



Built for fire season

Wildfire Smoke Monitoring Product Update



David Lu

Co-founder and CEO



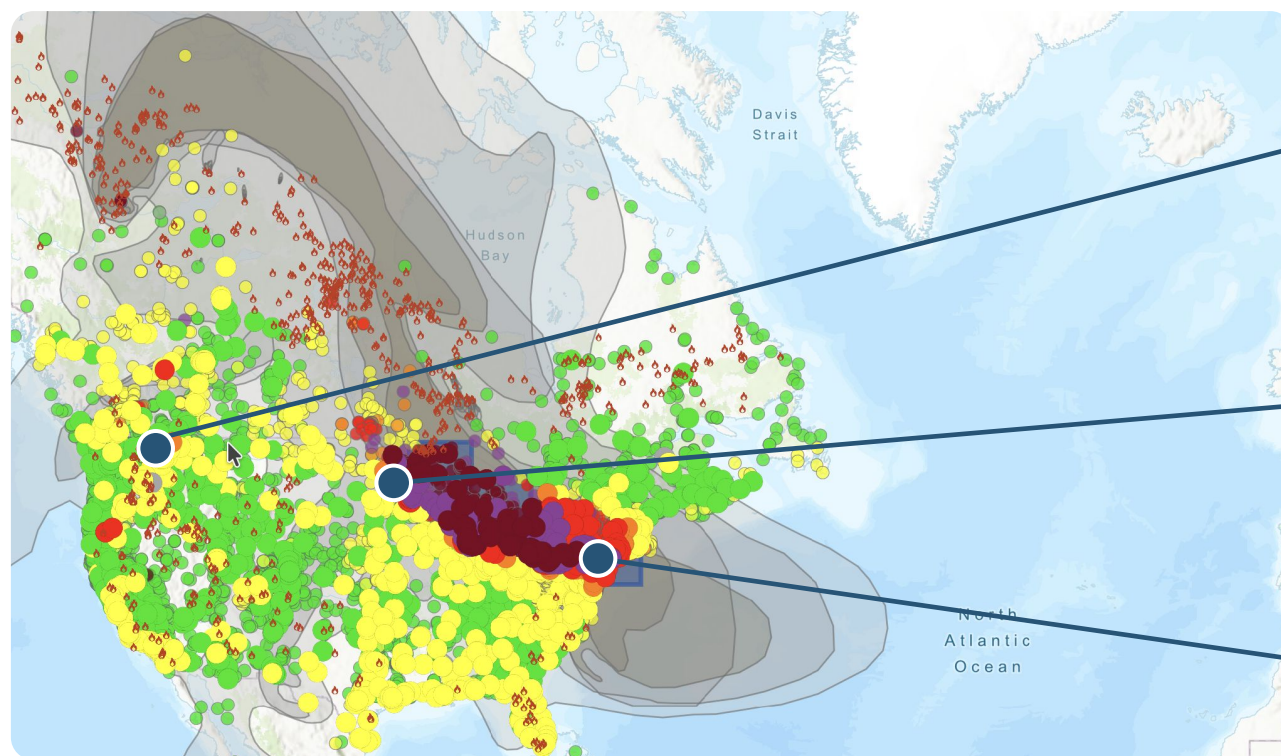
Paolo Micalizzi

Co-founder and CTO



WHY NOW

Wildfire smoke is a national crisis, and it's not going anywhere



Spokane

AQI 406

July 17, 2026 · Hazardous



Chicago

AQI 481

July 16, 2026 · Hazardous



New York

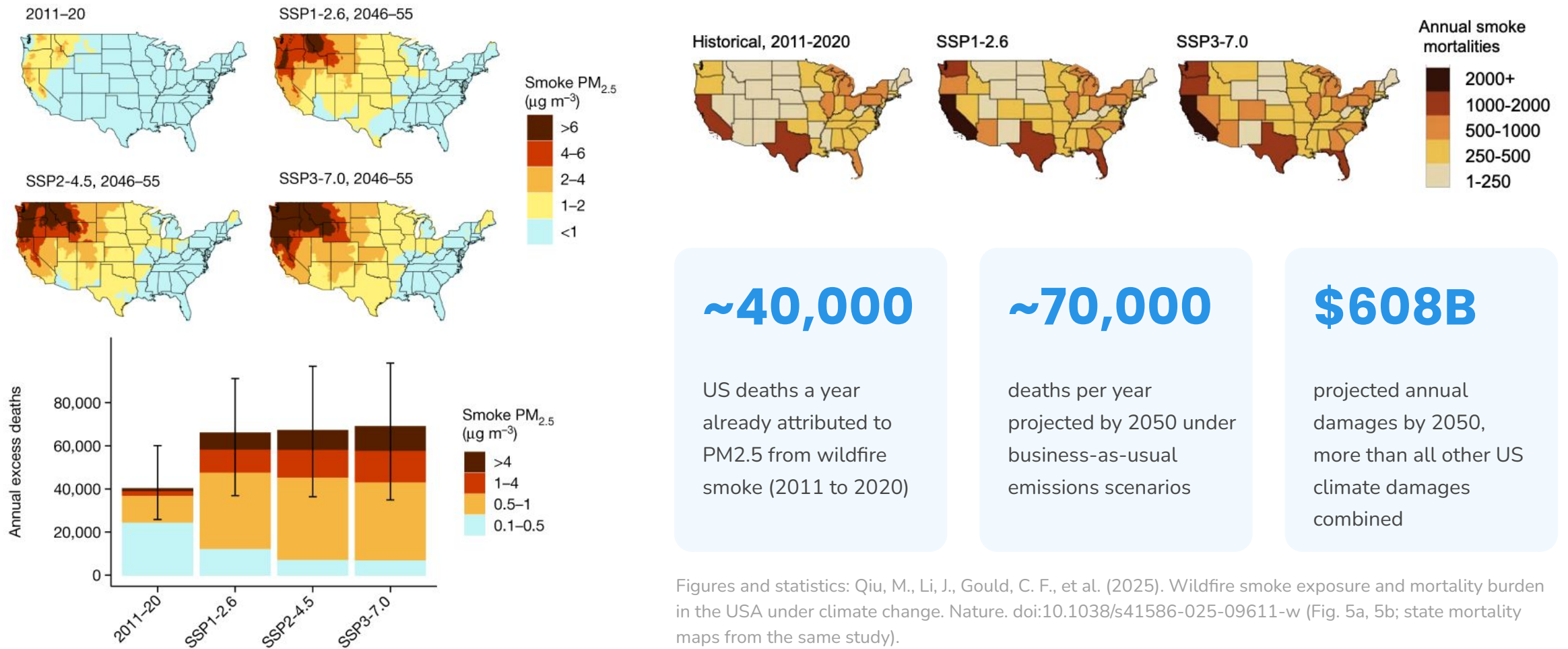
AQI 237

July 16, 2026 · Very Unhealthy

AirNow Fire and Smoke Map, July 16, 2026, 2:50 PM; city AQI from Clarity sensors

WHY NOW

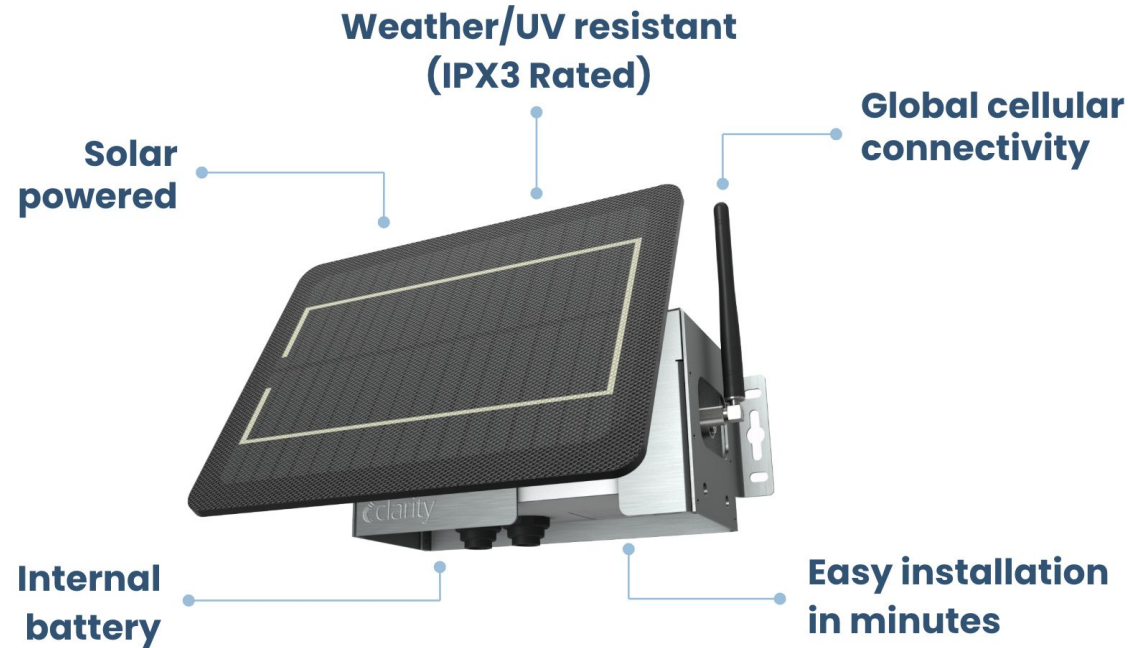
The health toll is already large, and every projection says it will grow



AVAILABLE TODAY

What the Node-S already does for wildfire

Measures PM_{2.5} and NO₂ at every site



📍 On the EPA & USFS Fire & Smoke Map

The only professional-grade sensor on FASM. 200+ Nodes fast-tracked on during the 2025 LA fires

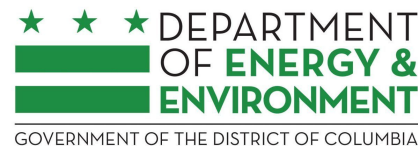
⚡ Solar powered and cellular connected

Deploys where line power and WiFi do not reach, and is operational within hours

✓ Calibrated for wildfire smoke

Global v2.1 calibration holds accuracy at hazardous AQI, where optical sensors tend to overestimate

ALREADY USED FOR WILDFIRE MONITORING BY



AVAILABLE TODAY

Add-On Modules enhance smoke monitoring



Multi-Gas Module (CO | O₃ | NO | NO₂ | NO_x)

- CO rising with PM_{2.5} points to smoke, not dust
- Ozone catches secondary pollution that forms downwind of a plume



Black Carbon Module

- Confirms a PM spike is wildfire smoke, not traffic or industry
- Detects long-range smoke early, even at low concentrations when PM_{2.5} is still near background



Wind & Met Module

- Shows where smoke came from and where it is headed
- Wind and pollution roses, built into the Dashboard



Dust Module (PM₁₀)

- Ash and coarse particles that PM_{2.5} sensors miss
- Covers the fire itself and the burn scar cleanup after it

What's new?



What's new?



Enhanced coverage





ENHANCED COVERAGE

Sometimes **solar + cellular** isn't enough during a wildfire

Power drops

Preemptive shutoffs and grid damage take sites offline before the smoke even arrives

Cell service fails

Towers burn or lose backhaul, and solar power does not help if there is nothing to transmit to

Remote locations lack coverage

Rural areas, tribal lands, and remote WUI sites have no usable cellular to begin with

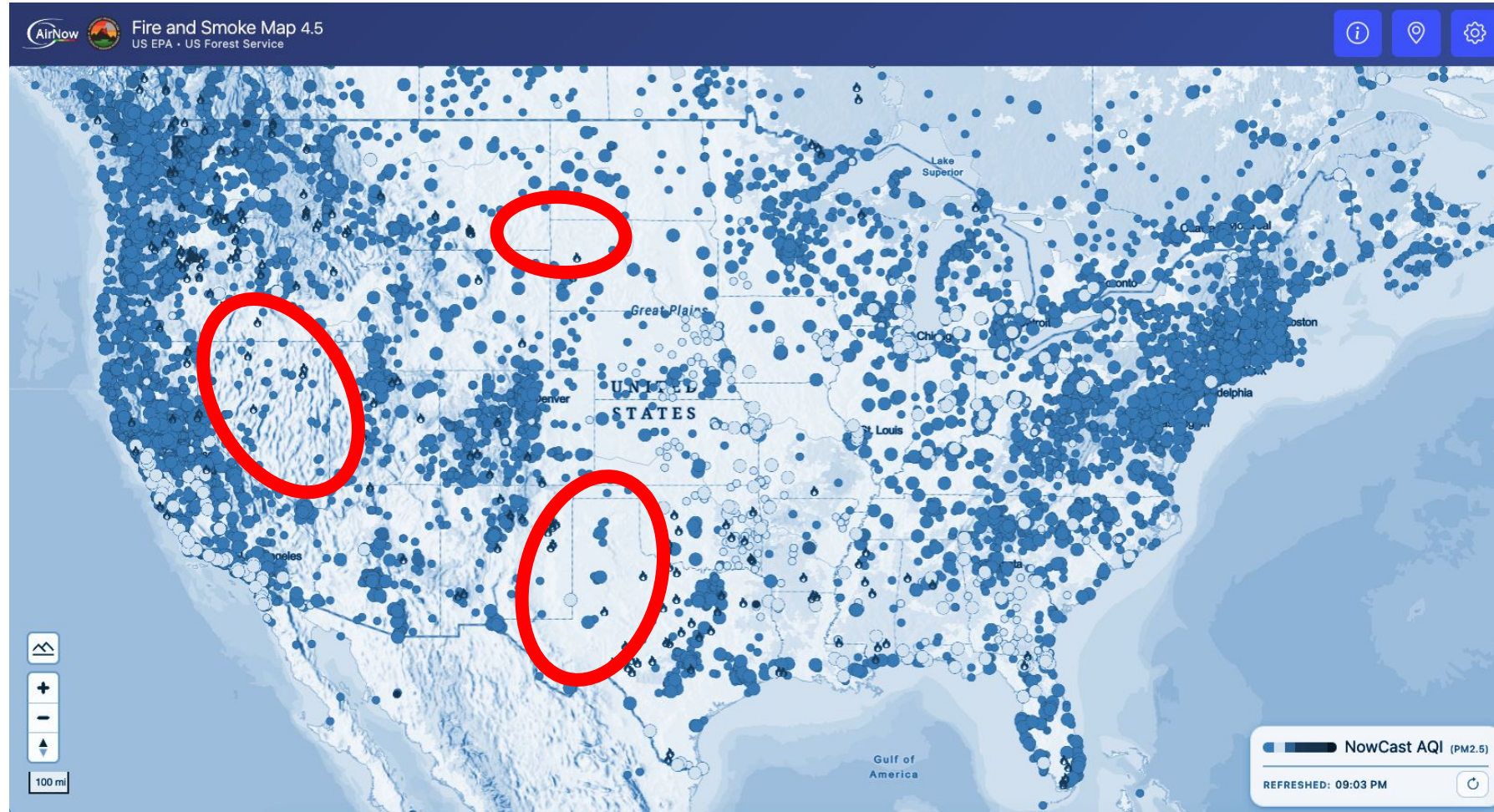


ENHANCED COVERAGE

Sometimes solar + cellular

is

PO
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s lack

and remote
cellular to



Adding native **direct-to-cell** satellite connectivity to the Node-S



Same footprint

Native direct-to-cell satellite inside the same Node-S. No dish, no extra antenna, same integrated solar panel.

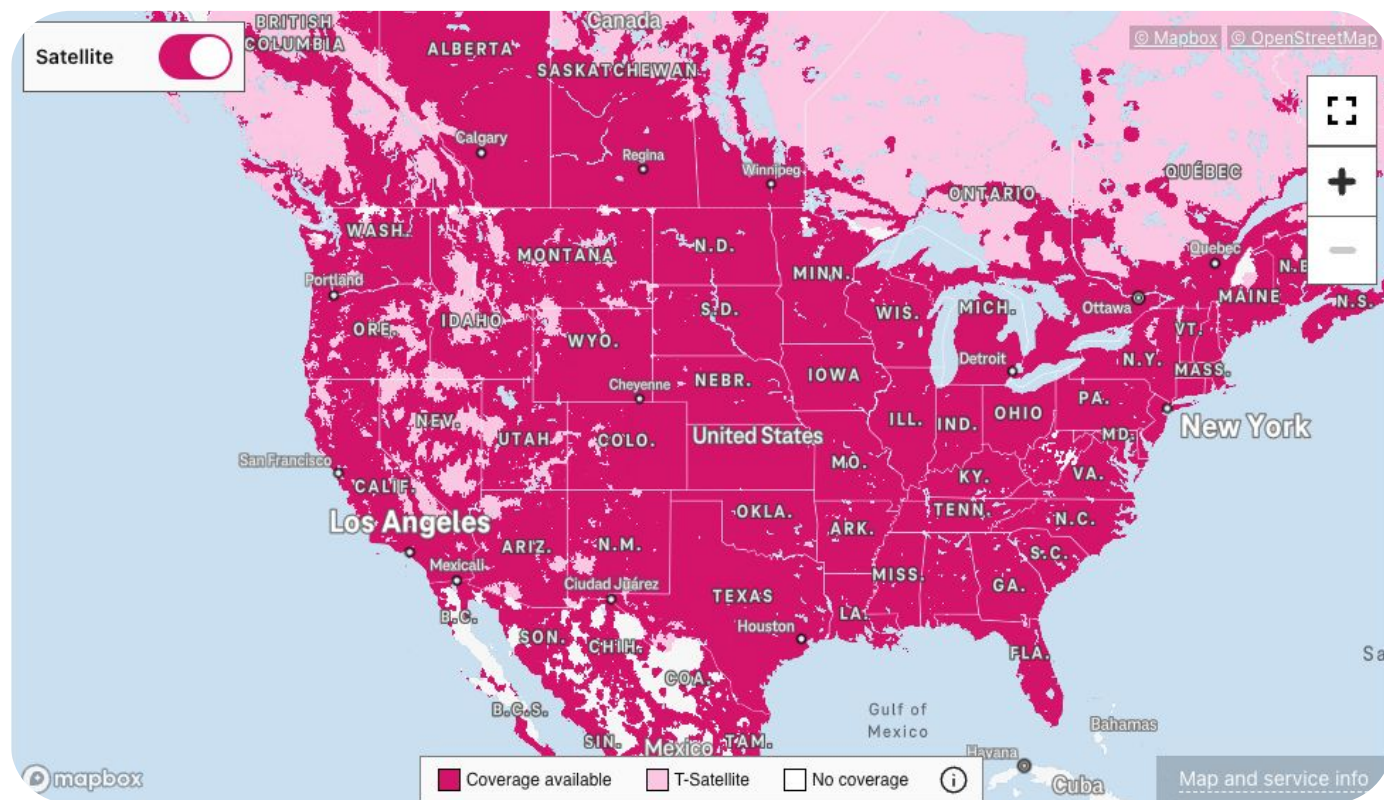
Same ease of deployment

Install it as you do today, anywhere with a view of the sky. Data immediately available on Dashboard, FASM, etc.

Same performance

Maintain the same excellent sensor accuracy, sampling rate, device ruggedness, etc.

Measure air quality where cellular cannot reach



Launching first in United States

Excluding Alaska. Then rolling out globally over time.

What's new?



Enhanced coverage



**Extended
measurement range**





Multi-Gas CO range, retuned for wildfire monitoring out of the box



Up to
500 ppm
Carbon
Monoxide

What we changed

- Retuned the readout circuitry so CO reads reliably up to 500 ppm without saturating.
- Same limit of detection at the low end

Why it matters for smoke monitoring

- Measure near the source where emergency responders work
- Provide data to support tier 2 exceptional event demonstrations

What's new?



Enhanced coverage



**Extended
measurement range**



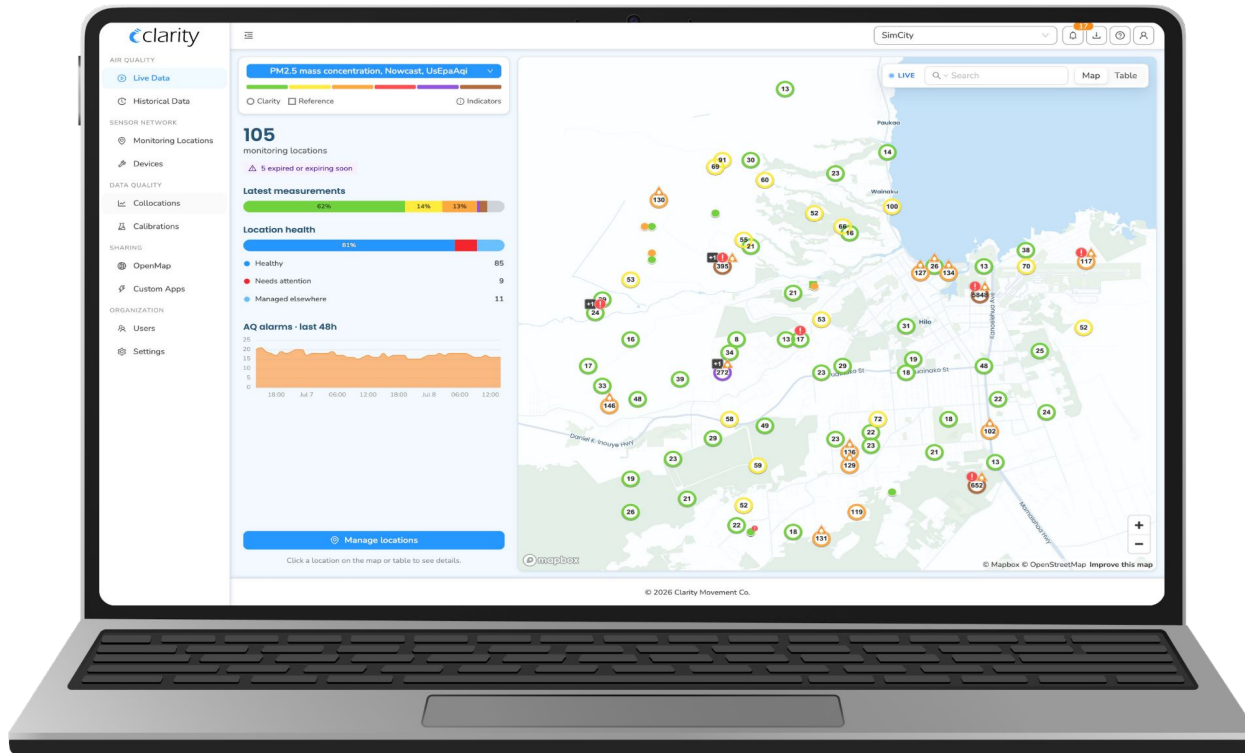
**Simplified management
and analysis**





SIMPLIFIED MANAGEMENT AND ANALYSIS

Dashboard: Your operations hub during an emergency



See the whole network at a glance

Air quality, device health, and data QC flags on one overview

Configure in a few clicks

Set up Nodes, custom thresholds, and alarms for every site

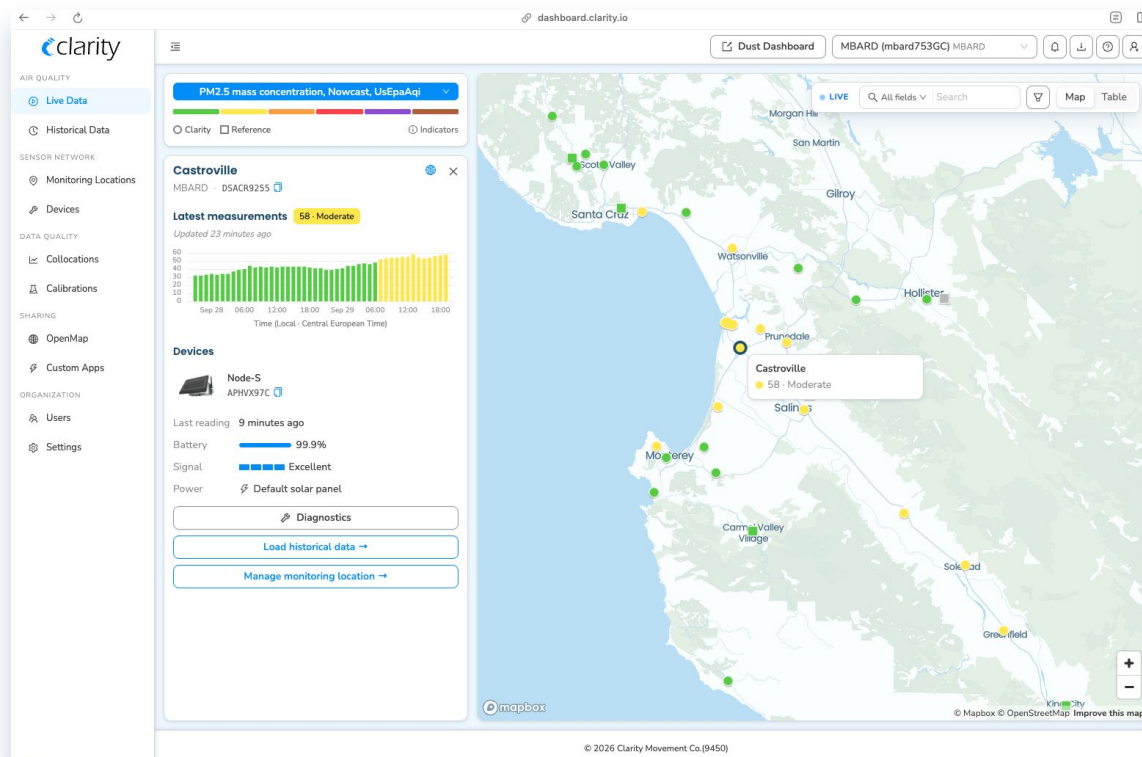
Analyze on the spot

Wind roses, strip charts, and shareable GIFs built in

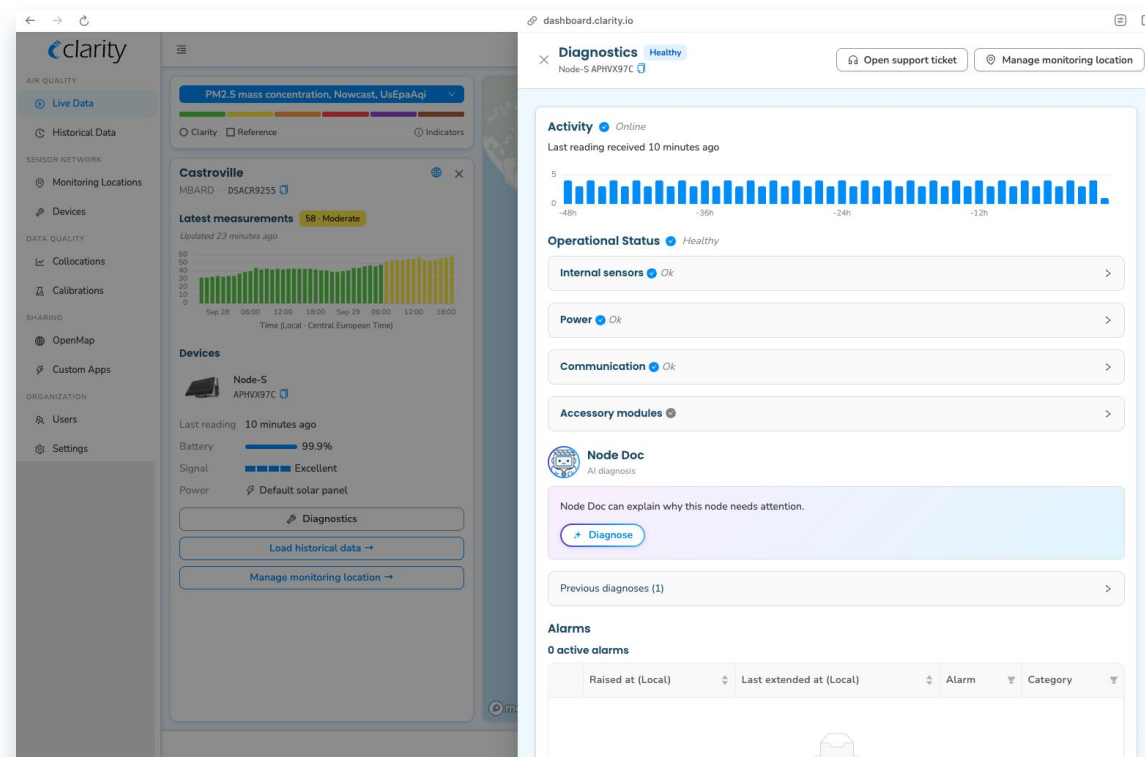


SIMPLIFIED MANAGEMENT AND ANALYSIS

Live conditions and device health



Overview: air quality, alerts, and data QC flags across the network



Device health: status and diagnostics for every Node and Module



SIMPLIFIED MANAGEMENT AND ANALYSIS

Alarms and thresholds, per site

Add alarm rule

1 Configure 2 Review

* Rule name
High PM2.5

* Metric
Hour Day

PM2.5
1h $\mu\text{g}/\text{m}^3$ 1h $\#/ \text{cm}^3$ 24 roll $\mu\text{g}/\text{m}^3$ 24 roll $\#/ \text{cm}^3$
NowCast $\mu\text{g}/\text{m}^3$ US AQI UK AQI AU AQI PH AQI

PM10
1h $\mu\text{g}/\text{m}^3$ 1h $\#/ \text{cm}^3$ 24 roll $\mu\text{g}/\text{m}^3$ 24 roll $\#/ \text{cm}^3$
NowCast $\mu\text{g}/\text{m}^3$ US AQI AU AQI

PM1
1h $\mu\text{g}/\text{m}^3$ 1h $\#/ \text{cm}^3$

Black Carbon
All 1h ng/m^3 Biomass 1h ng/m^3 Fossil 1h ng/m^3

TSP
1h $\mu\text{g}/\text{m}^3$

CO₂
1h ppm

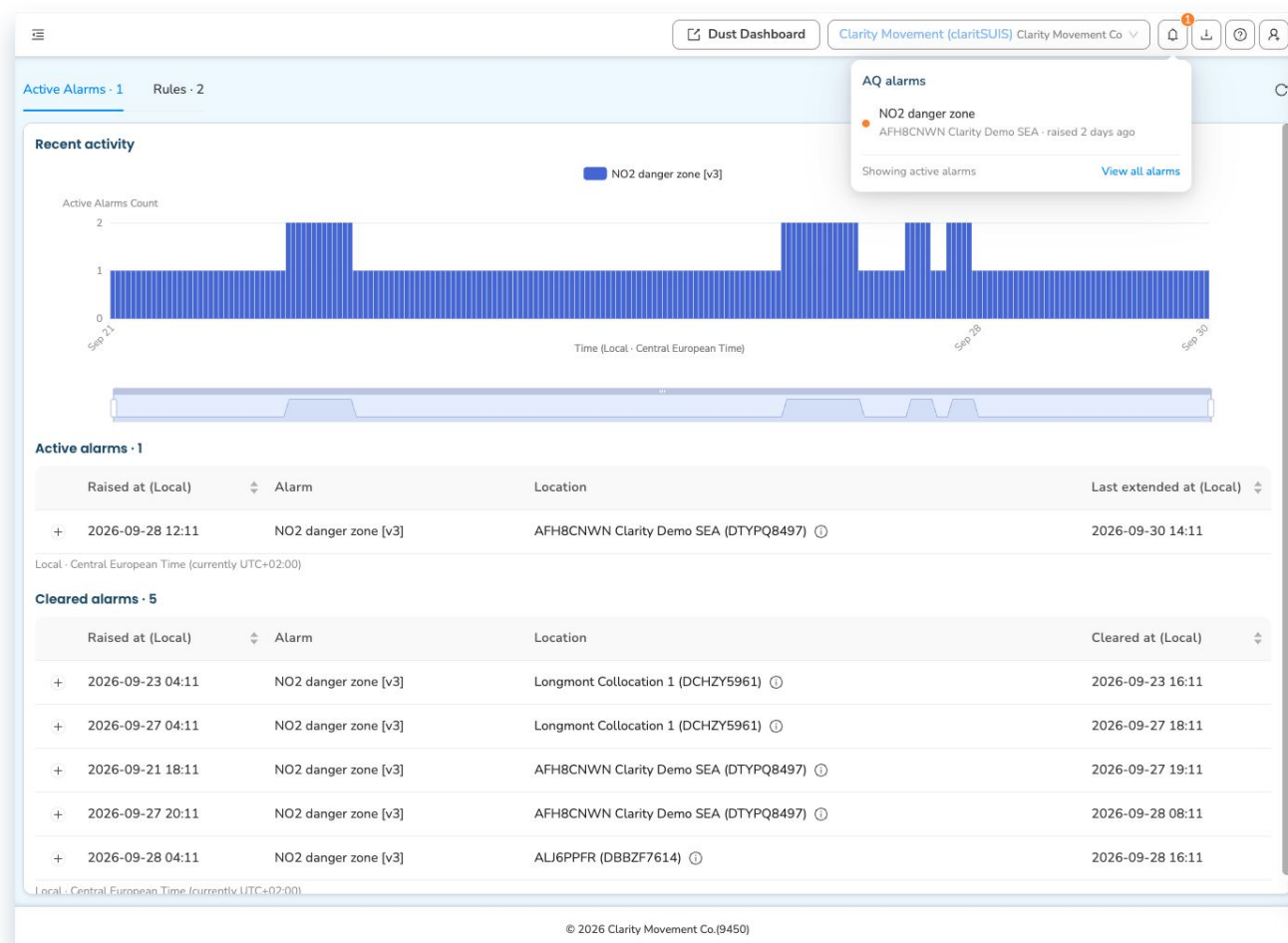
NO₂
1h ppb US AQI UK AQI AU AQI

NO
1h ppb

* Calibration and QC
Calibrated & Valid QC Raw & Ignore QC

Cancel Review

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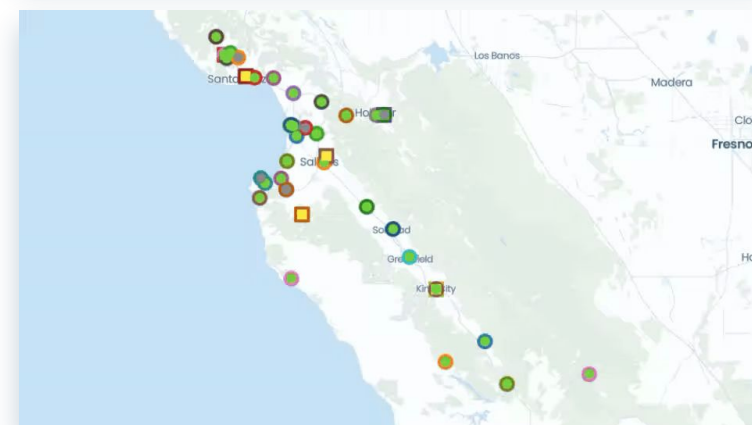
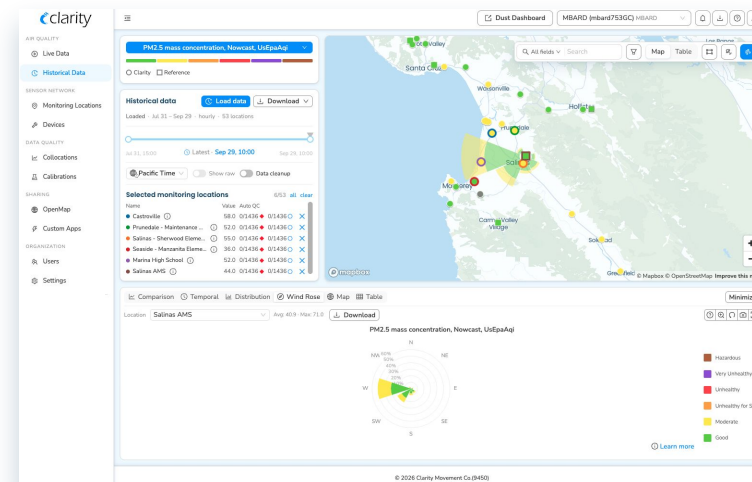
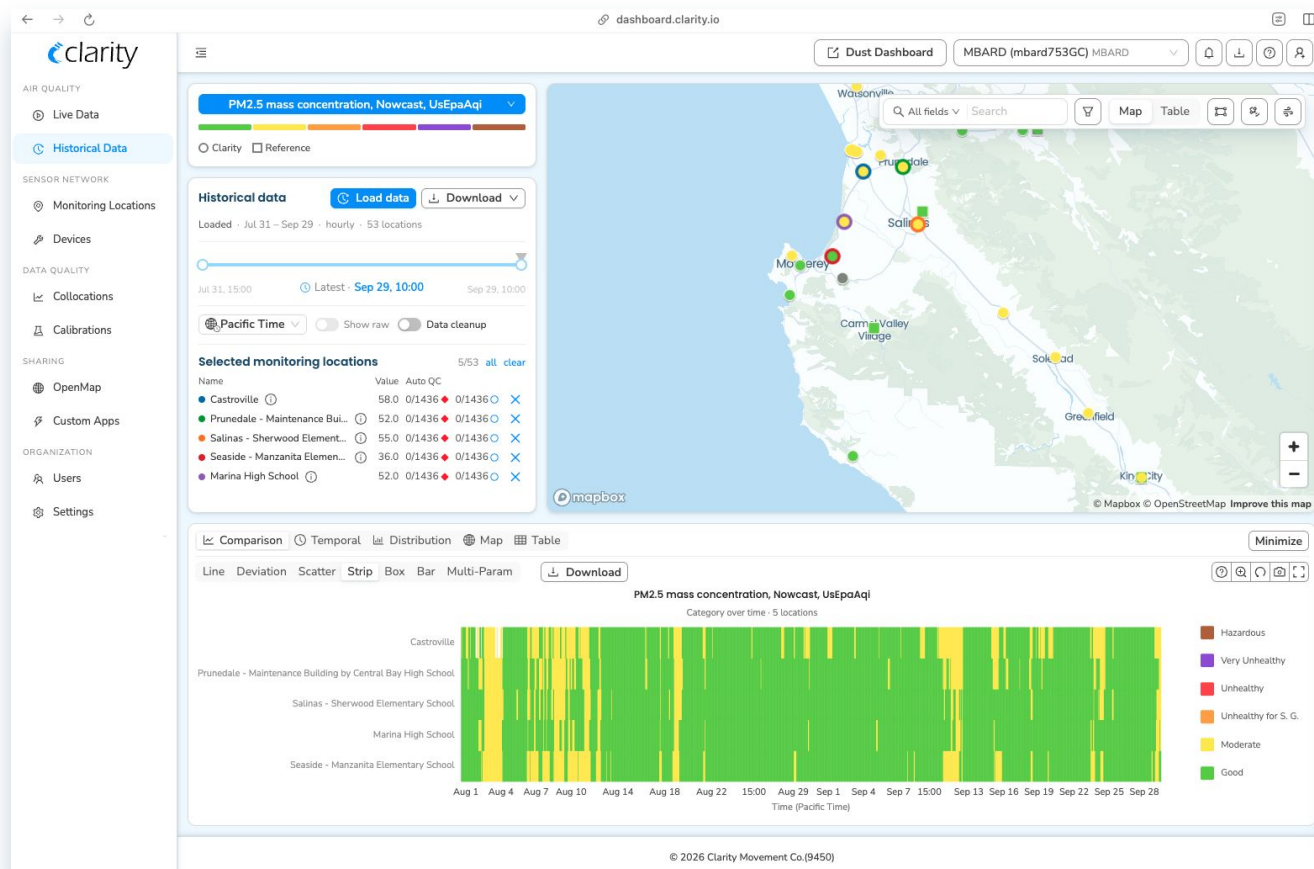


Measurement alarms: custom rule configuration, notification and detailed alarms log



SIMPLIFIED MANAGEMENT AND ANALYSIS

Advanced analyses, right in Dashboard



Strip charts, wind roses, and time-lapse GIFs, straight from the Dashboard

What's new?



Enhanced coverage



**Extended
measurement range**



**Simplified management
and analysis**



**Expanded public data
sharing**



EXPANDED PUBLIC DATA SHARING

OpenMap: Your data, shared on your terms

The screenshot shows the OpenMap dashboard at dashboard.clarity.io. The interface includes a sidebar with navigation options: AIR QUALITY (Live Data, Historical Data), SENSOR NETWORK (Monitoring Locations, Devices), DATA QUALITY (Collocations, Calibrations), and SHARING (OpenMap, Custom Apps). The main content area is titled 'OpenMap' and shows '36 of 39 running monitoring locations are open on OpenMap'. Below this is a section 'Embed your map on your site' with a 'Widget Builder' tool. The widget builder has a 'Configuration' panel on the left with settings for Width (100%), Height (600px), Border (checked), and Disable Product Tour (unchecked). It also displays an 'Embed Code' block with an iframe snippet. On the right is a 'Preview' of the map widget, which shows a map of the Monterey Bay area with sensor locations, a US EPA AQI scale, and a search bar. The map is titled 'MBARD Smoke Sensor Network' and includes a legend for 'Clarity Sensor' and 'Reference Monitor'.

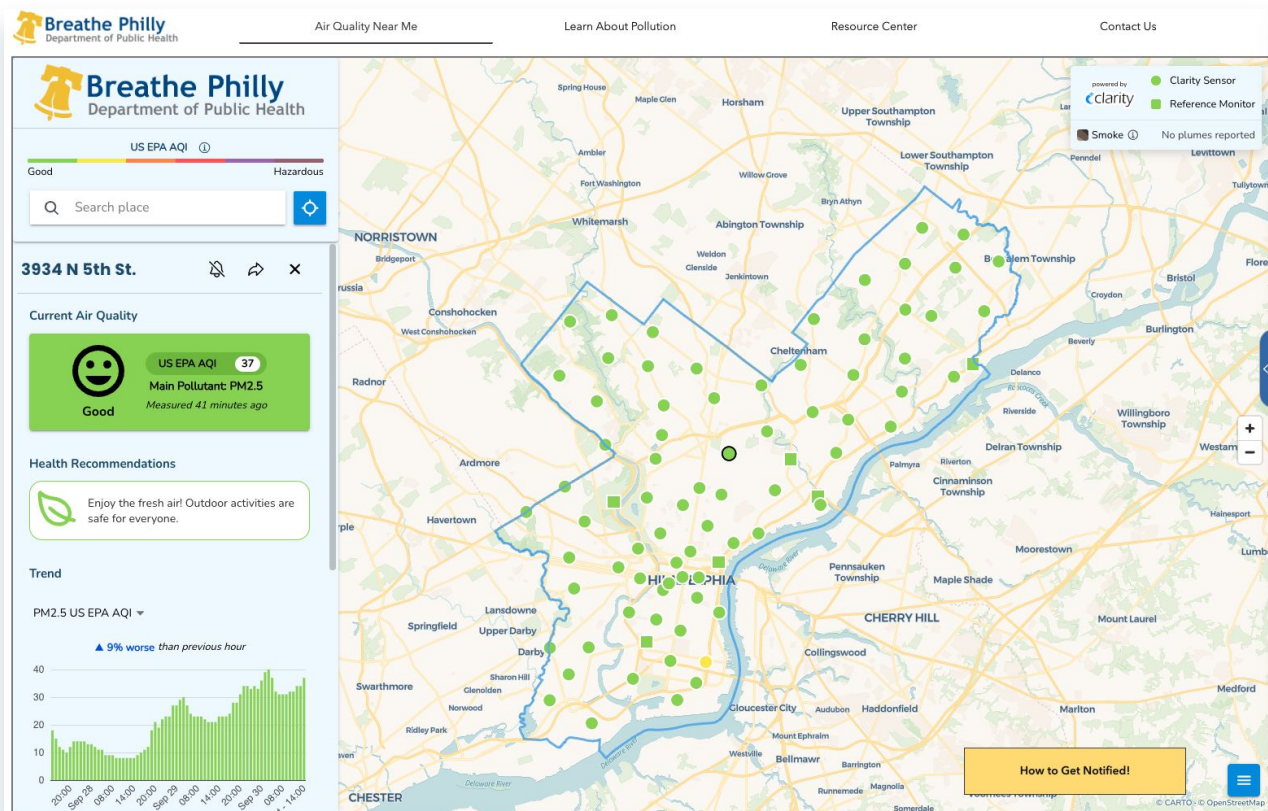
Included in Sensing-as-a-Service:

- **Full data ownership**; you choose whether to share publicly
- **Manage public data sharing** from the Dashboard
- **Embed OpenMap** on your website
- Community members can **sign up for email notifications**
- If you make your data public, it is **automatically shared with open data partners such as FASM**



EXPANDED PUBLIC DATA SHARING

White labeled: **your network, your branding**



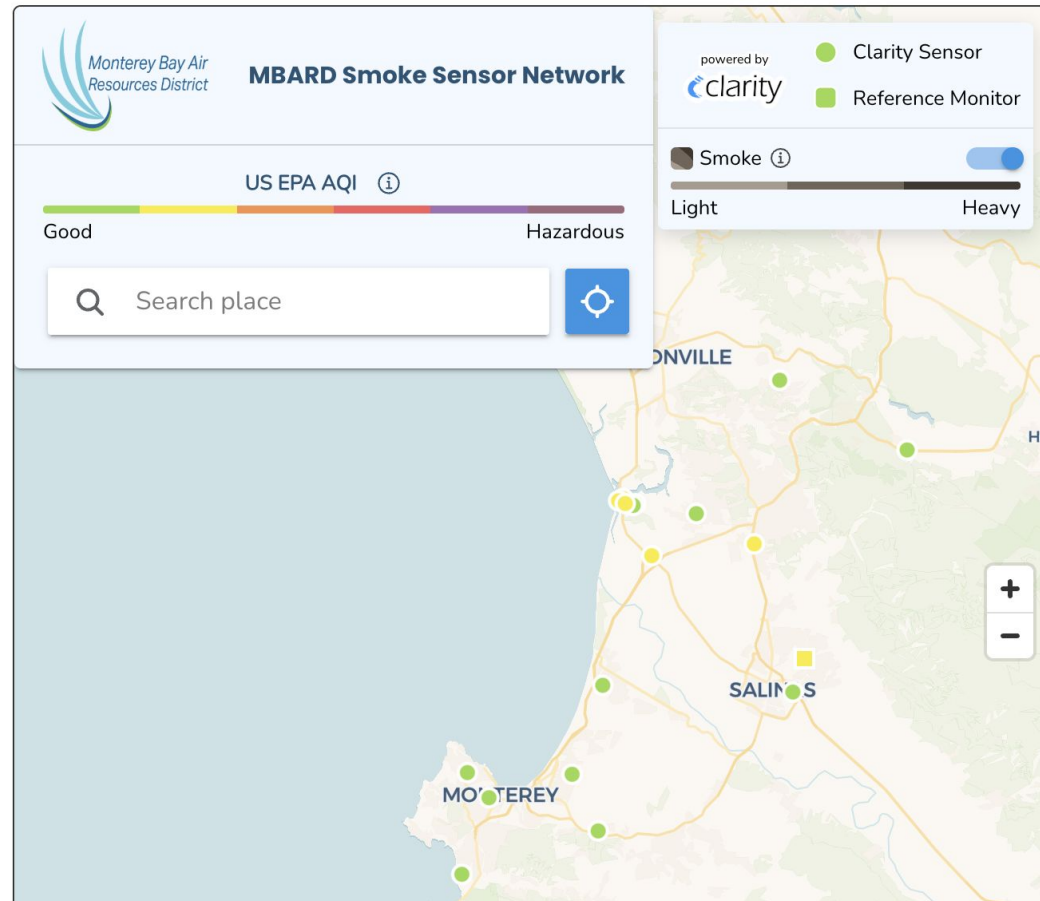
Burn Day Status | Current Air Quality & Forecast

Air Quality and Planning | Permitting | Rules | Grants | Meetings | About Us | I Want To

AIR QUALITY AND
PLANNING

CURRENT AIR QUALITY
& FORECAST

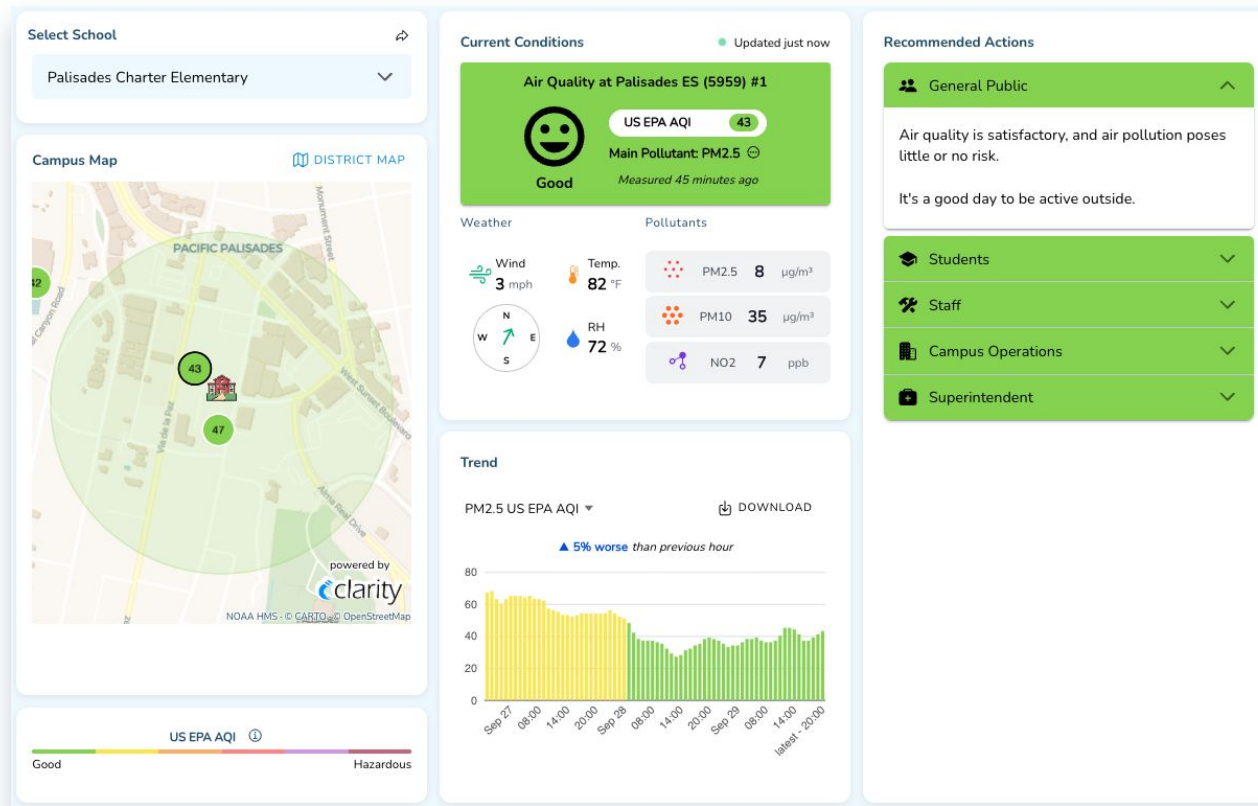
Wildfire Smoke Sensor Network Information and Resources





EXPANDED PUBLIC DATA SHARING

Custom build: the LAUSD school widget



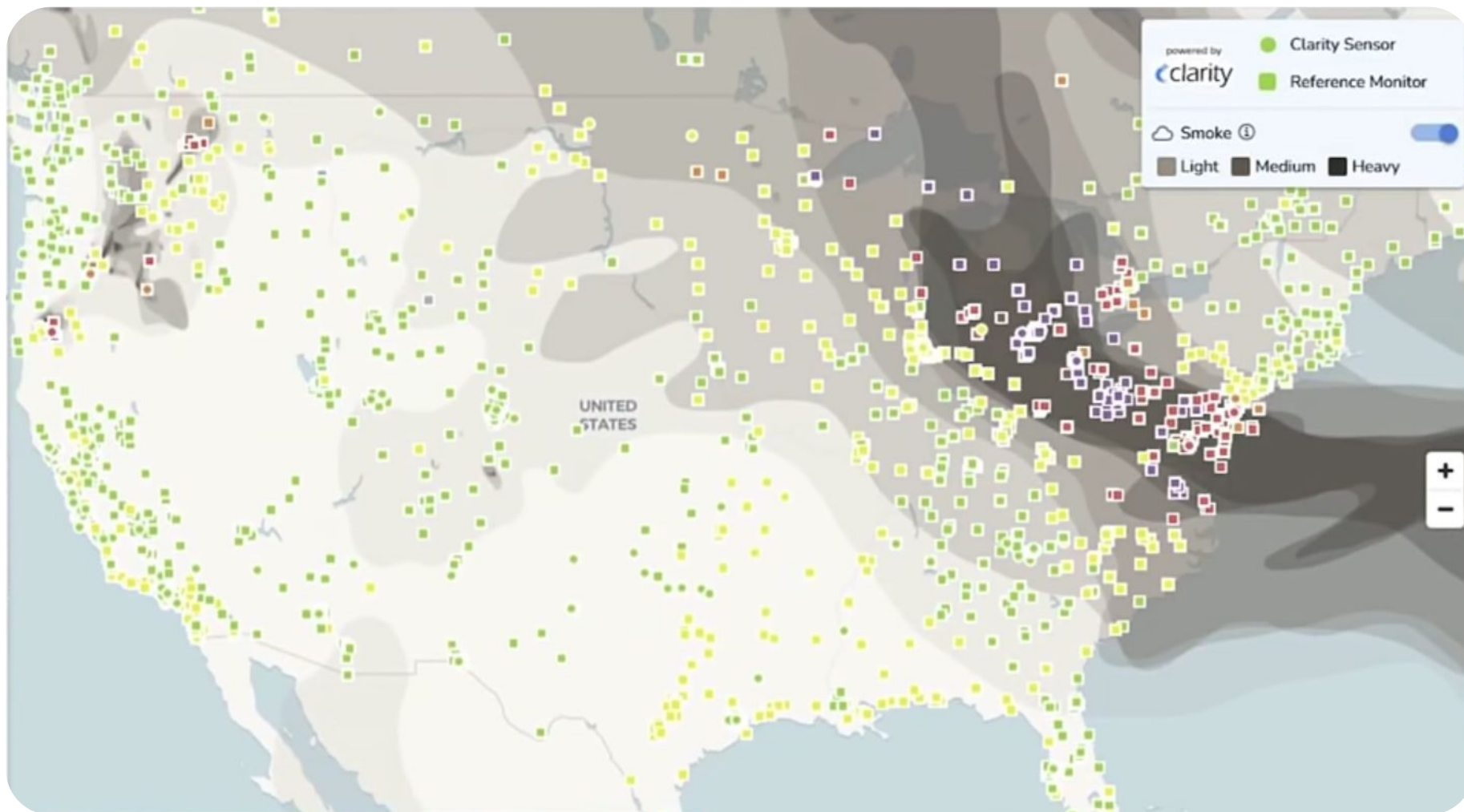
Custom OpenMap Widget Los Angeles Unified School District

- Pick a school and see its current and recent air quality trends
- Displays recommended actions for the general public, students, staff, and campus operations
- Built on the same OpenMap data, styled for the district and its families



EXPANDED PUBLIC DATA SHARING

Add context with wildfire smoke plumes





**Native Direct-to-Cell
Satellite Connectivity
Available for
pilots.**

**Official launch
in early 2027**

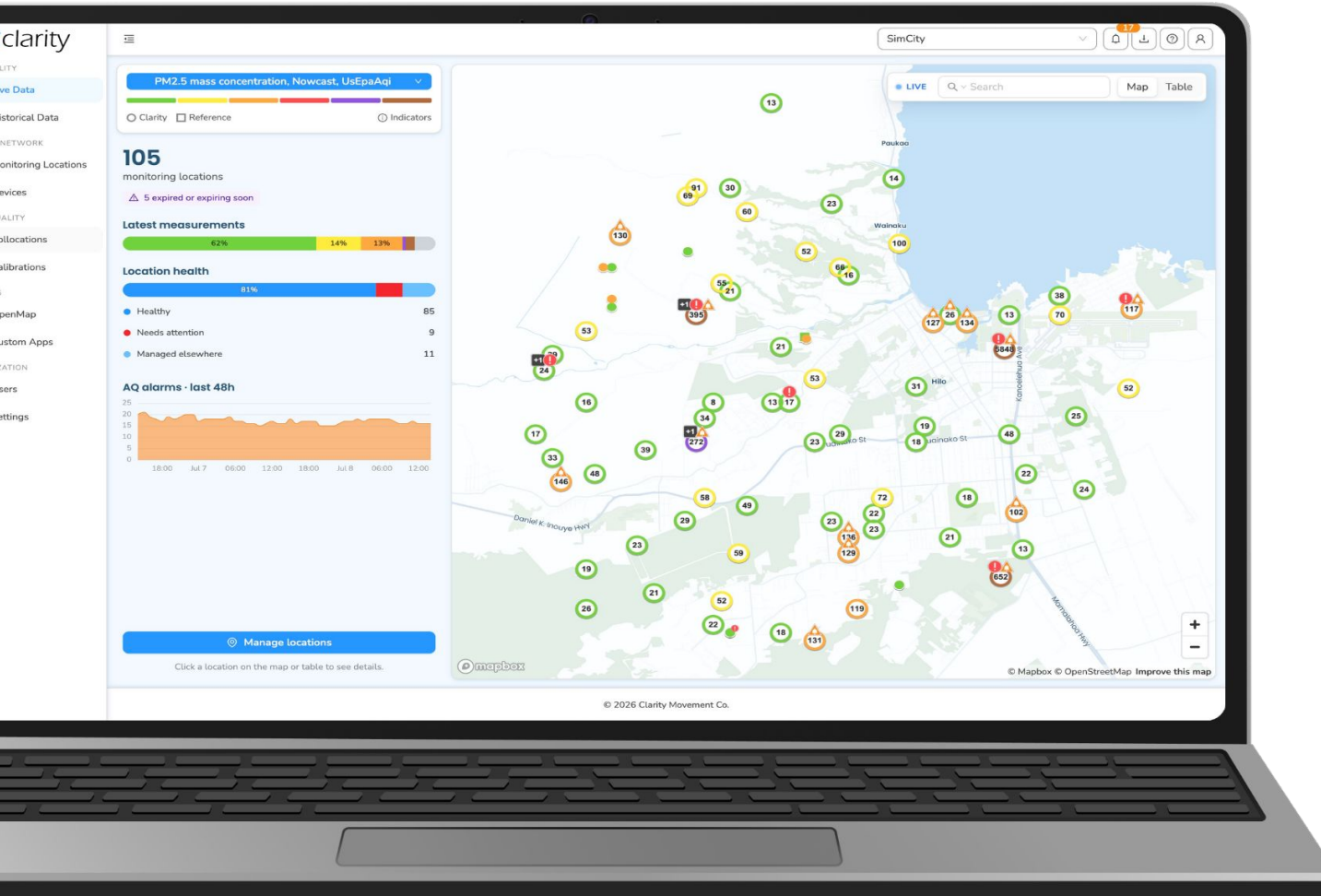


**Multi-Gas elevated
carbon monoxide range**

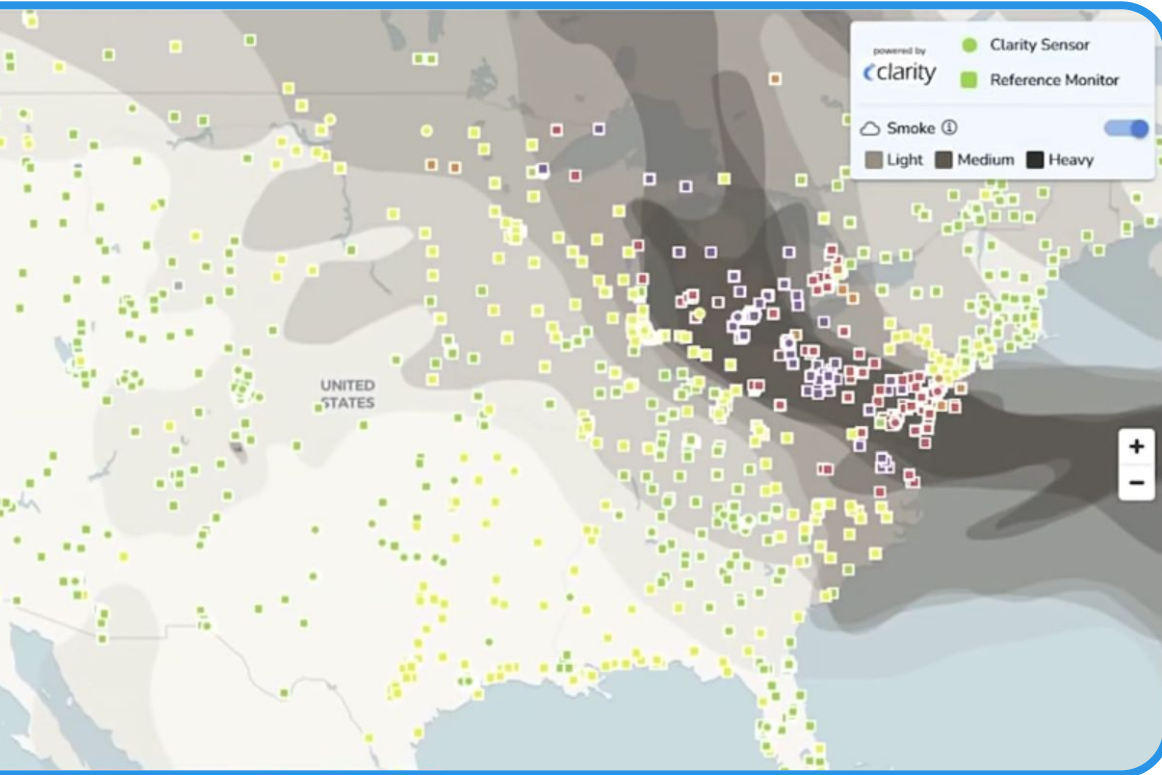
**Available for
pilots!**

Shipping in early 2027

Product Update | Built for fire season



**Revamped
Clarity Dashboard
Live now!**



**OpenMap public
data sharing**

**Included in
Sensing-as-a-Service**

Questions?



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