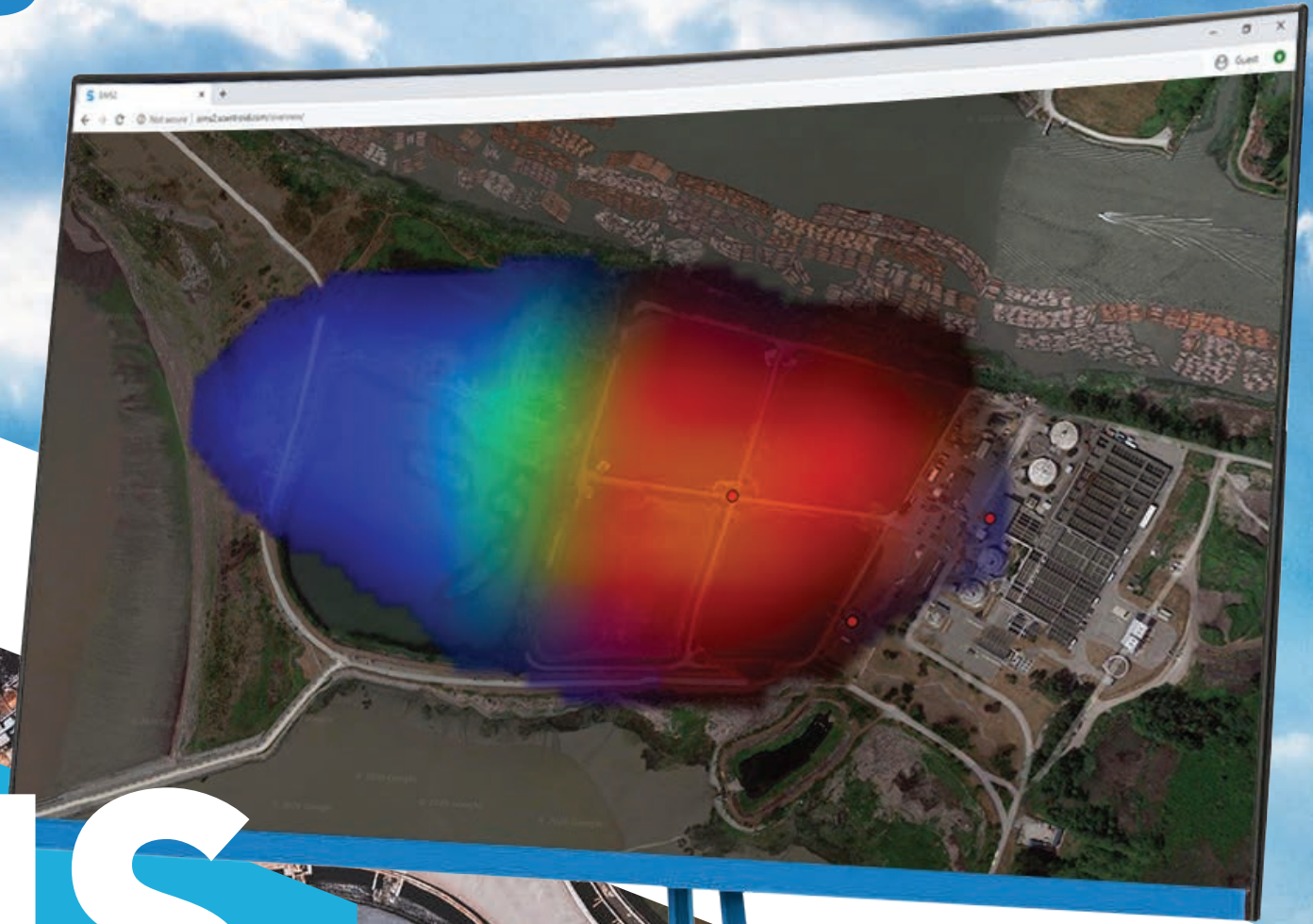


SCENTROID



TOMS

TOTAL ODOR MANAGEMENT SYSTEM

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.



Dr. Ardevan Bakhtari
CEO, Scentroid

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INTRODUCING TOMS

A woman with long dark hair is sitting at a desk, holding several bright pink sticky notes. In front of her is a silver laptop displaying various charts and graphs. The scene is brightly lit, suggesting a modern office or workspace. A blue banner with white text is overlaid on the top left of the image.



TOMS

Total Odor Management System

Our TOMS software offers a complete and integrated suite for odor management. The system provides a perfect blend of real-time odor impact estimation with the registration and further management of odor complaints from neighboring residents.

Our easy to use software utilizes both continuous pollution monitoring data and live weather data to calculate a real time odor plume model, further displaying an exact location and spread of your odor emissions. Furthermore, complaints are automatically logged and compared to odor emissions for quick and efficient validation.

Our TOMS program outlined in this document follows a simple 4 step methodology to ensure you tackle any odor situation with ease and certainty.

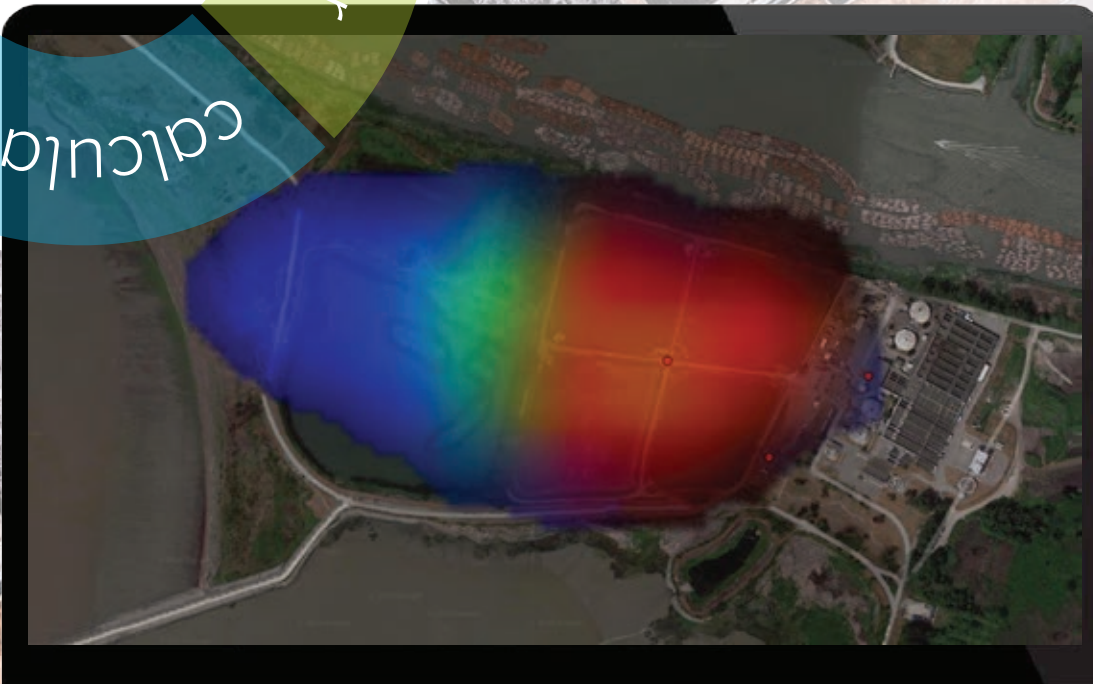
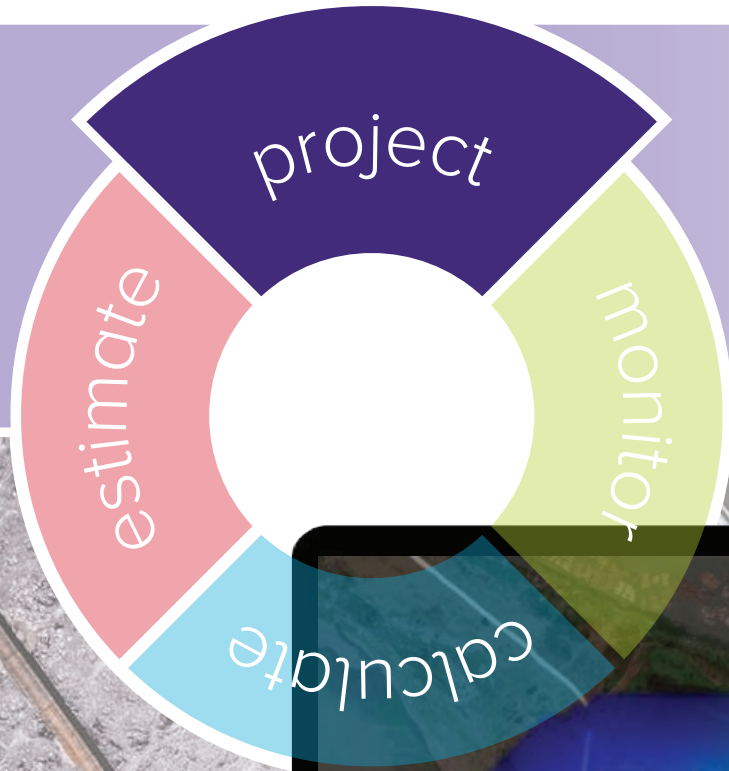


ESTIMATE OF EMISSIONS

The first step to fully comprehending and solving any odor issue begins with creating an initial estimate of their emissions. This can be as comprehensive as a full odor inventory using field olfactometry devices such as the SM100i, or as simple as using Scentroid's comprehensive emission factor database. Scentroid's environmental engineers can guide you through this step to ensure a cost effective yet accurate initial estimate.

When dealing with the potential subjectivity of registering an odor complaint, applying a system such as this removes a large source of potential error.

PROJECT LEVELS OF POLLUTION



The initial odor inventory is used to create an odor plume. This plume visually indicates how odors will travel and affect nearby residents. To calculate this plume, USEPA air dispersion modeling software (AERMOD) is used.

The dispersion model will not only use the odor emission from each source but also take into account local meteorological data such as wind speed and wind direction. This will further allow us to apply a model to both surface and elevated sources, and through both simple and complex terrain variations.

MONITOR POLLUTION

monitor

calculate

estimate

project

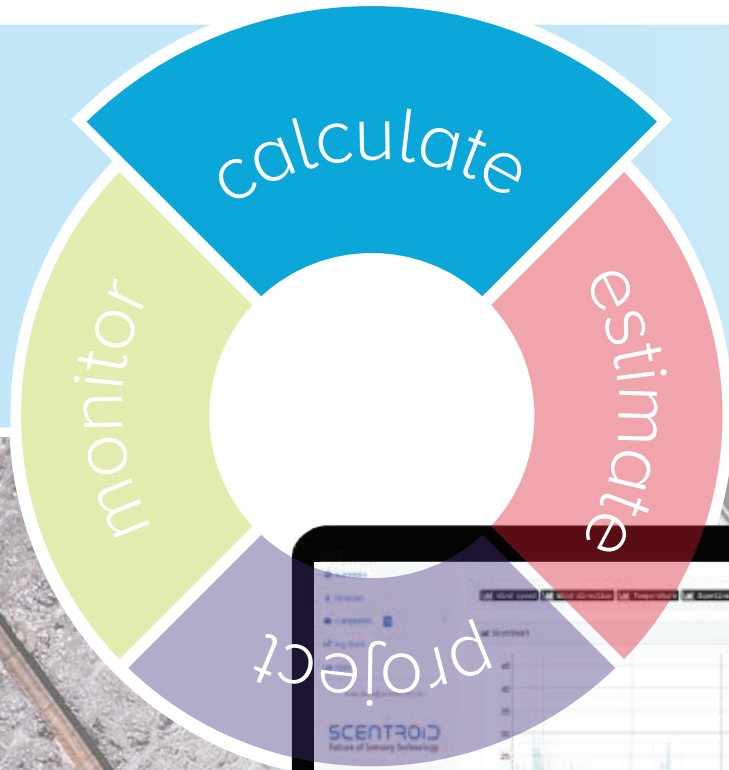
SCENTINAL

SCENTROID

Odor emissions are always changing based on process, ambient weather conditions, or upset conditions. TOMS automatically calculates and updates itself to reflect these changes through live ambient odor monitoring.

Monitoring stations, such as the CTair and Scentinal are used to measure ground level odors at facility boundary, directly over large sources, or at sensitive receptors. Scentroid's monitoring equipment has been specifically designed to detect trace levels (parts per billion) of odorous compounds such as H₂S, NH₃, and VOCs. The pollutant measurement is converted to odor units (OU/m³) using Scentroid's deep learning algorithm. The data collected is then used in the next phase to compute changes to the source emission rates.

CALCULATE ERROR ESTIMATE



The most critical step of the TOMS live monitoring is the update of the emission estimate based on real ground level odor measurements. Every minute, TOMS compares its estimated odor level from dispersion modeling to the actual measurements through the use of continuous odor monitoring equipment. If there is a significant difference, TOMS will adjust and update its emission rates to compensate. The emission rates are updated using a fuzzy logic algorithm that takes into consideration weather data, source variation patterns, detected pollutants and historical estimates. Users are not only provided with an extremely accurate odor emission projection but also can use updated emission rates to determine how sources emit odors over time and which operations are more detrimental to an overall odor control strategy.

From estimation to monitoring and odor dispersion, TOMS provides a complete solution for understanding a plant's total odor impact.

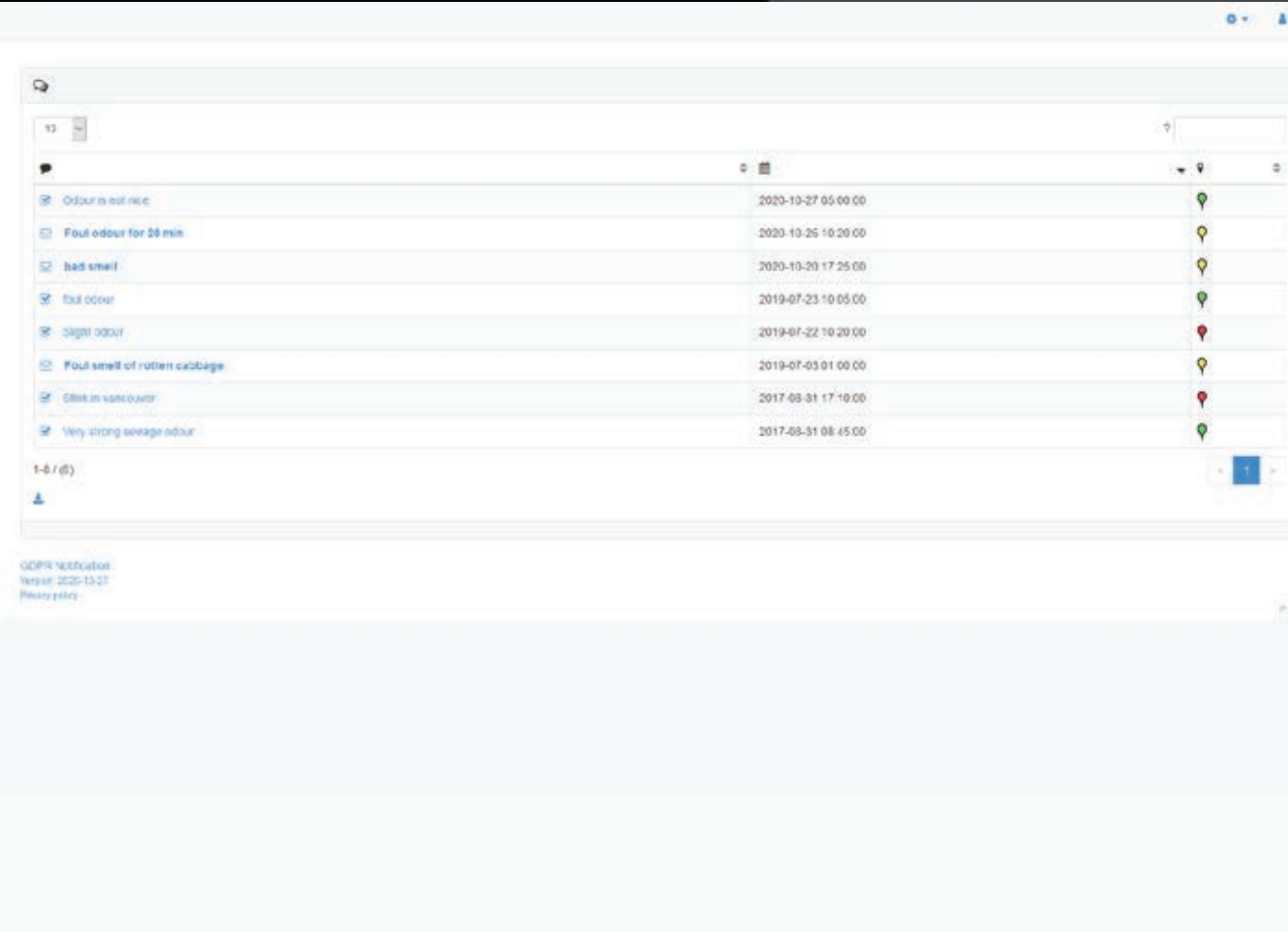
TOMS FEATURES



REAL-TIME ODOR EMISSION MONITORING

This summary page displays a real time plume, contains a menu for changing users or logging out, settings, plots based on time and date, open complaint display, and weather data for the current plot. The warmer colors displayed within the plume represent the areas most effected by a concentrated odor. In summary, the plume has been generated using AERMOD dispersion modeling, weather data, and odor concentration measurements from infield olfactometry tests. This model can be used to further estimate emissions from a stack or another potential odor source.

COMPLAINT MANAGEMENT SYSTEM



Complaint Description	Date	Status
Odour is not nice	2020-10-27 05:00:00	Green pin
Foul odour for 20 min	2020-10-26 10:20:00	Yellow pin
bad smell	2020-10-20 17:25:00	Yellow pin
bad odour	2019-07-23 10:05:00	Green pin
Slight odour	2019-07-22 10:20:00	Red pin
Foul smell of rotten cabbage	2019-07-03 01:00:00	Yellow pin
Stink in van cover	2017-08-31 17:10:00	Red pin
Very strong sewage odour	2017-08-31 08:45:00	Green pin

GDPR Notification
Version: 2020-10-27
Privacy policy

The TOMS system will reduce complaints to regulatory bodies through channeling them into your system directly. Any new complaint can either be registered by TOMS users, or through a link provided within your project documentation. Once registered, they are compared to the odor impact at their specified location and time. Critical facility data, such as scheduled maintenance and unforeseen events are also automatically mapped against the complaint.

The list of all complaints is available from our “manage complaints” feature. Clicking on an individual title within this interface will open an individual answer form. Each article is also searchable.

COMPLAINT JUSTIFICATION SYSTEM

2019-07-03 01:00

Foul smell of rotten cabbage

Log book details

No log book data recorded on this date

Answer complaint

- Complaint is caused by operations
- Complaint is caused by incident explained in log book

Automatic analyses suggests that this complaint is justified



2019-07-03 01:00



Once a complaint has been entered, our TOMS system will record the complaint, the time of complaint, or any answers supplied by your facility. The user may also select whether the complaint is caused by known operations (building maintenance, etc), or by a specific incident as recorded within your log book. The user can change the status of each complaint as they see fit:

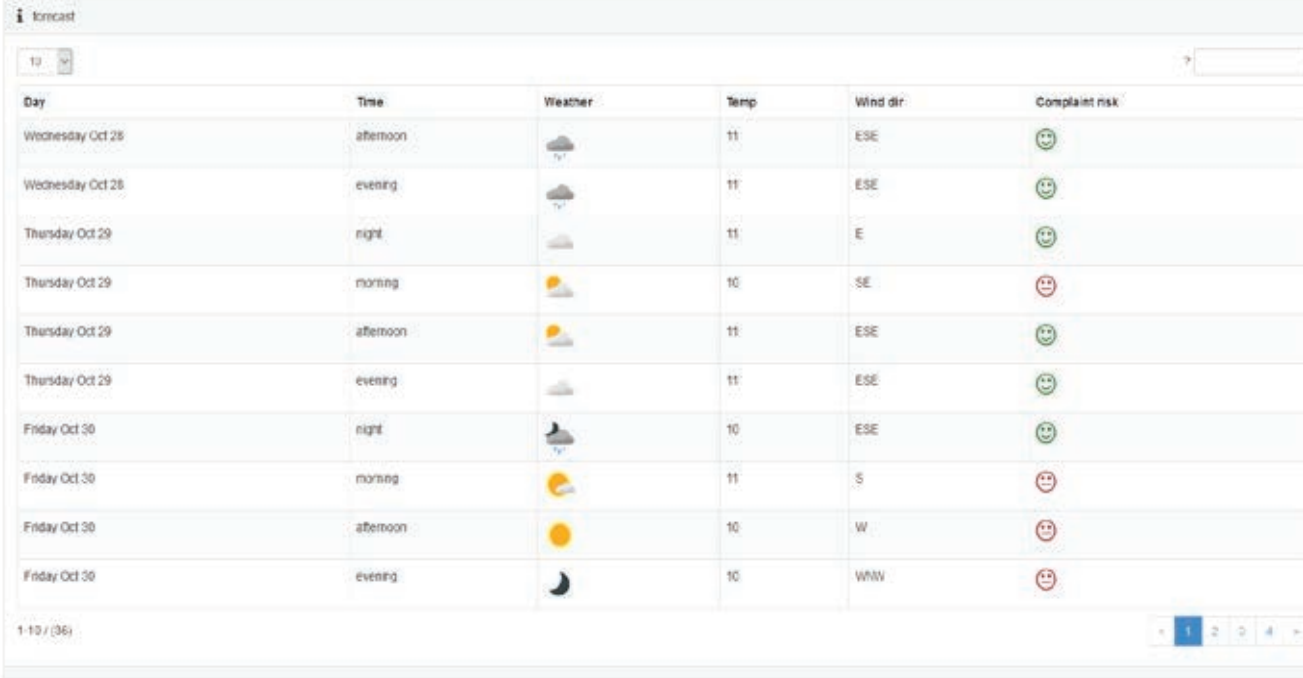
Green: Complaint not justified

Yellow: Complaint not yet investigated

Red: Complaint is justified

The system is also capable of automatically determining and analyzing (based off of mapping events / plume modeling) whether a complaint is justified or not.

WEATHER FORECAST & PREDICTIVE RISK SYSTEM

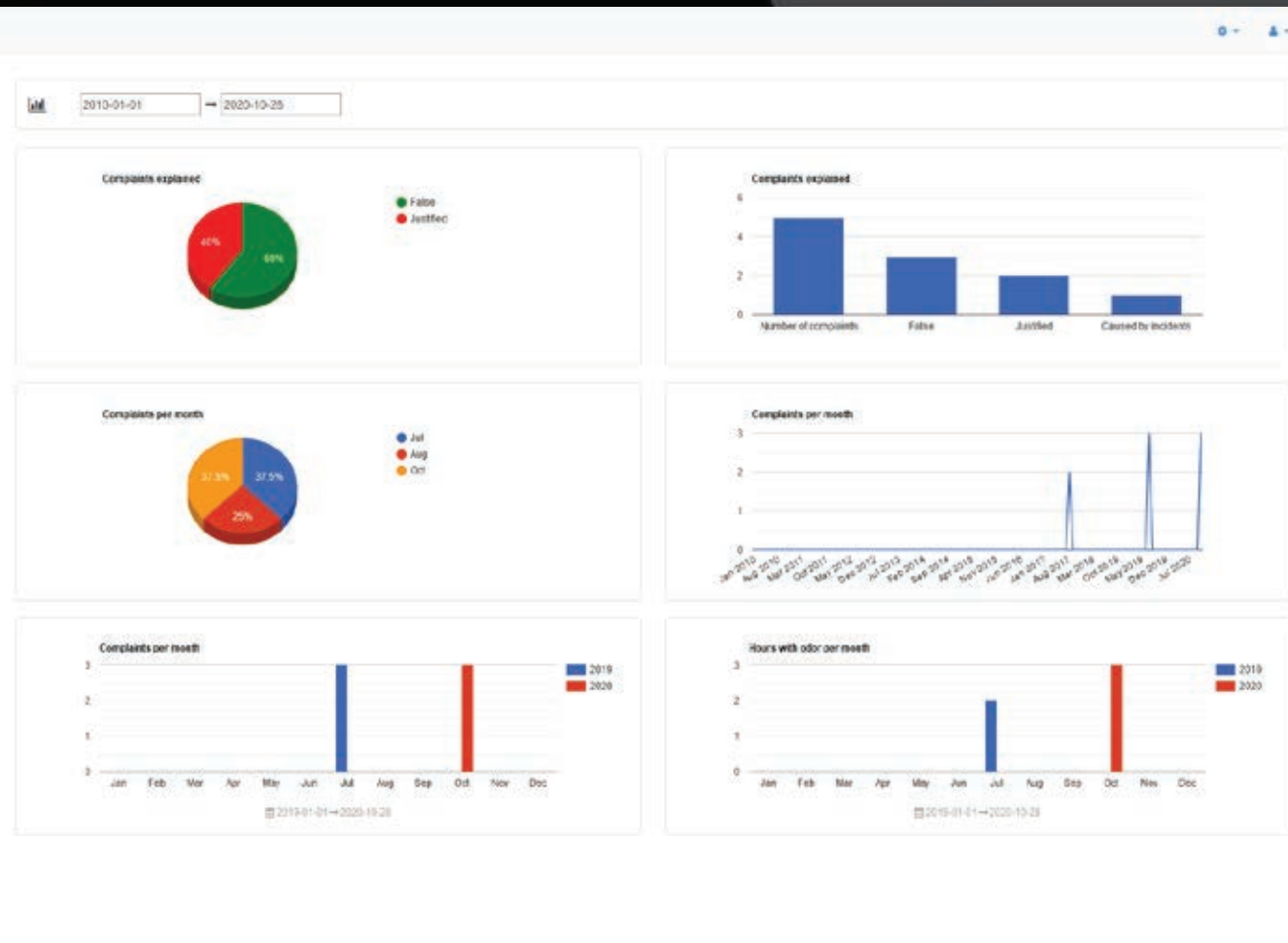


Day	Time	Weather	Temp	Wind dir	Complaint risk
Wednesday Oct 28	afternoon		11	ESE	
Wednesday Oct 28	evening		11	ESE	
Thursday Oct 29	night		11	E	
Thursday Oct 29	morning		10	SE	
Thursday Oct 29	afternoon		11	ESE	
Thursday Oct 29	evening		11	ESE	
Friday Oct 30	night		10	ESE	
Friday Oct 30	morning		11	S	
Friday Oct 30	afternoon		10	W	
Friday Oct 30	evening		10	WNW	

Scentroid TOMS is capable of handling data and information compiled from multiple sources. Through a minimal setup procedure, TOMS will obtain weather data from a local weather station or the nearest meteorological station. If there are local sources of information available, TOMS will grant priority to this source over an online source. Should the local source no longer be available, data will be extracted online automatically.

Through obtaining this data, our sensitive algorithm is even capable of pinpointing days with potentially high risk odor dispersion trends. This is displayed through the "risk" column located to the right of the weather forecast panel.

ADVANCED DATA ANALYTICS



A thorough and complete odor report can be generated dynamically through a user selected time period. The report itself details complaints received per month, and whether they are justified or not. Our report will even tell you how many hours per month a foul odor may have been affecting a neighboring resident!

Should you have an appropriate monitoring device on the premises, the TOMS is capable of generating a data analysis screen. This screen displays wind speed, direction, temperature, and more as it is captured by our equipment.

COMPATIBLE DEVICES





SL50

SCENTINAL

Scential is a continuous ambient pollutant and odor emission monitoring system which operates through high accuracy (ppb level) sensing technology. Scential can provide simultaneous monitoring of odorous and non-odorous gases such as Hydrogen Sulfide (H₂S), Sulfur Dioxide (SO₂), Ammonia (NH₃), Methane (CH₄), Carbon Dioxide (CO₂), and many other Volatile Organic Compounds (VOCs).

Scential uses up to 20 sensing modules ranging from Photo-Ionization Detectors, Non-Dispersive Infrared Detectors, Electro-Chemical Cells, Laser Scattered counters and Metal Oxide sensors. The data collected from sampling is stored locally and is also transmitted to the cloud server, providing easy accessibility. The Sensor Information Management System (SIMS) is used to store and display the results from monitoring and sampling campaigns while also providing capabilities for remote configuration, calibration, and diagnosis of multiple Scential units.





SM100i PERSONAL OLFACTOMETER

INTELLIGENT IN-FIELD Odor MEASUREMENT

This SM100i can conduct a full odor analysis in accordance with the international EN13725 standard. The SM100i is capable of analyzing from a sample bag or deployed in the field for direct olfactometry and ambient odor measurements. In addition to odor concentration (in OU) the SM100i with the use of the wearable OdoTracker can also automatically record the concentration of various gases based on equipped sensor technology (as specified at time of ordering)

The SM100i draws a sample of ambient air via venturi pump and dilutes it using fresh odorless air from a compressed air tank. The SM100i takes out all the guesswork from personal olfactometry. This is done through automatically screening panelists and conducting tests to determine accurate Odor concentration and hedonic tones. The SM100i requires no sample bags, no filters to change, no pumps or other moving parts to maintain. It's a device you can rely on.

Comparison to Lab. Olfactometer:

Sample	Lab Results (OU)	SM100C Results (OU)
1	116	94
2	108	164
3	139	131
4	201	219
5	1846	1441

Comparative study between SM100i and an EN13725 certified Odor laboratory.

Use the SM100i to...

- Perform odor assessments and identify sources
- Determine odor mitigation effectiveness
- Monitor emission compliance and conduct N-butanol screening

Conduct Odor measurements from...

- Ambient air without any additional sampling equipment
- Directly from smoke stacks or filter inlets
- Flux chamber
- Air samples in PTFE/Tedlar bags



CTAIR URBAN AIR QUALITY

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. Scentroid's CTair Urban air quality is one

of the most advanced cordless continuous monitoring solutions in the market. 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 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.



Solar Powered Option Available!

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 analysers 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 modeller is able to predict pollutant levels to 96% of true concentration



AFTER-SALES SUPPORT

A photograph of a blue industrial machine, likely a lathe or mill, in a factory setting. The machine has a white control panel with two circular buttons. The background is slightly blurred, showing other industrial equipment and a yellow overhead crane. A blue banner is overlaid on the top left of the image, containing the text 'AFTER-SALES SUPPORT' in white, bold, sans-serif font.

Training

Training is the key of using any instrument, and 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

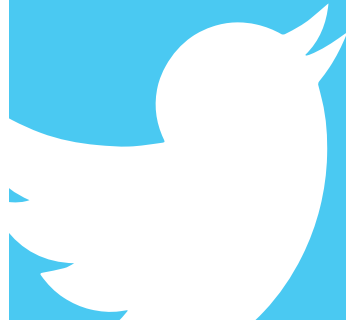
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BUILD OUR
NETWORK

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PICTURE

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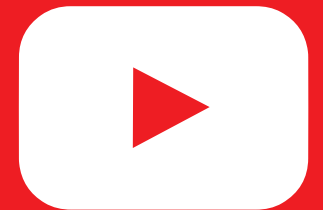
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70 Innovator Avenue, Units #6-8 | Toronto, ON, L4A 0Y2

T: 416. 479.0078 or 1.888.988.IDES (4337)

info@scentroid.com | www.scentroid.com