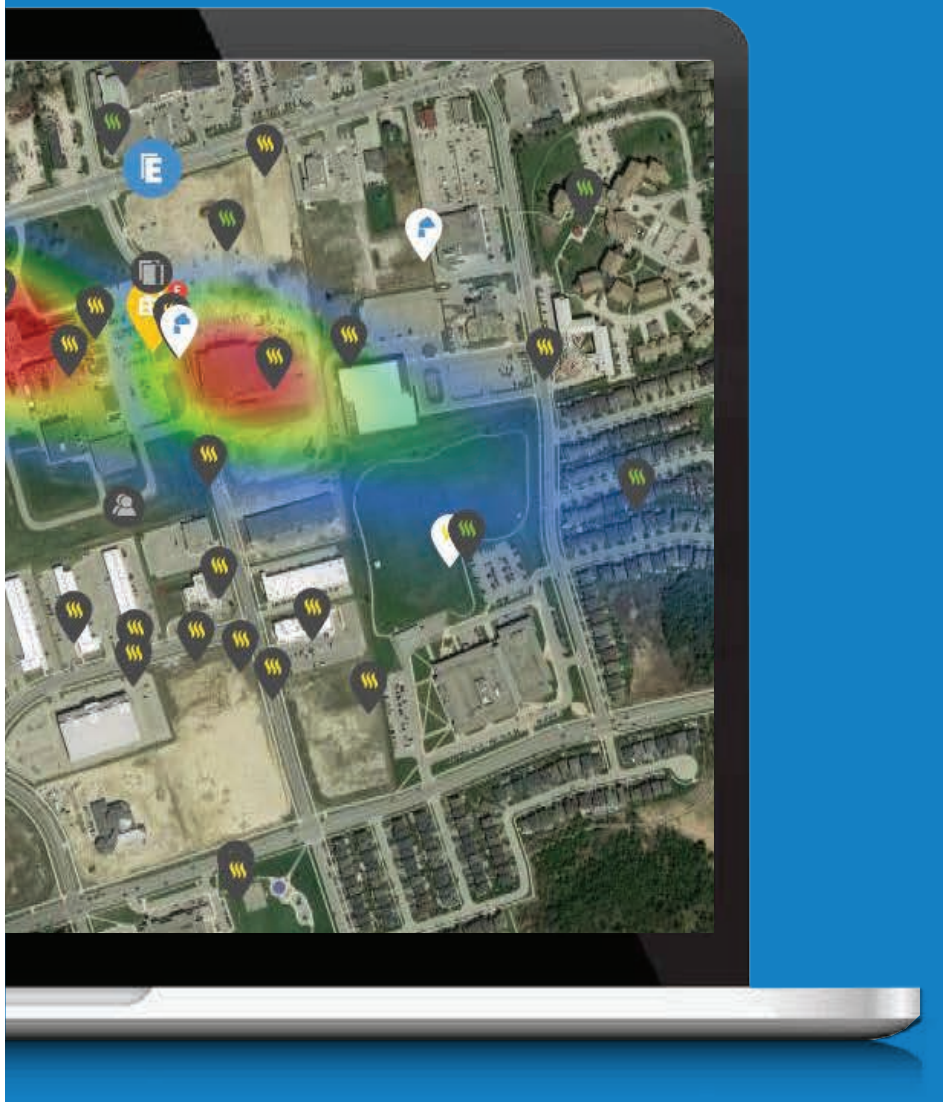
SCENTROID

SIMS3



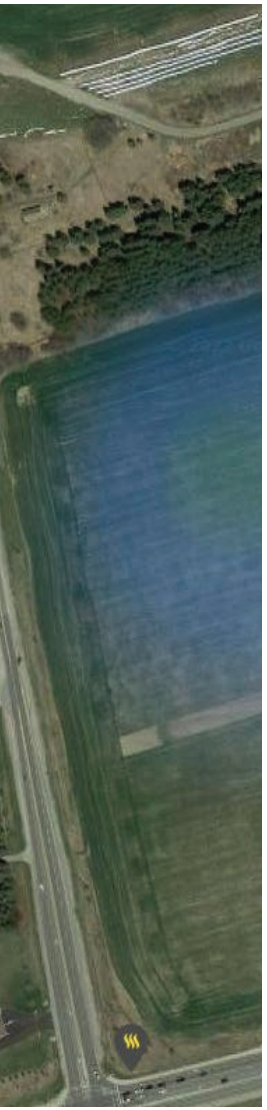
Letter from Scentroid's CEO

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

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 organised 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

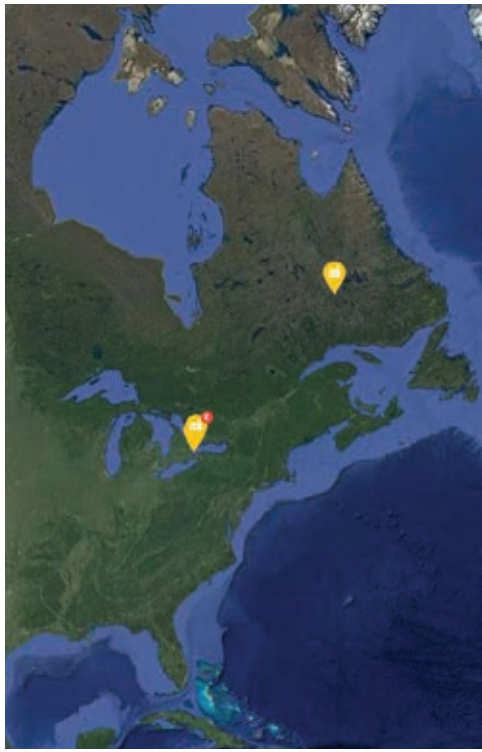
Nearby complaints are automatically assigned to facilities, and even sources within facilities, so that the system provides a perfect blend of real-time odor impact estimation, with the registration and further management of odor complaints from neighboring residents.

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!



Odor Complaint Management

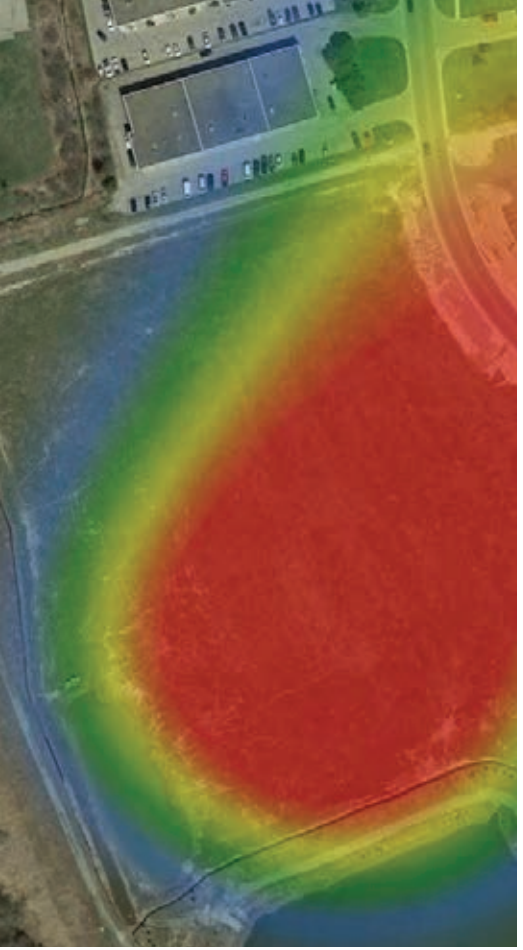
Odor complaints are automatically analyzed to determine the individual validity of each against a known **odor source** or event. They're then visually marked as justified (red), not justified (green), and to be justified (yellow). For each complaint the user will receive a list of all **contributing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

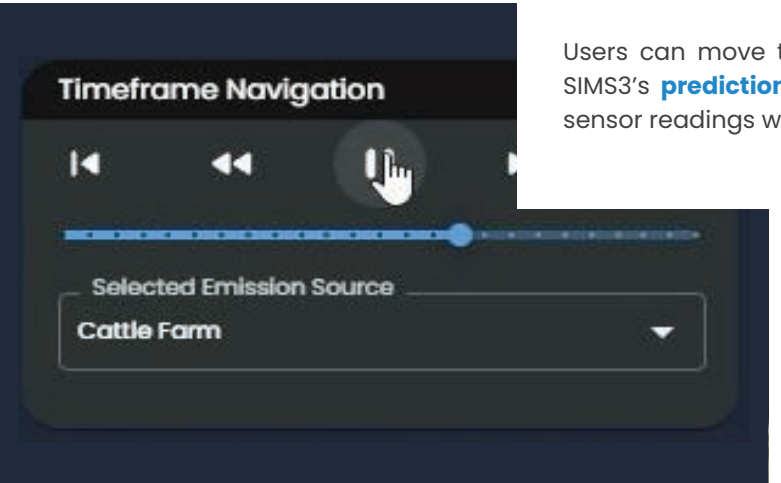
A location that has a potential for an odor complaint – for instance, a person who'll complain frequently or a company that'll be directly affected by an odor, can be marked as a **Sensitive Receptor**. Odor or pollutant concentrations at Sensitive Receptor locations are estimated and modelled every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

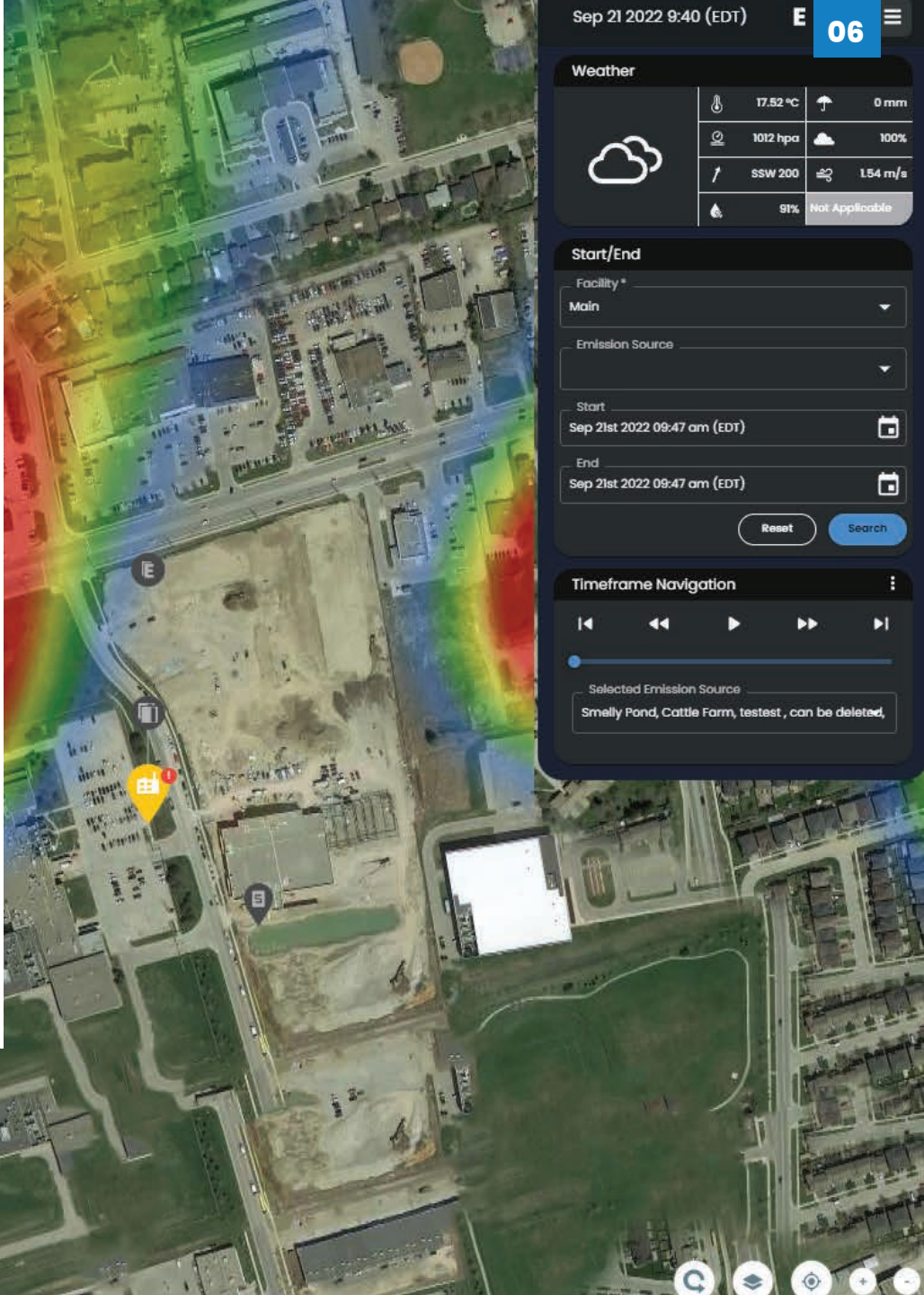
Timeline Control and Navigation

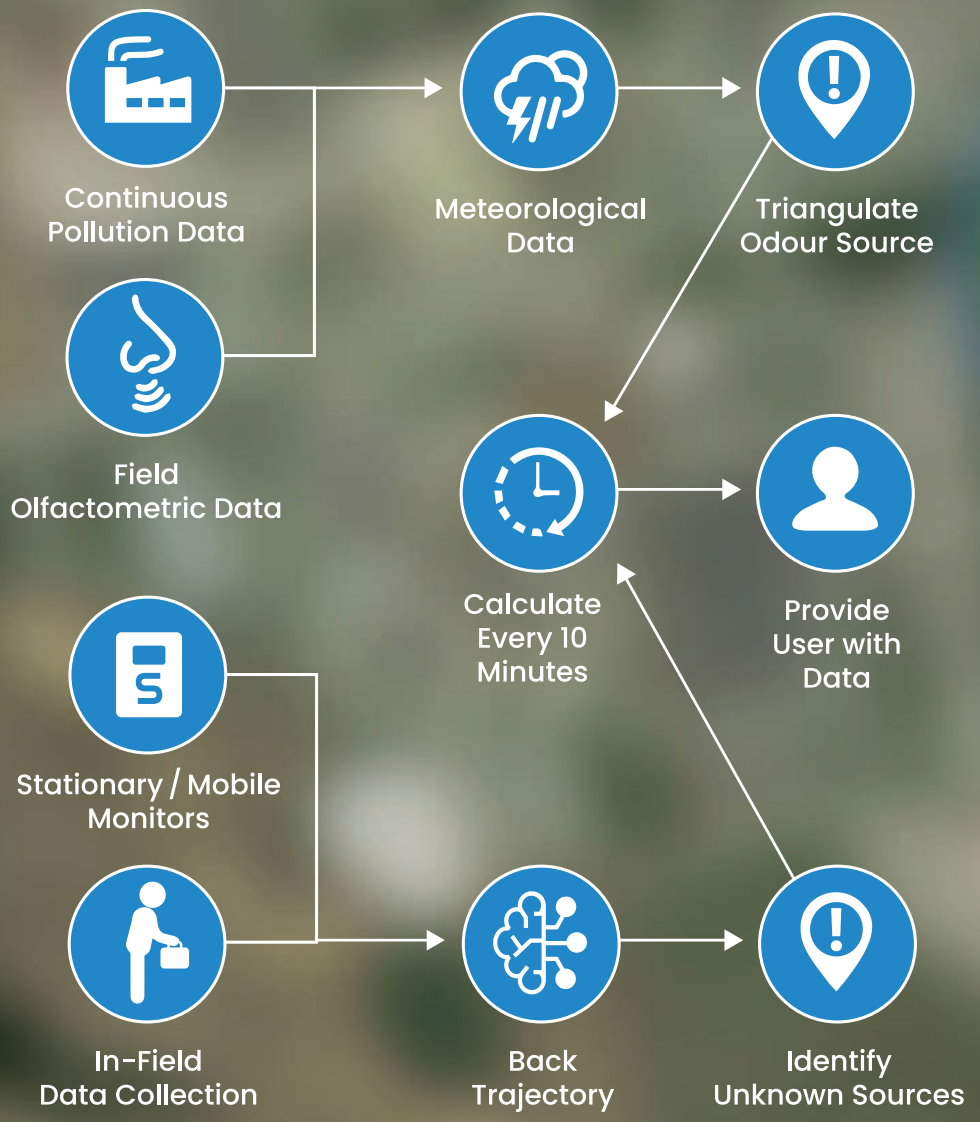
A powerful component of SIMS3 is the **full control of time**. Users can move a **Timeline Navigation Slider** to investigate how a **Plume** evolves over a set period. Plume data readings from **ambient monitors**, complaints, **source emissions**, and all other events will all be synced with the selected 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.









SIMS3 AI

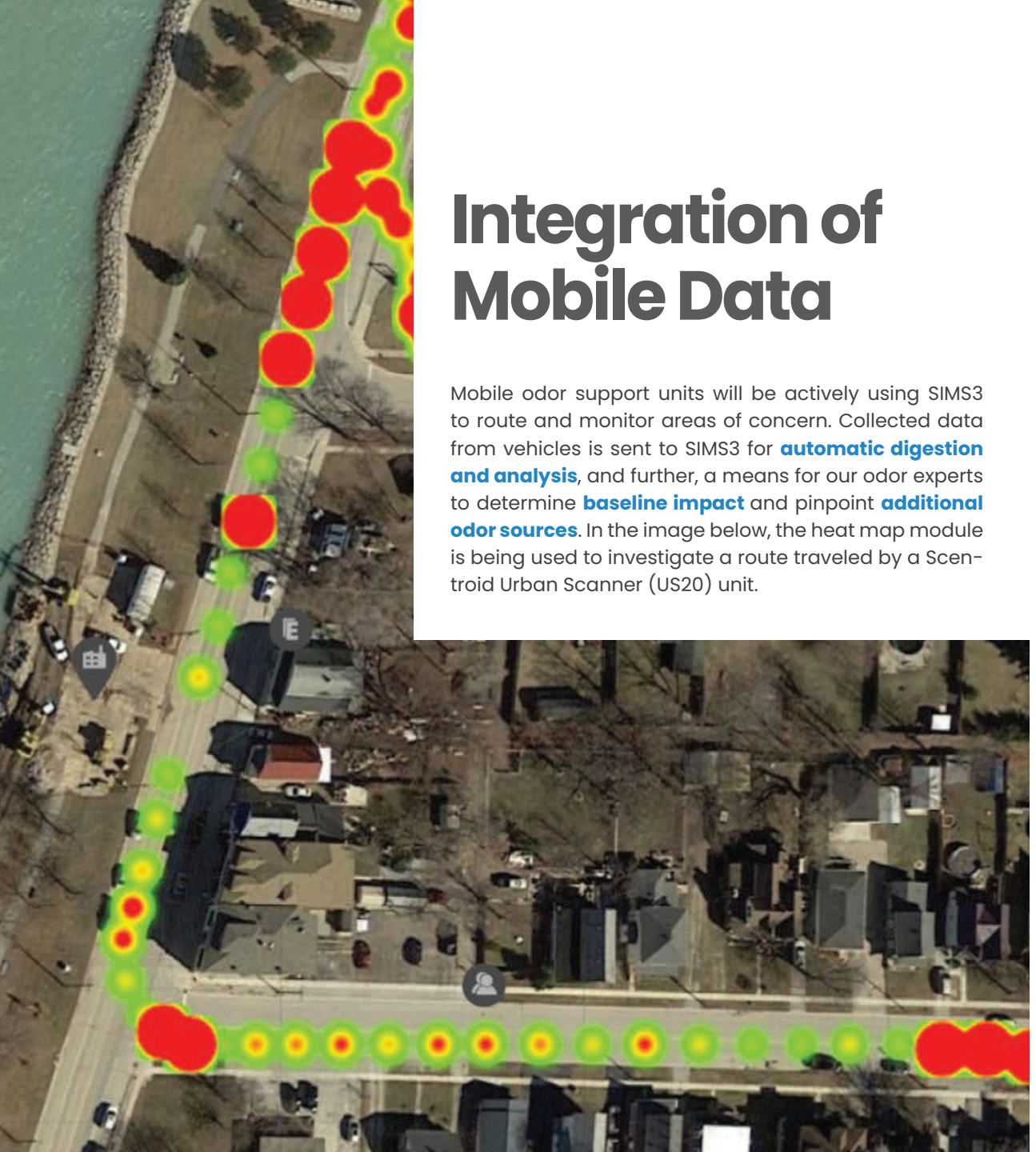
The 'brains' of SIMS3 utilizes an impressive and powerful logic. AI compares estimated odor levels from **dispersion modelling** to the actual measurements collected with **odor monitoring equipment**. AI adjusts and updates **emission rates** of all sources to compensate. Ground level readings are used by SIMS3 to conduct **back trajectory** to identify unknown sources. **Continuous pollution data** and **field olfactometric data** are used with **meteorological data** to triangulate the exact location of an odor source. Our Software conducts these back trajectory and emission rate estimates every 10 minutes.

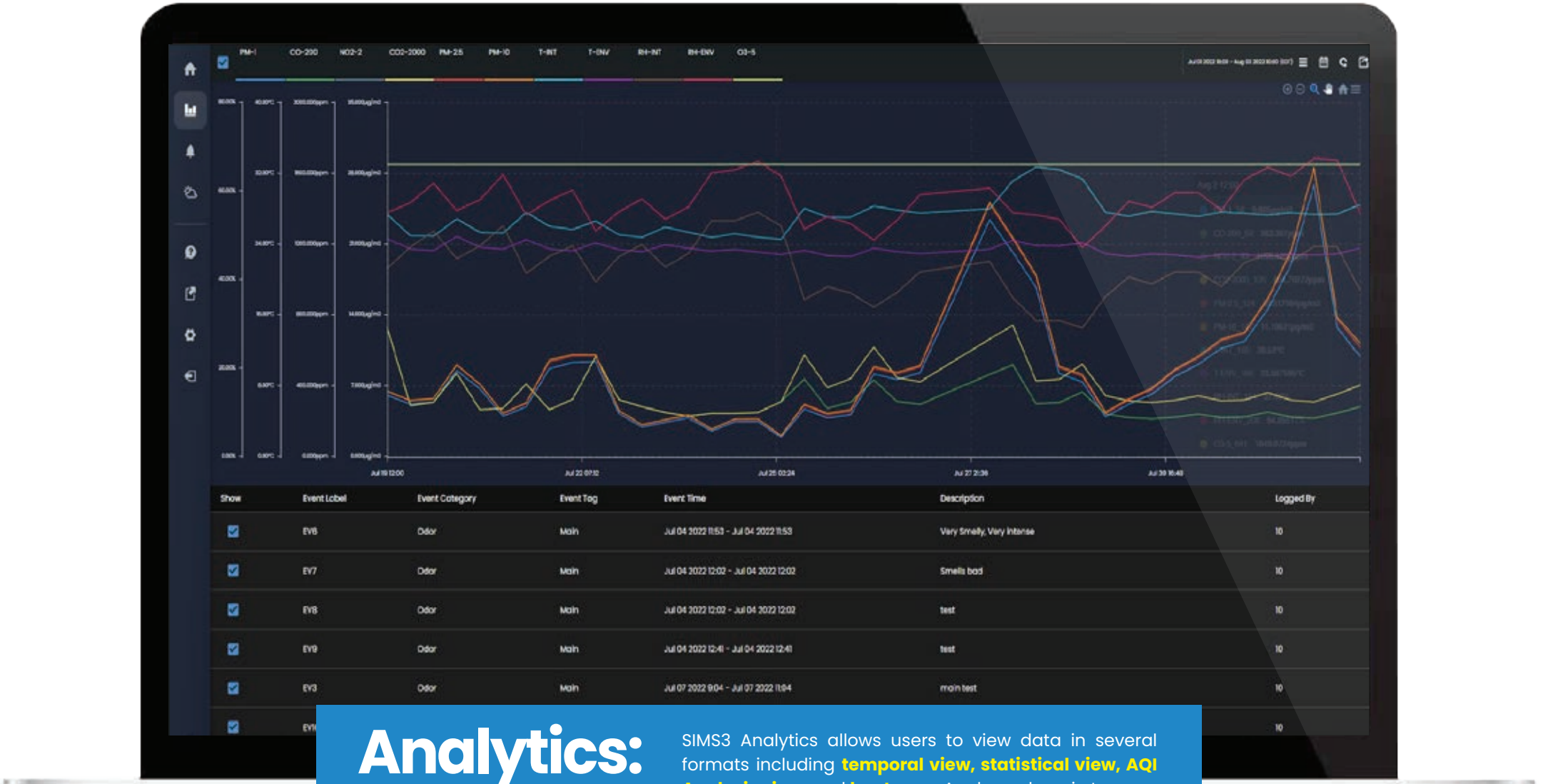
Weather and Complaint Forecasting

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**.

Integration of Mobile Data

Mobile odor support units will be actively using SIMS3 to route and monitor areas of concern. Collected data from vehicles is sent to SIMS3 for **automatic digestion and analysis**, and further, a means for our odor experts to determine **baseline impact** and pinpoint **additional odor sources**. In the image below, the heat map module is being used to investigate a route traveled by a Scentroid Urban Scanner (US20) unit.



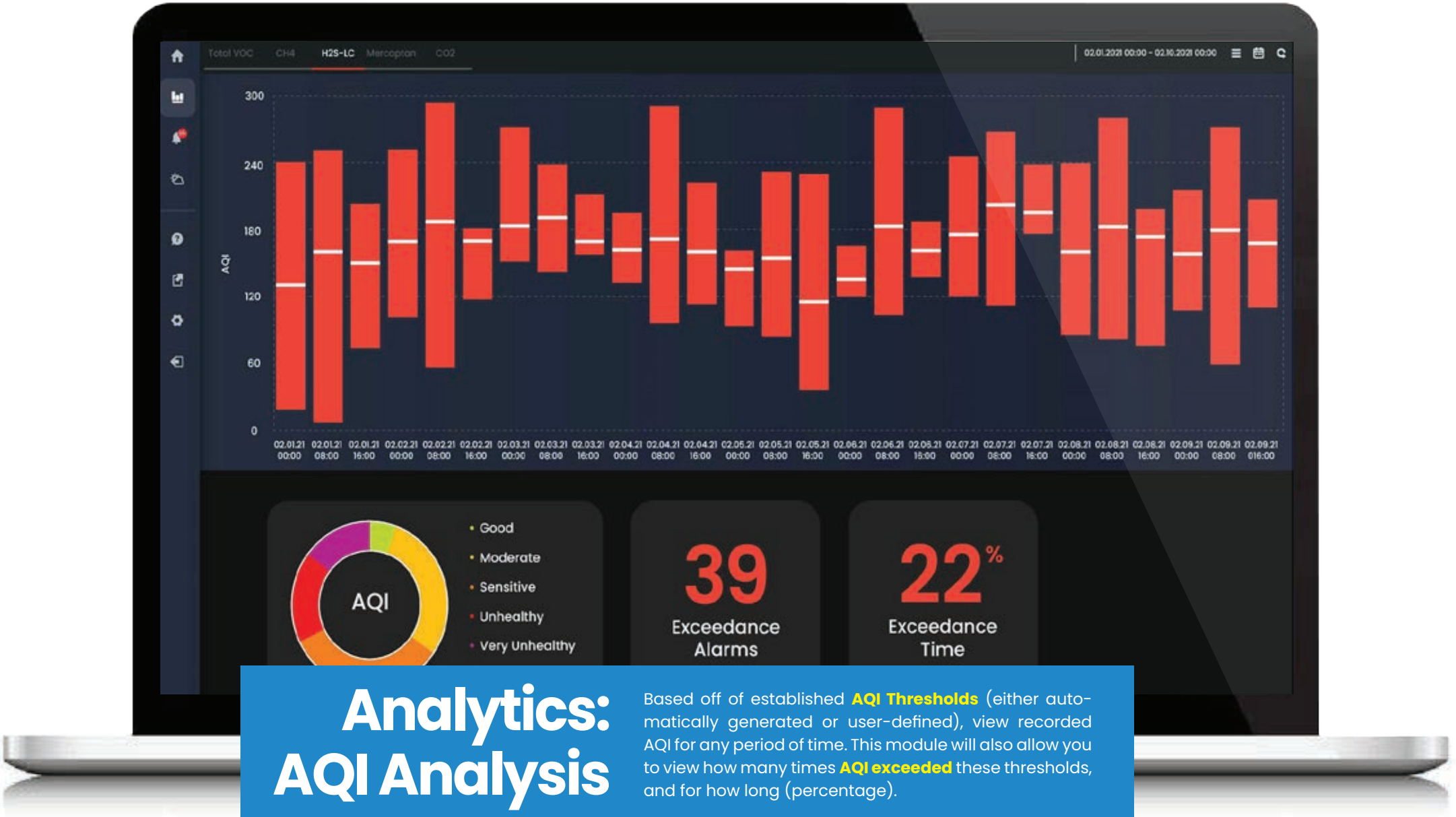


Analytics: Temporal

SIMS3 Analytics allows users to view data in several formats including **temporal view, statistical view, AQI Analysis view,** and **heat map**. As shown here in temporal view, the user can Isolate or compare collected **sensor data** for any **user-defined timeframe** in an easy to read chart. Any event or event type that occured within the specified timeframe is also tracked.

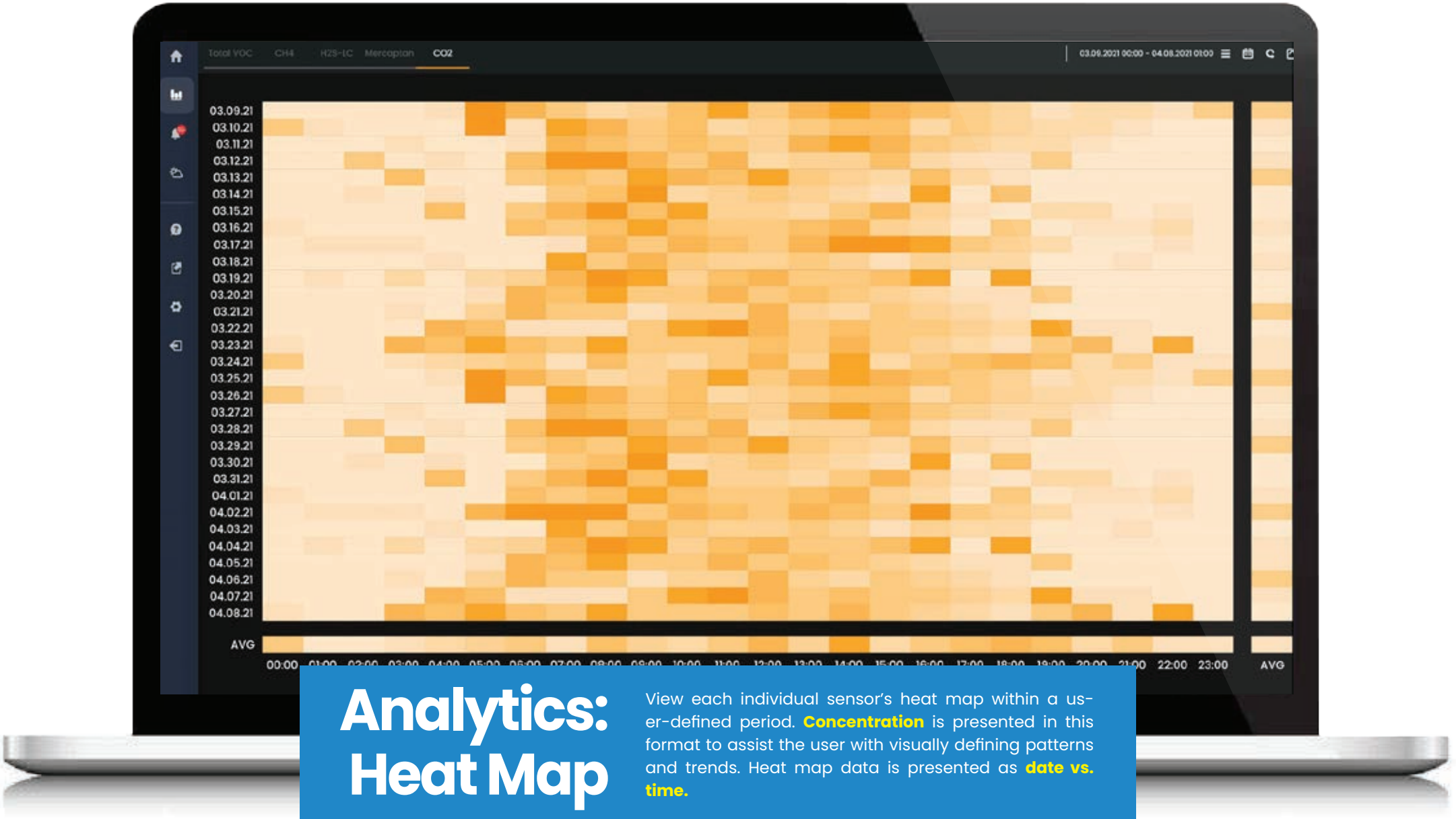
Analytics: Statistical

Isolate and determine **individual sensor reading trends** with our detailed statistical analysis view. Data is presented as **percentages vs concentration** for quick reference. A **data trend guide** displays whether your tracked chemical readings are displaying an increase or decrease.



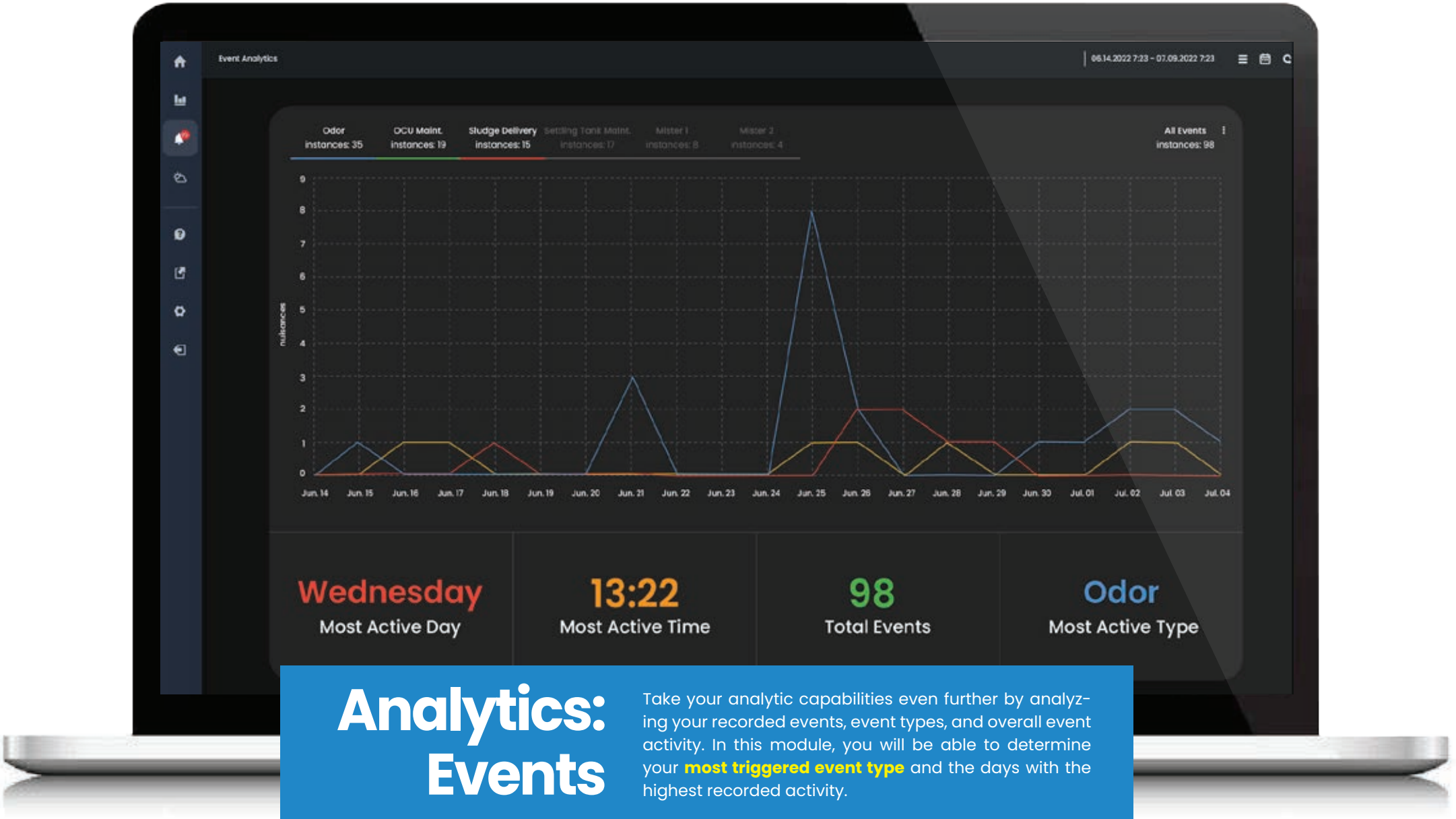
Analytics: AQI Analysis

Based off of established **AQI Thresholds** (either automatically generated or user-defined), view recorded AQI for any period of time. This module will also allow you to view how many times **AQI exceeded** these thresholds, and for how long (percentage).



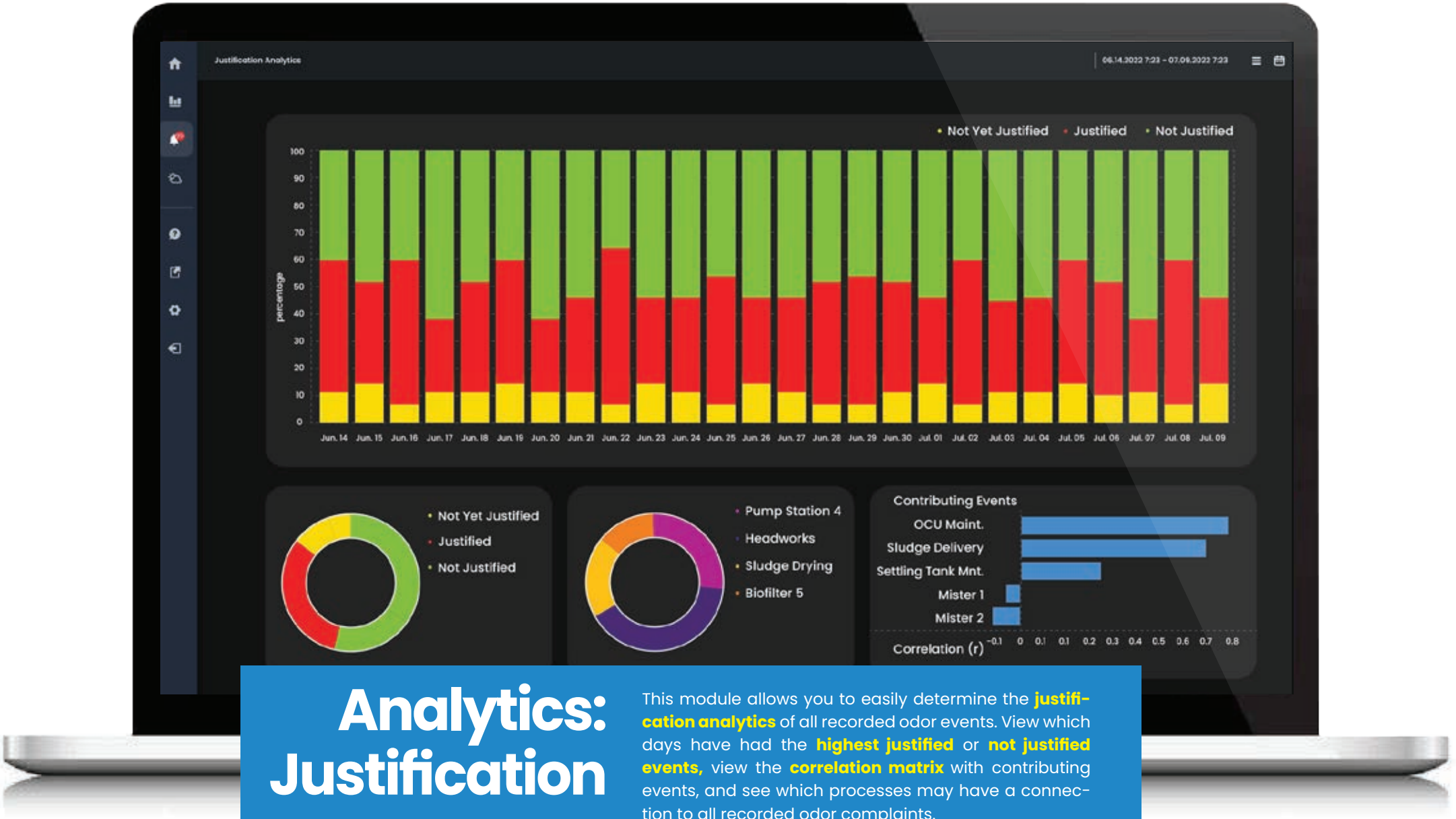
Analytics: Heat Map

View each individual sensor's heat map within a user-defined period. **Concentration** is presented in this format to assist the user with visually defining patterns and trends. Heat map data is presented as **date vs. time.**



Analytics: Events

Take your analytic capabilities even further by analyzing your recorded events, event types, and overall event activity. In this module, you will be able to determine your **most triggered event type** and the days with the highest recorded activity.

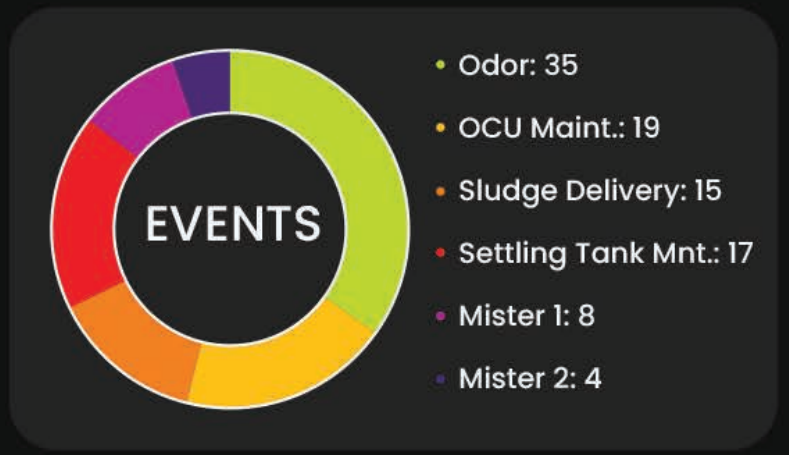


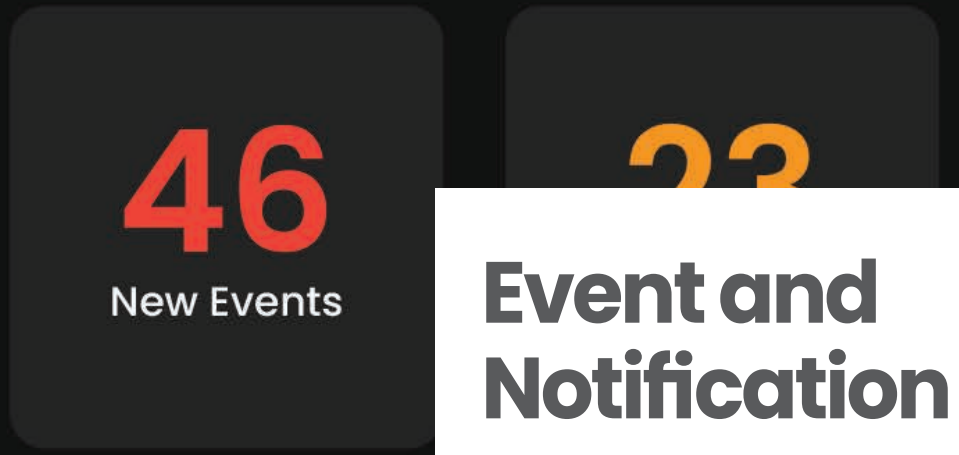
Analytics: Justification

This module allows you to easily determine the **justification analytics** of all recorded odor events. View which days have had the **highest justified** or **not justified events,** view the **correlation matrix** with contributing events, and see which processes may have a connection to all recorded odor complaints.

Export Reports

The SIMS3 reporting module provides you with the tools you need to make informed decisions regarding your monitoring projects. At the click of a button, this document **generates averages** as well as **thorough individual sensor reports**. Users can schedule weekly, monthly, or annual reports.





Event and Notification Log

The SIMS3 **Event Log** contains event data, timeframe, 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.

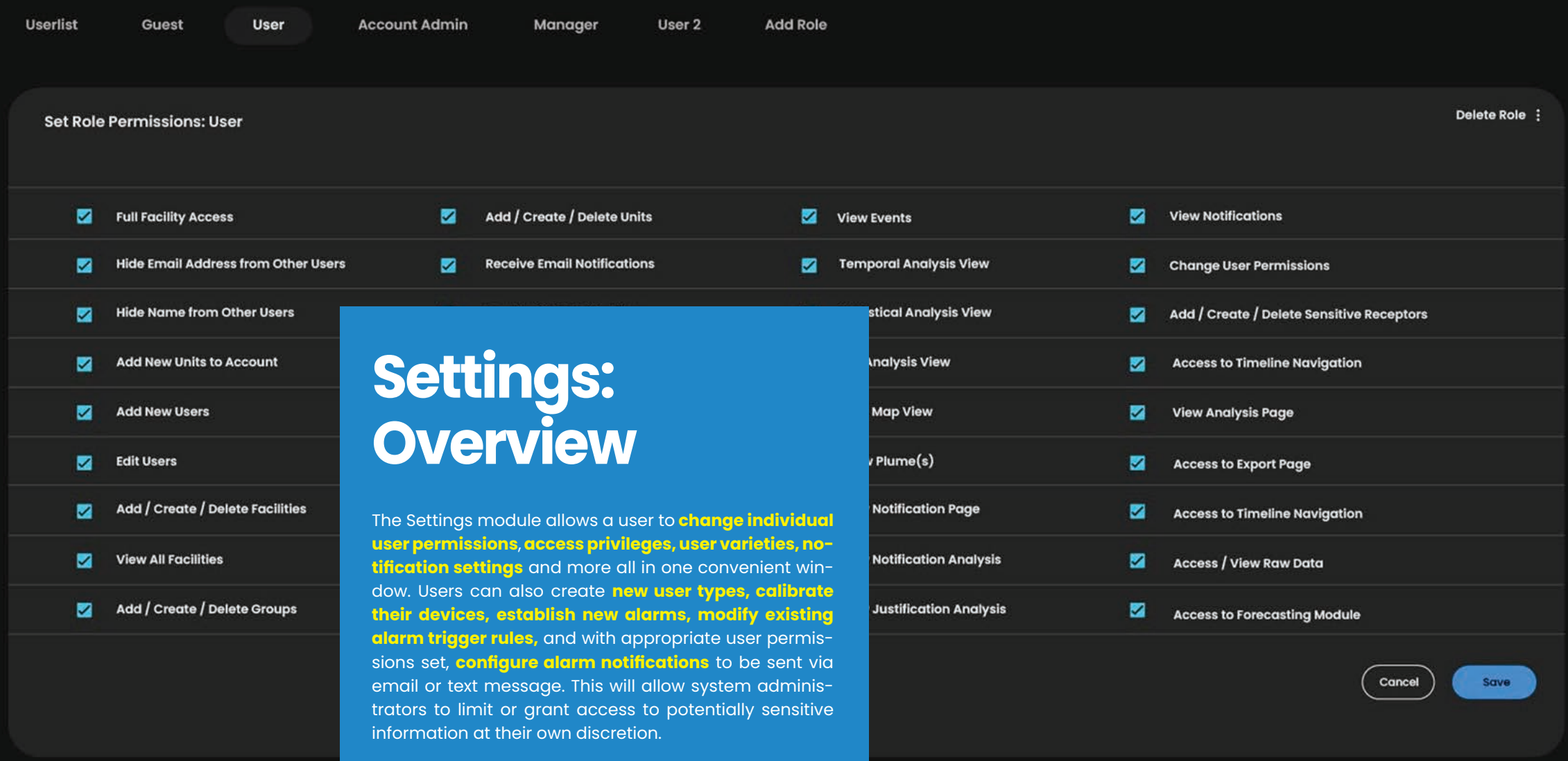
Our **notification center** allows you to quickly view your instrument's alarms through a clean and organized interface. Here, you can access your device, look up a specific sensor, display all of your established alarms, and obtain a detailed breakdown of your alarm status.

Event Notification List

Status	Type	Registrant	Event Time	Justification	Correlation	Description				mark
New	Odour	SR: Stanley Homes	2022.06.14 7:30 - 14:25	Manual Not Justified	View Correlation	Stanley Homes r sensitive recept			ntensity	✓
New	Alarm: H2S	System	2022.06.16 14:05 - 15:30	Manual justified	None	Exceedance alar consecutively wi			N/A	✓
New	OCU Maint.	Benjamin	2022.06.16 15:00 - 17:00	Auto Justified	View Correlation	Scheduled maint			N/A	✓
New	OCU Maint.	Benjamin	2022.06.17 5:00 - 7:30	Auto Justified	View Correlation	Emergency mai			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 maintainence	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	✓

Notifications

We understand that you may not always have access to your computer to view in-app notifications on sensor alarms and alerts. Should you be monitoring a potential air quality hazard, an **immediate notification** may be necessary. Scentroid has you covered! Our SIMS3 platform is capable of notifying you via SMS or email should any sensors report an **exceedance** of a pre-determined value within our alarm settings page.

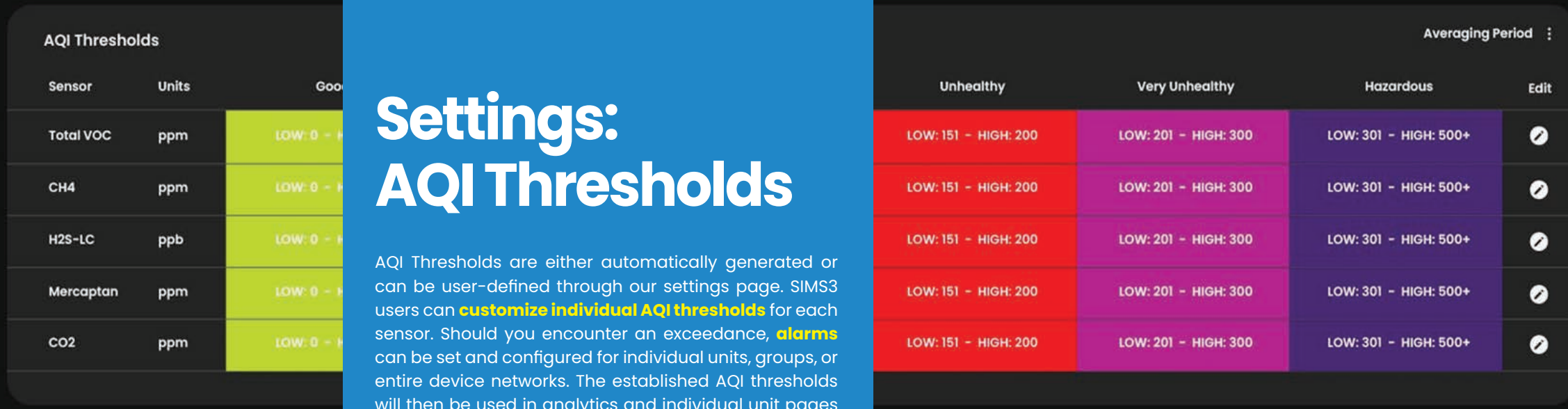


Settings: Overview

The Settings module allows a user to **change individual user permissions, access privileges, user varieties, notification settings** and more all in one convenient window. Users can also create **new user types, calibrate their devices, establish new alarms, modify existing alarm trigger rules,** and with appropriate user permissions set, **configure alarm notifications** to be sent via email or text message. This will allow system administrators to limit or grant access to potentially sensitive information at their own discretion.

Settings: AQI Thresholds

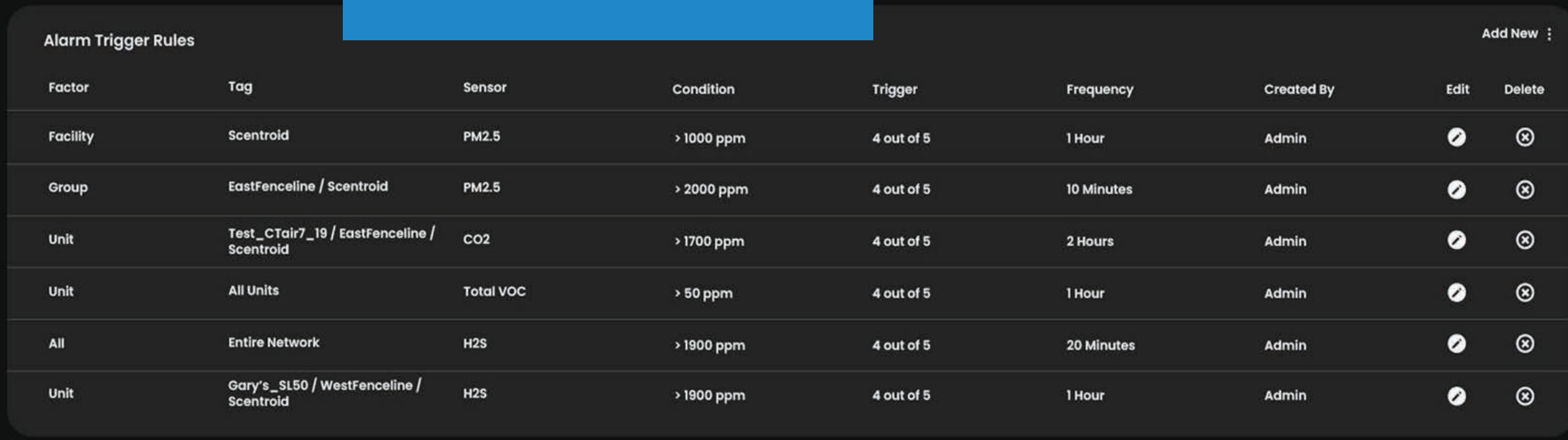
AQI Thresholds are either automatically generated or can be user-defined through our settings page. SIMS3 users can **customize individual AQI thresholds** for each sensor. Should you encounter an exceedance, **alarms** can be set and configured for individual units, groups, or entire device networks. The established AQI thresholds will then be used in analytics and individual unit pages throughout SIMS3.



AQI Thresholds

Averaging Period

Sensor	Units	Good	Unhealthy	Very Unhealthy	Hazardous	Edit
Total VOC	ppm	LOW: 0 - H	LOW: 151 - HIGH: 200	LOW: 201 - HIGH: 300	LOW: 301 - HIGH: 500+	
CH4	ppm	LOW: 0 - H	LOW: 151 - HIGH: 200	LOW: 201 - HIGH: 300	LOW: 301 - HIGH: 500+	
H2S-LC	ppb	LOW: 0 - H	LOW: 151 - HIGH: 200	LOW: 201 - HIGH: 300	LOW: 301 - HIGH: 500+	
Mercaptan	ppm	LOW: 0 - H	LOW: 151 - HIGH: 200	LOW: 201 - HIGH: 300	LOW: 301 - HIGH: 500+	
CO2	ppm	LOW: 0 - H	LOW: 151 - HIGH: 200	LOW: 201 - HIGH: 300	LOW: 301 - HIGH: 500+	



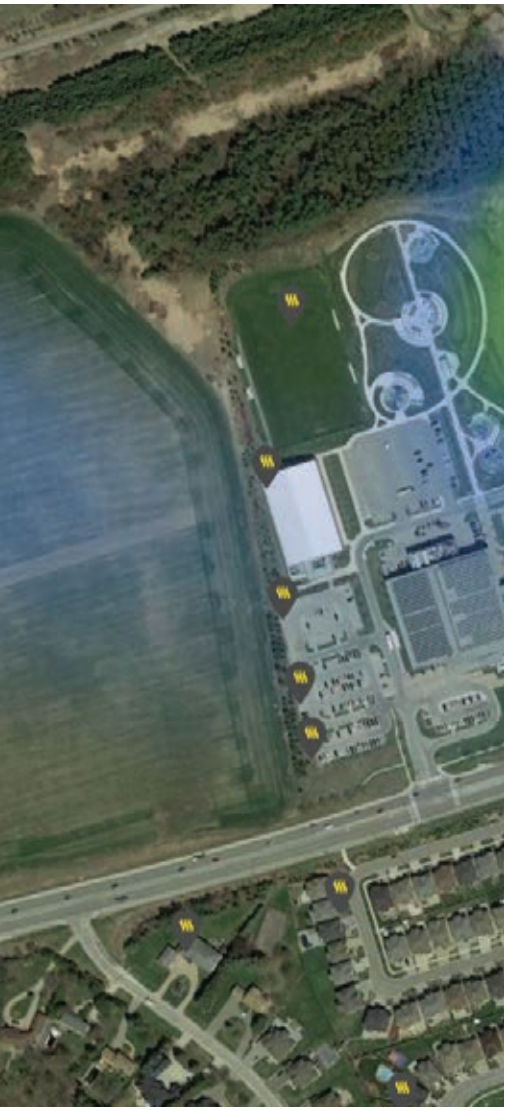
Alarm Trigger Rules

Add New

Factor	Tag	Sensor	Condition	Trigger	Frequency	Created By	Edit	Delete
Facility	Scentroid	PM2.5	> 1000 ppm	4 out of 5	1 Hour	Admin		
Group	EastFenceline / Scentroid	PM2.5	> 2000 ppm	4 out of 5	10 Minutes	Admin		
Unit	Test_CTair7_19 / EastFenceline / Scentroid	CO2	> 1700 ppm	4 out of 5	2 Hours	Admin		
Unit	All Units	Total VOC	> 50 ppm	4 out of 5	1 Hour	Admin		
All	Entire Network	H2S	> 1900 ppm	4 out of 5	20 Minutes	Admin		
Unit	Gary's_SL50 / WestFenceline / Scentroid	H2S	> 1900 ppm	4 out of 5	1 Hour	Admin		

SIMS3 Feature List	Base	Pro	Pro + OMS
Total Number of Users	1	5	100
Secure Data Storage	2 Years	Unlimited	Unlimited
Graphing of Multiple Sensors per Individual Equipment	○	○	○
Equipment Error Notifications and Alarms	○	○	○
Over-the-Air Firmware Upgrades	○	○	○
Setup of New Facilities and AQSafe Networks	○	○	○
Email and SMS Alarm System	✕	○	○
Graphed Sensor Comparison Mode	✕	○	○
Automatic Event Detection	✕	○	○
API for External Data Retrieval and 3rd Party Integrations	✕	○	○
Auto Calibration Suite	✕	○	○
Weather Forecasting	✕	○	○
Complaint Management	✕	✕	○
Dispersion Modeling	✕	✕	○
Complaint Risk Forecasting	✕	✕	○
Virtual Sensors	✕	✕	○
Unknown Source Identification	✕	✕	○
Odour Concentration Estimation and Calculation	✕	✕	○
Reporting and Analytics:			
Automatic Report Generation	✕	○	○
Export of Raw Data to Excel	○	○	○
Temporal Analytics Reporting	○	○	○
Statistcal Analytics Reporting	○	○	○
Heat Map Analytics Reporting	✕	○	○
Event Analytics	✕	○	○
Customized AQI Analytics	✕	○	○

SIMS3 revolutionizes air quality monitoring and odor complaint management. The Scentroid team has worked hard to provide you with an unforgettable user experience, designed with utmost care to provide you the tools to determine pollutant threats, air quality alarms, historical data, sampled areas, plumes, complaint management, and much more. The intuitive and esthetic graphical interface allows anyone to run complicated data analytics without needing to be an air quality expert.



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!

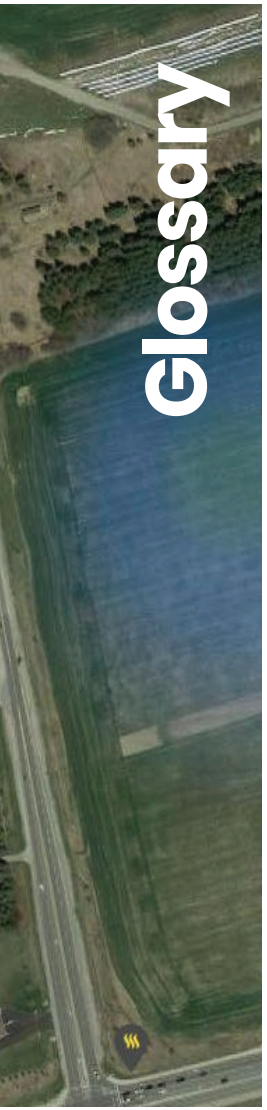
Local Support
We have developed a vast growing network of distributors and repair facilities. To find your local support please check our distributors map.

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



Glossary

Ambient Air
atmospheric air in its natural state, not contaminated by air-borne pollutants

Ambient Monitoring
Systematic, long-term assessment of pollutant levels by measuring the quantity and types of certain pollutants in the surrounding, outdoor air

AQI
The Air Quality Index (AQI) is used for reporting air quality changes. Its numbers reveal how polluted or hazardous air may be.

AQI Thresholds
The higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 or below represents good air quality, while an AQI value over 300 represents hazardous air quality.

Back Trajectory
Interpolated measured or modeled meteorological fields to estimate the most likely central path over geographical areas that provided air to a receptor at a given time.

Baseline Impact
Testing method used to evaluate the effects of a change, or to track the progress of an improvement project

Contributing Source
Common odor producing sources including various chemical plants, industrial facilities and operations, wastewater treatment plants, landfills, and more.

Dispersion Modeling
The process of using mathematical formulations to characterize the atmospheric processes that disperse a pollutant emitted by a source.

Emission Rate
Total quantity of any air contaminant discharge into the atmosphere in a given period.

Mobile Odor Support Units
Scentroid line of mobile devices (can provide multiple GPS points) that support the usage of odor monitoring or odor patrols. These include but are not limited to the DR2000, TR8, TR8+, SM100, SM100i, and the US20 UrbanScanner.

Odor Concentration
An odor's pervasiveness. To measure odor sensation, an odor is diluted to a detection or recognition threshold. The detection threshold is the concentration of an odor in air when 50% of a population can distinguish between the odorous sample and an odor-free reference sample

Odor Emission Rate
The quantity of odour units (ou) which crosses a given surface divided by time

Odor Justification
The determination of whether or not an odor complaint may be the direct result of a specific odor source.

Odor Plume
Odor plumes are created when odor molecules are released from their source and are taken away in the wind.

Odor Source
The point of origin of a particular odor. A plume develops from this location.

Sensitive Receptor
Sensitive receptors are children, elderly, asthmatics and others whose are at a heightened risk of negative health outcomes due to exposure to air pollution. The locations where these sensitive receptors congregate are considered sensitive receptor locations.

Source Emission (Emission Source)
Emission source refers to any machine, equipment, device, or other article or operation that directly or indirectly releases contaminants into the outdoor atmosphere

LET'S BUILD OUR NETWORK

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SCENTROID

Future of Sensory Technology

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