



Clarity Showcase

November 16th, 2023

www.clarity.io

Welcome!



David Lu
Co-Founder & CEO



Paolo Micalizzi
Co-Founder & CTO



Meiling Gao, PhD
COO

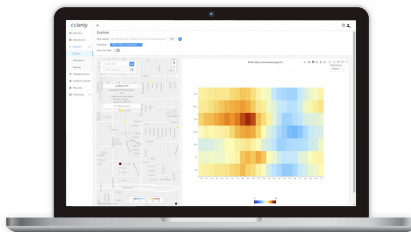
Empowering the world to reduce air pollution

We are on a **mission** to empower the world to **reduce air pollution**





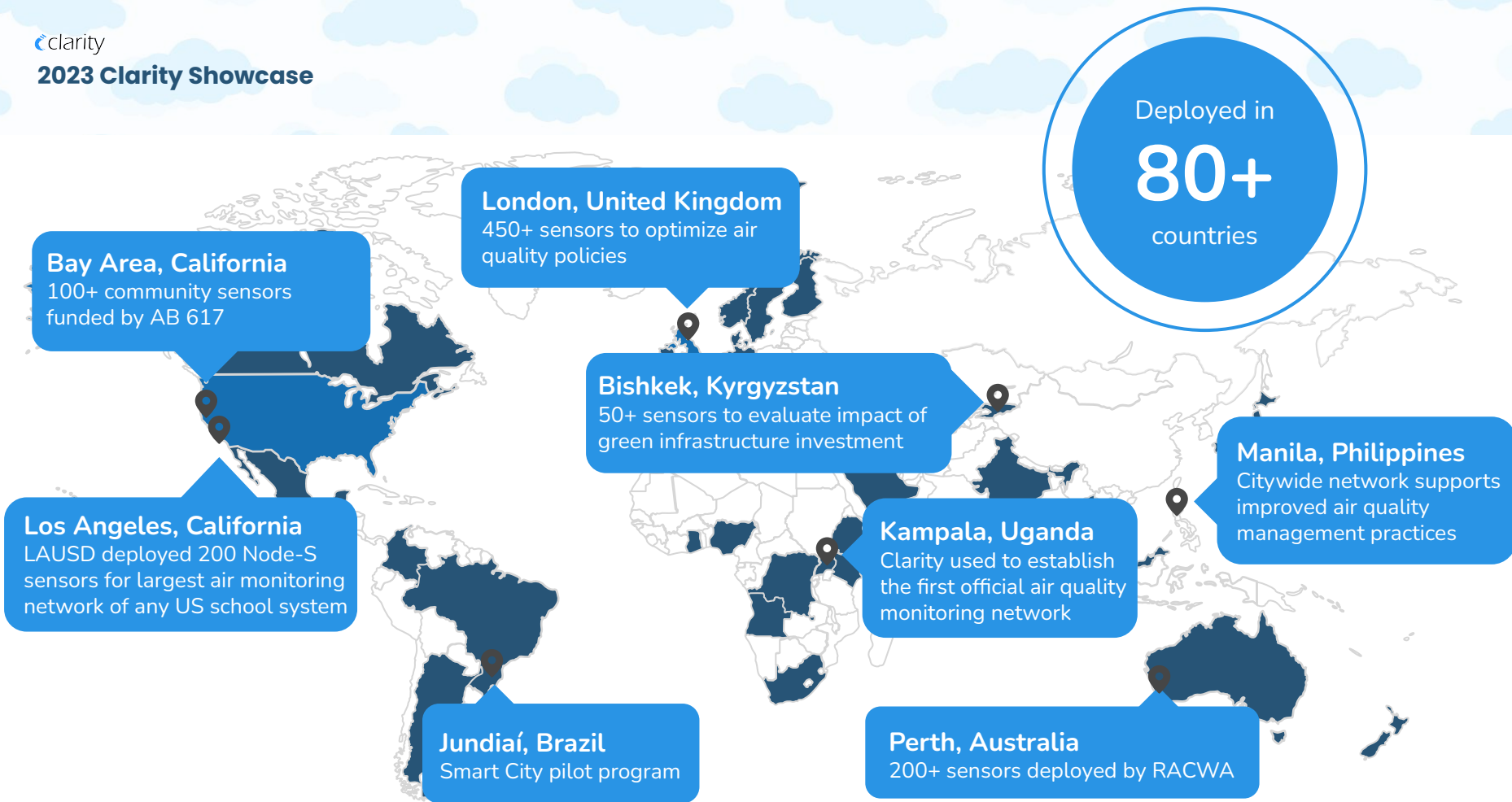
**Node-S devices
and Modules**



**Clarity
Cloud**



**Expert
Support**







Expansion of the **Ultra Low Emission Zone**

Almost 50% reduction in
toxic nitrogen dioxide
pollution in central London

Promotion & enforcement of **anti-idling campaigns** at schools

In Westminster alone,
more than 70,000 idling
drivers have been
reported since 2017

Establishing **wood burning guidelines**

Domestic wood burning
accounted for 25% of
London's PM2.5
emissions in 2020

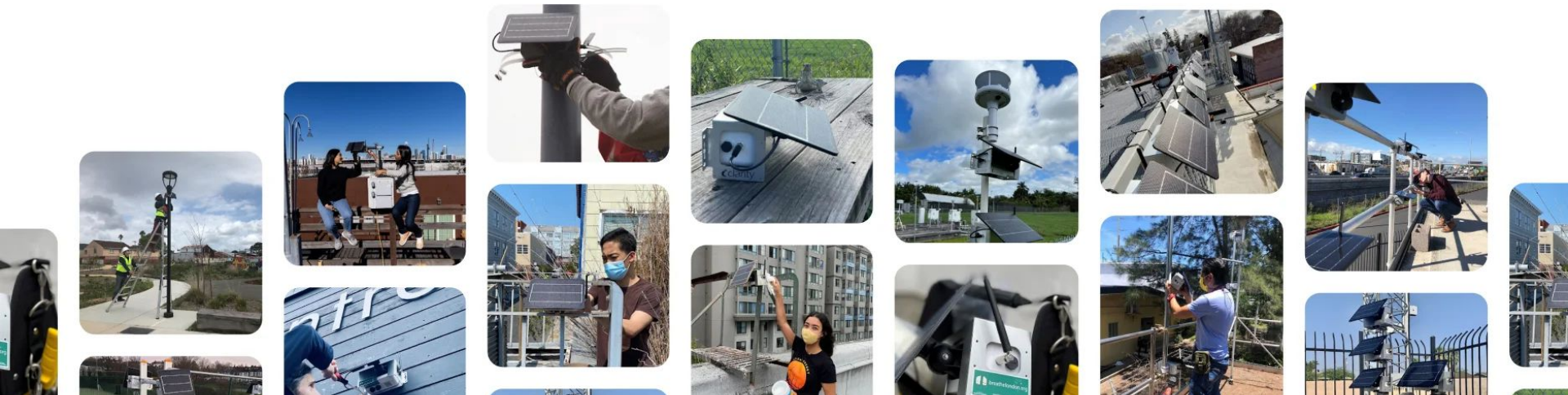
Available now

Download the whitepaper





Empowering the world to reduce air pollution



1

**Answer complex
questions**

2

**Trust
your data**

3

**Accelerate your
impact**

1

**Answer complex
questions**

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Coming 2024

Black Carbon Module





More sites, more answers

- Measures black carbon concentration and source apportionment from biomass, fossil fuel
- 5-wavelength detection: 880 nm, 625 nm, 528 nm, 470 nm, 375 nm
- High detection range: 0 - 1 mg/m³
- High accuracy with DualSpot detection tech
- Low barrier to entry with all-inclusive Sensing-as-a-Service yearly pricing

Deploy anywhere

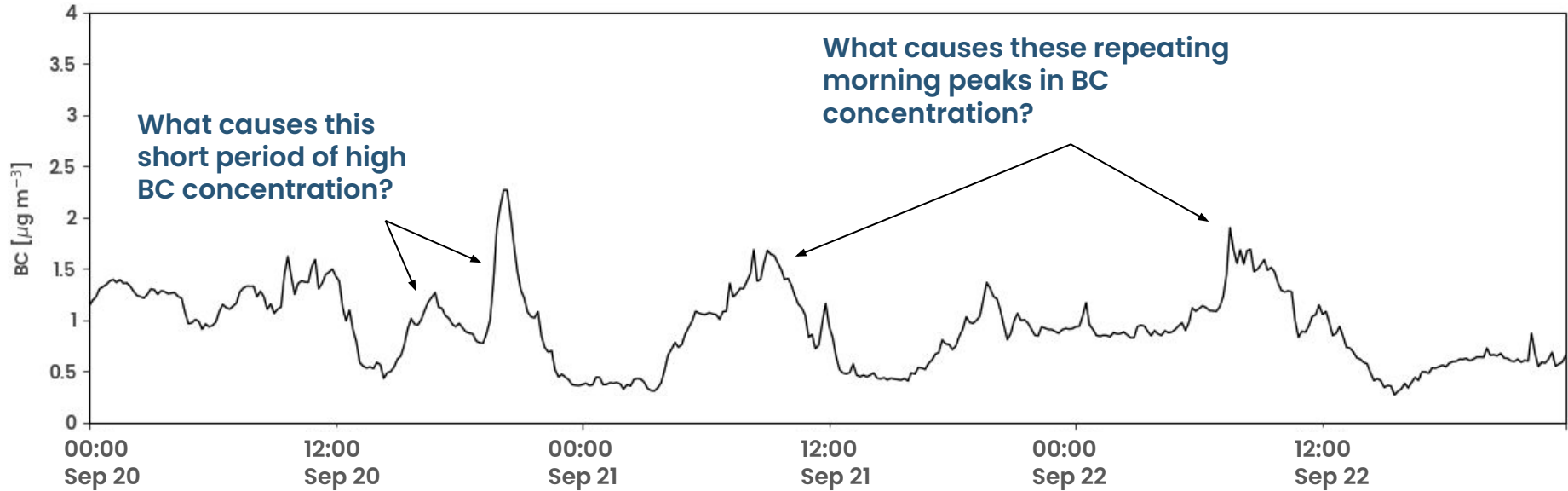
- Field deployment takes few minutes
- Solar operation requires only 40 minutes of direct sunlight per day
- 14-day autonomy without any sunlight
- Integrates seamlessly with the Clarity Cloud through companion Node-S via cellular
- Low maintenance with long filter tape life



Case study

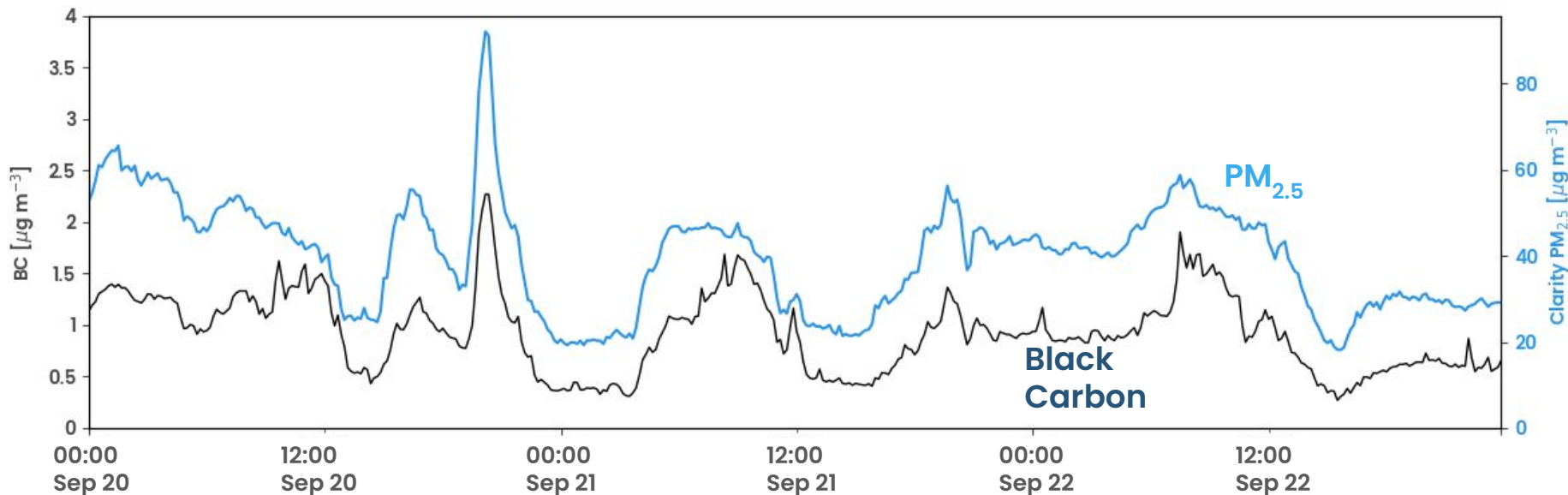
What's driving PM2.5 air pollution in Berkeley, California?

What's driving PM_{2.5} air pollution in Berkeley, California?



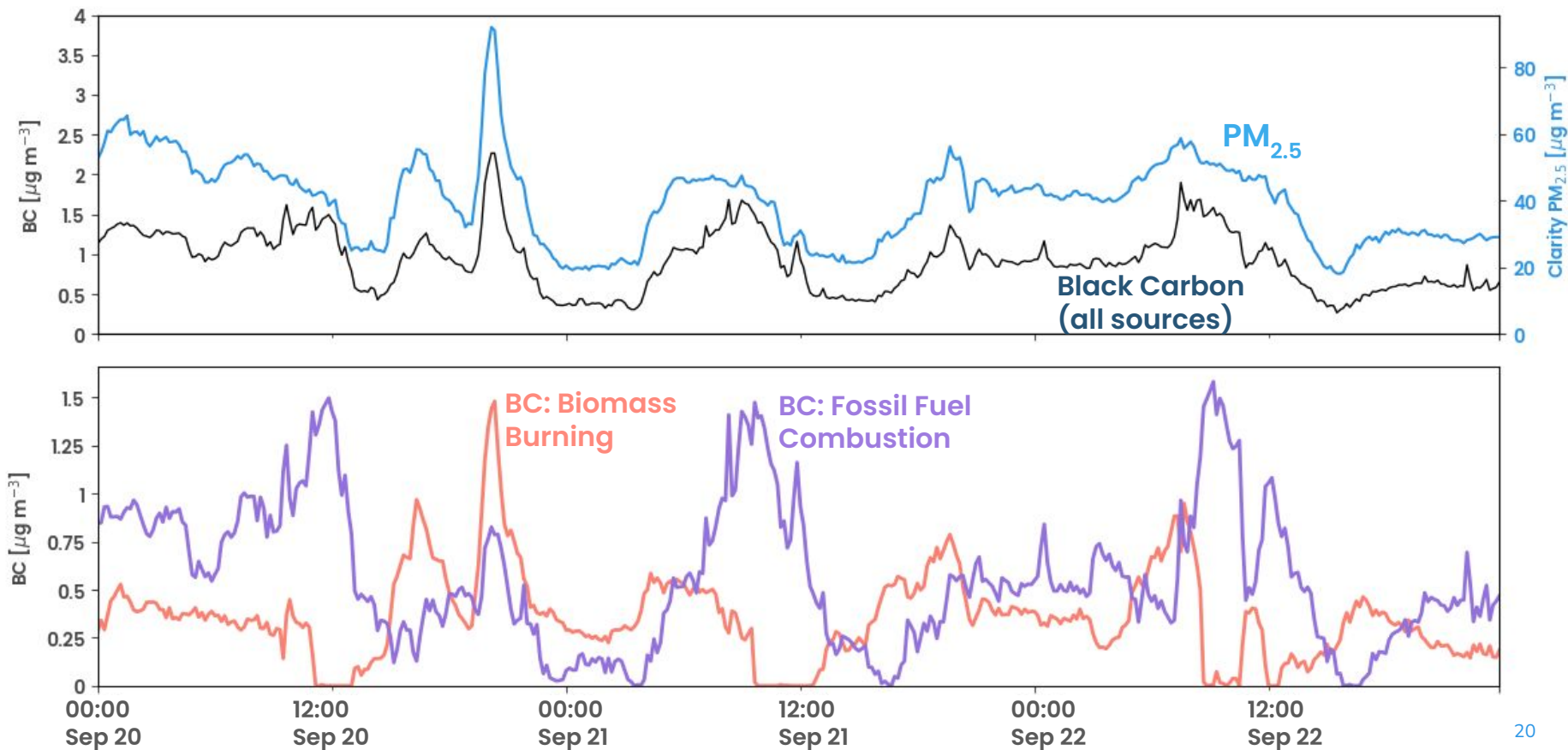
Berkeley experiences several episodes of high black carbon concentrations which could increase the risk of negative health impacts. What sources drive this high variability in BC?

What's driving $PM_{2.5}$ air pollution in Berkeley, California?

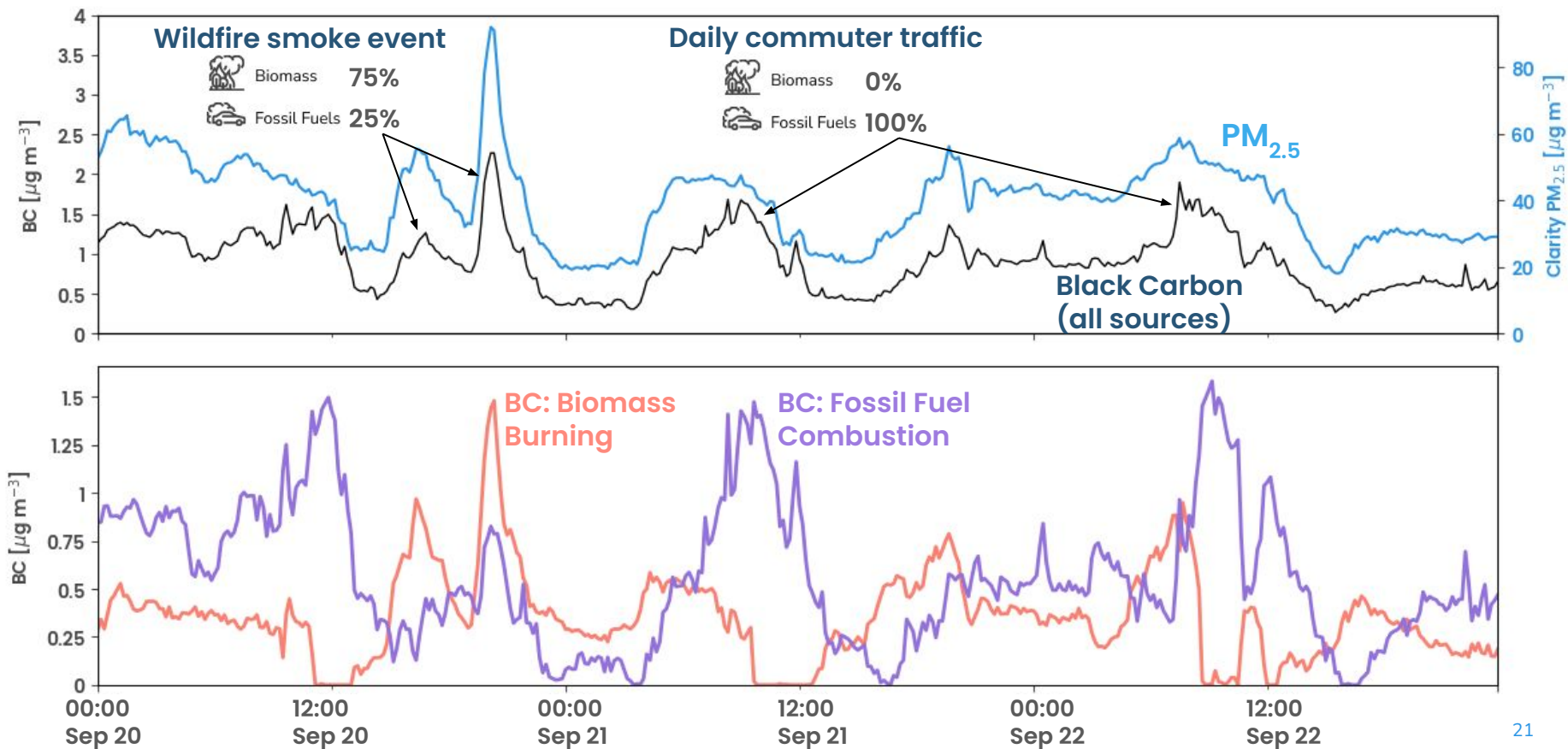


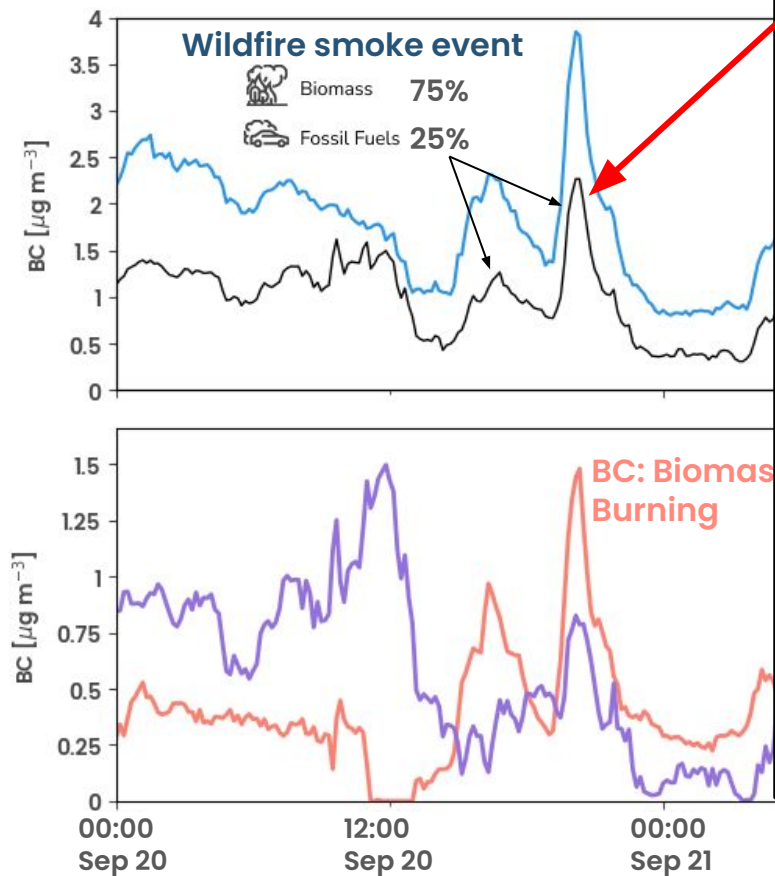
$PM_{2.5}$ and BC are strongly correlated ($R^2 = 0.8$), suggesting that combustion emissions played a major role in air quality in Berkeley over these several days.

What's driving PM_{2.5} air pollution in Berkeley, California?



We can further separate the combustion sources





The New York Times

Unhealthy Air Lingers in Bay Area After Wildfires

Smoke from northwestern California and southwestern Oregon has blown over from the Bay Area. Some relief is expected on Friday.

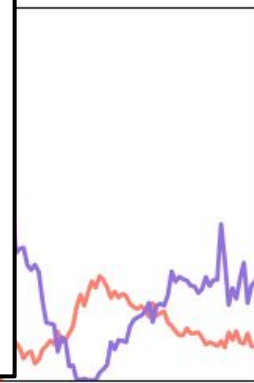
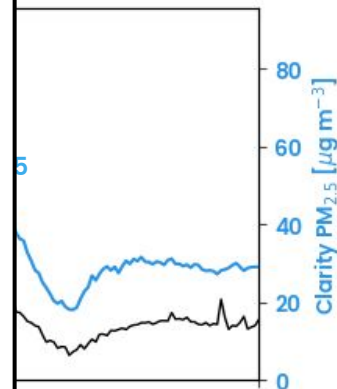
Share full article

A satellite image of Northern California and Southern Oregon on Wednesday morning. Smoke from wildfires has negatively affected air quality in parts of both states. NOAA

By **Rebecca Carballo**
Published Sept. 20, 2023 Updated Sept. 21, 2023

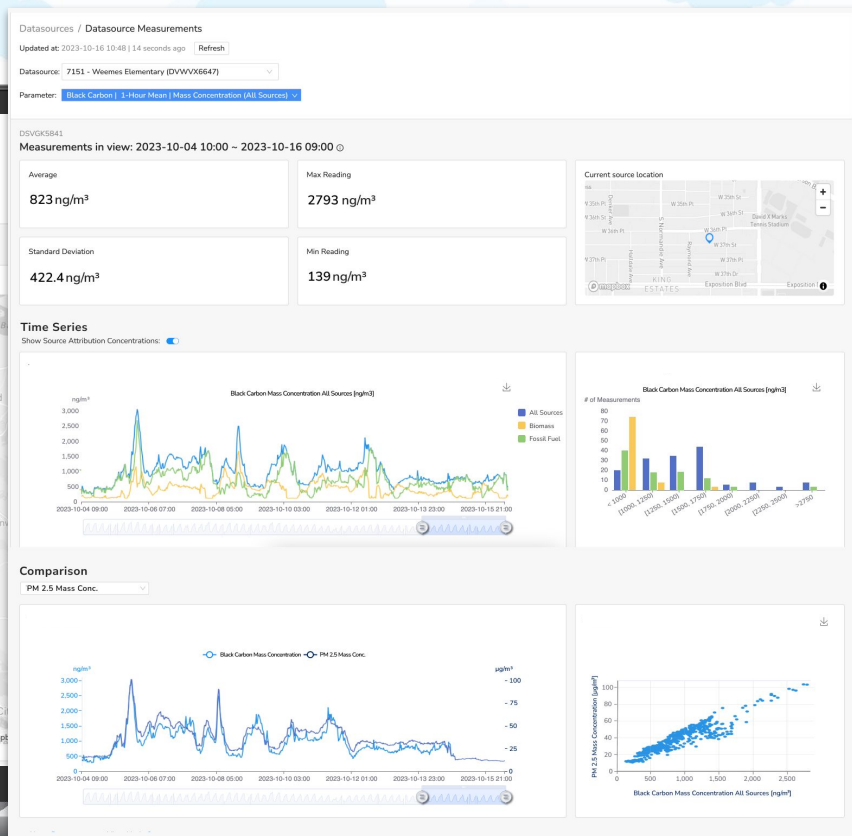
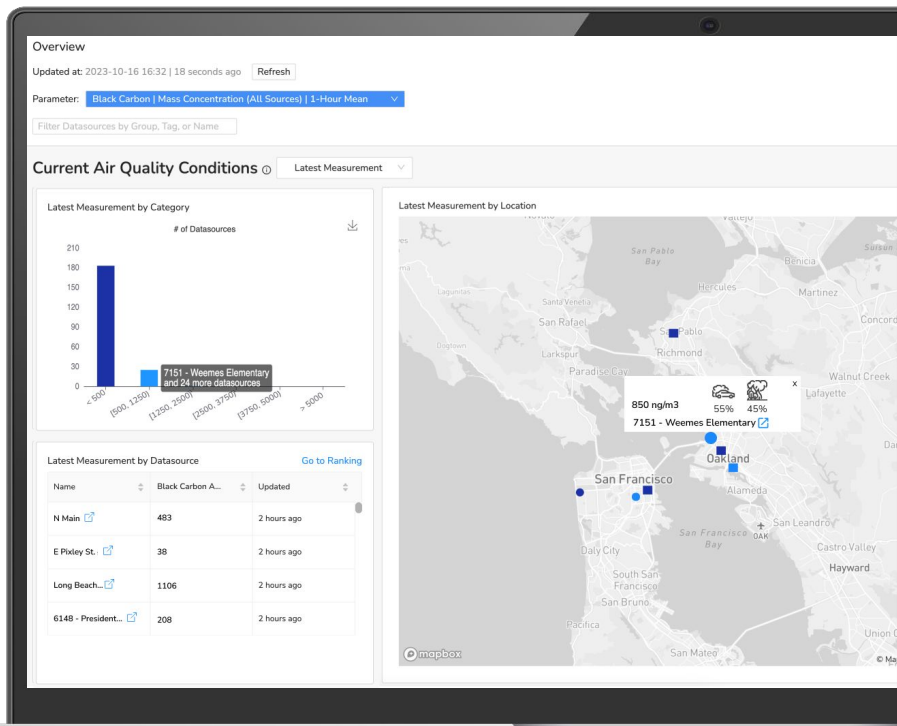
12:00 Sep 21 00:00 Sep 22 12:00 Sep 22

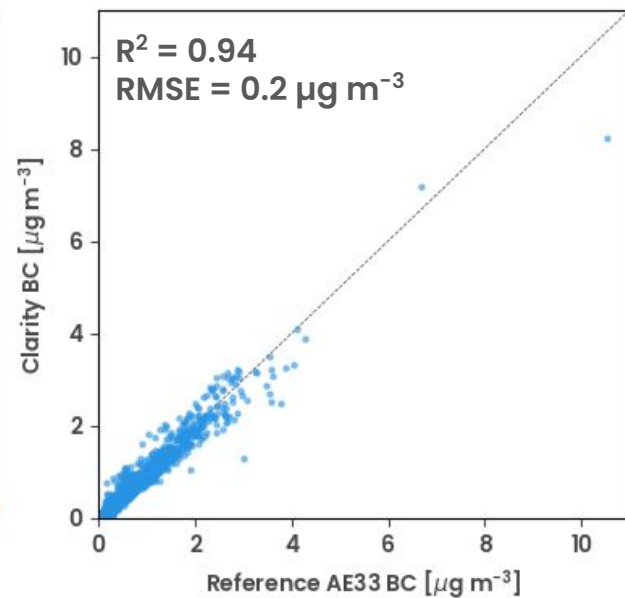
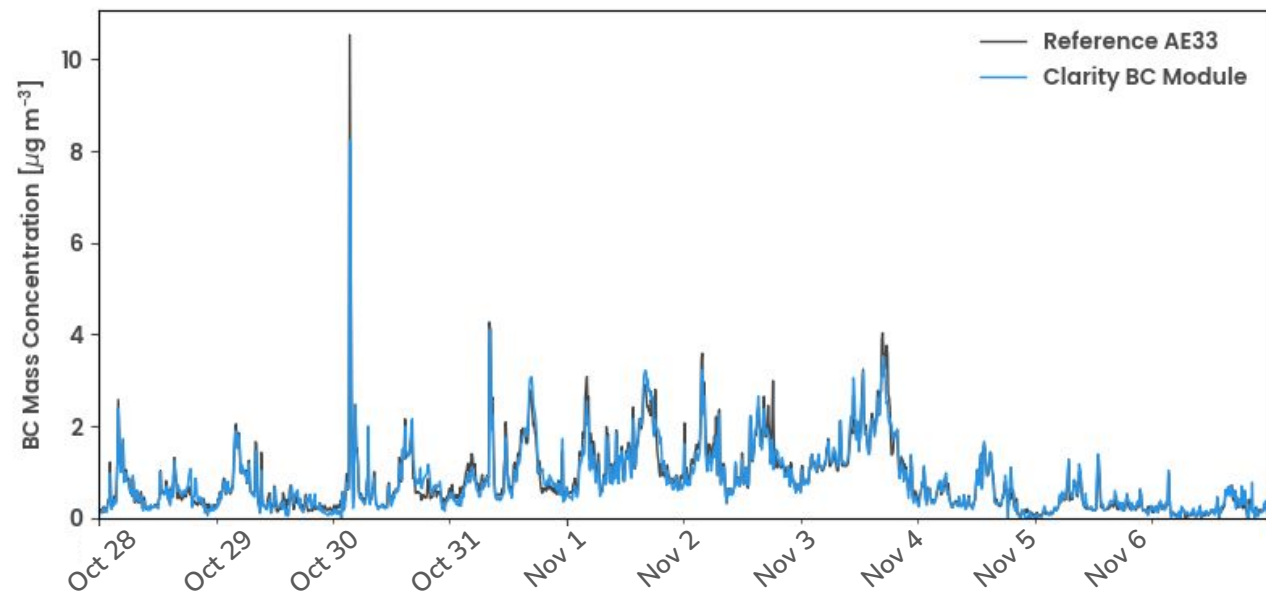
Combustion sources



clarity

2023 Clarity Showcase



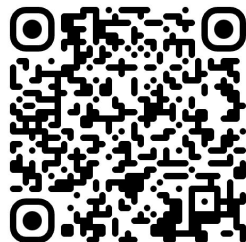






Shipping Early 2024

Preorders are now live



1

Answer complex
questions

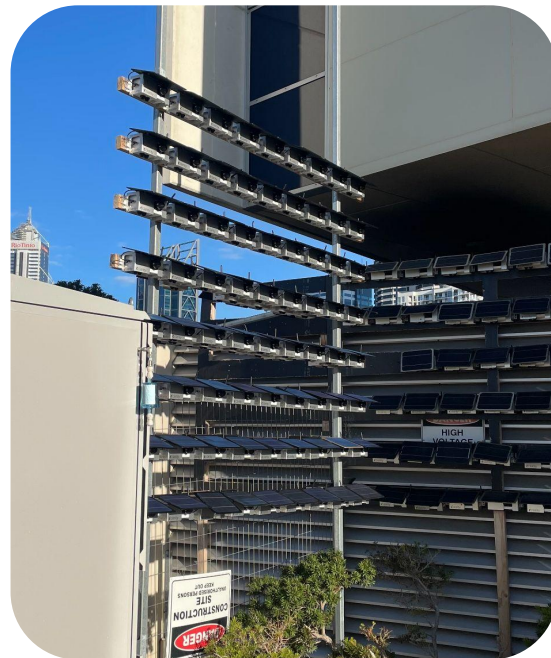
2

Trust
your data

3

Accelerate your
impact

Collocation-based calibration

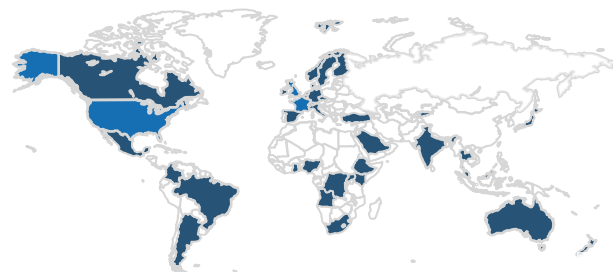


Collocated Node-S Devices

Collocation Months

Collocation Cities

Collocated Measurements



Available now

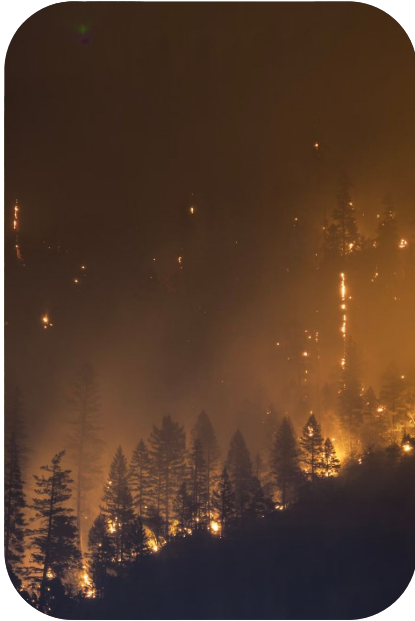
Pre-calibrated Node-S devices

- Clarity Node-S devices now come pre-calibrated with validated PM_{2.5} and NO₂ accuracy out of the box
- Custom on-site collocation still available for additional refinement if desired

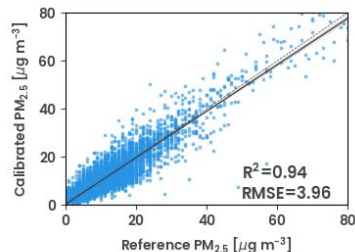
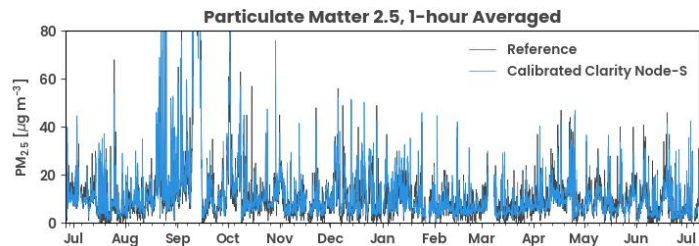




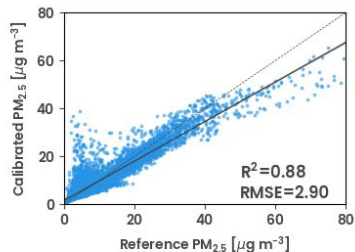
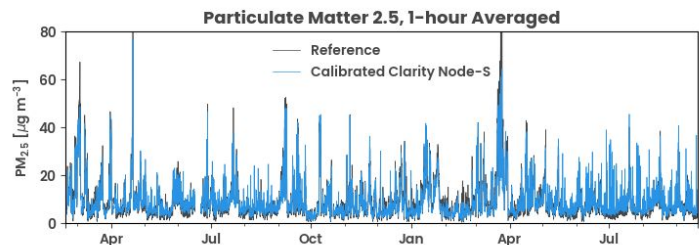




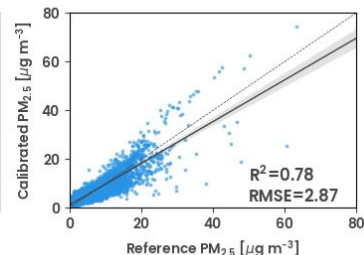
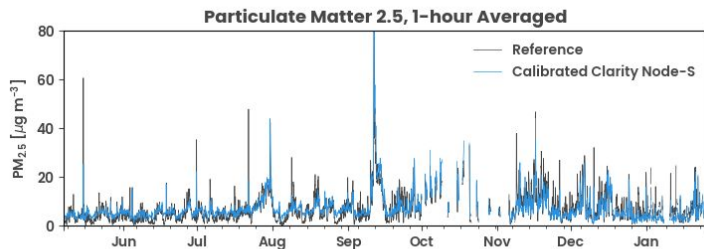
Global Calibration: PM_{2.5} Performance



US West Coast

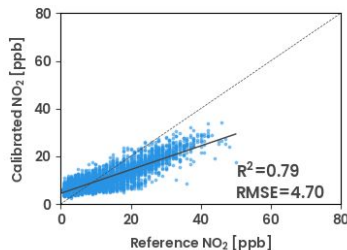
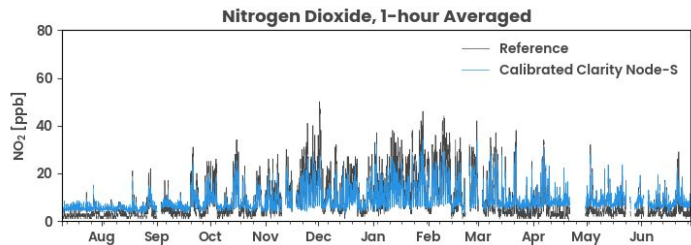


United Kingdom

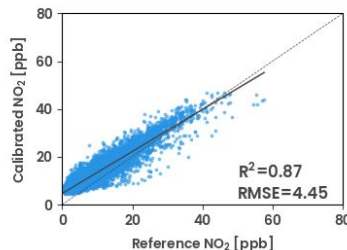
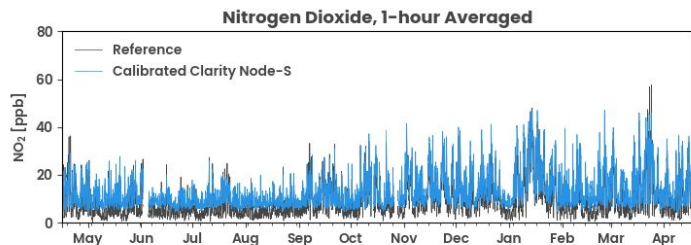


Canada

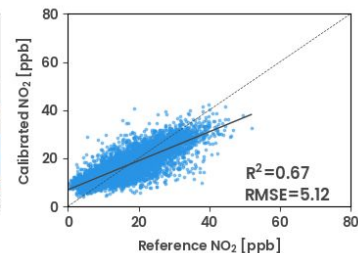
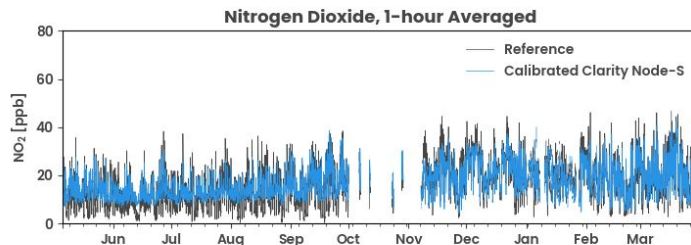
Global Calibration: NO₂ Performance



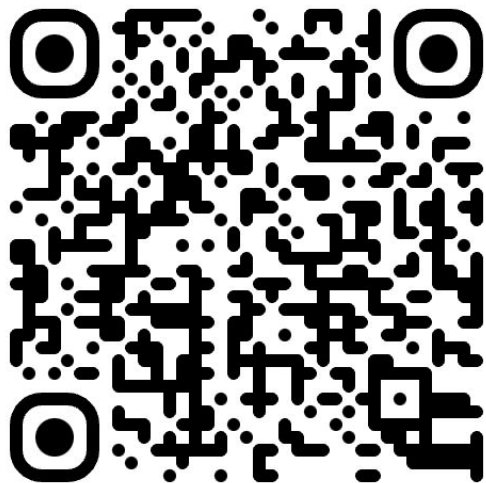
US West Coast



United Kingdom



Canada



**Explore our
collocation
library**

1

Answer complex
questions

2

Trust
your data

3

**Accelerate your
impact**

Now offering additional optional services



Data
Analysis



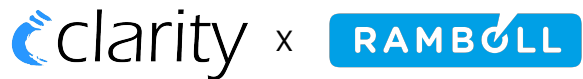
Network Design
Workshops



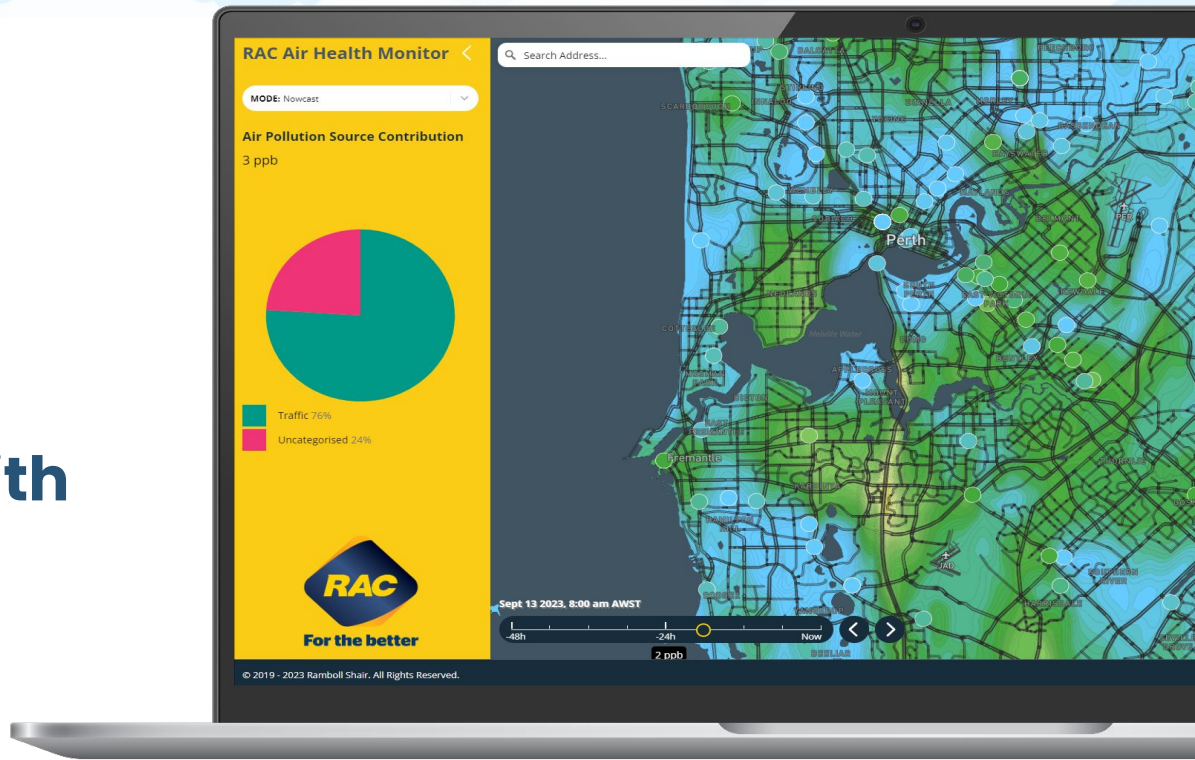
Deployment
Support

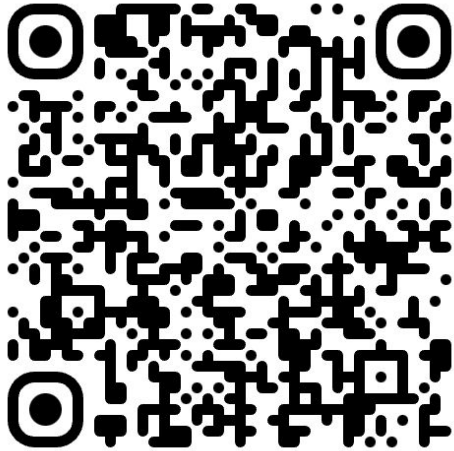


Air Quality
trainings



High-resolution air quality modeling with Ramboll Shair™





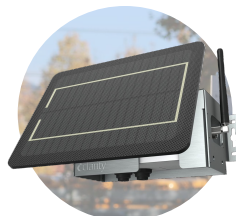
**Speak to our
team to
learn more**



**Clarity's
vision**



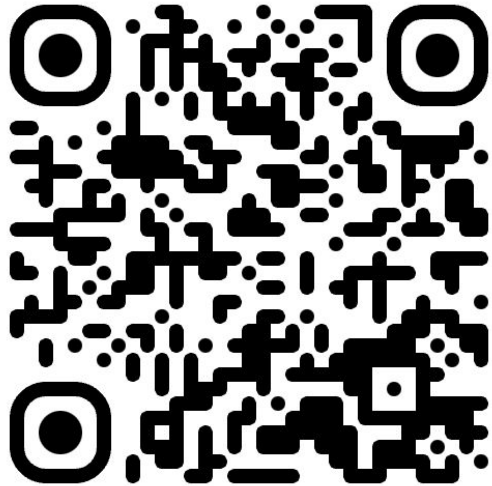
**Black Carbon
Module**



**Pre-calibrated
Node-S devices**



**New
services**



Are you a Clarity customer?

Refer someone to Clarity, and they'll receive 50% off their first year of Sensing-as-a-Service for two sites.

Any questions?



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COO



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