



# Case Study

## Real-Time Environmental Compliance for SERS



### ABOUT US

BlueArc Technologies is a leading provider of AI-driven business process automation, empowering organizations worldwide to achieve operational excellence.

We help businesses turn inefficiencies into growth opportunities, driving innovation through tailored, transparent automation solutions that deliver measurable results and sustainable impact.

### CHALLENGE

SERS supported 200+ clients operating across diverse construction sites. Ensuring compliance required real-time, correlated monitoring of particulate matter (PM10/PM2.5), weather, vibration, and noise. However, SERS's estate comprised high-end sensors that did not expose APIs, had no vendor documentation, and each reported to isolated platforms, making live alerting, cross-sensor correlation, and reporting cumbersome. Building an in-country R&D lab to decode proprietary firmware and unify devices would have cost well over USD \$500,000 and taken months to establish

### COST OF NOT CHANGING

- High risk of stop-work orders and compliance violations
- Disconnected systems causing blind spots and false alarms
- Manual reporting under tight deadlines
- Costly delays and >\$500K local R&D setup

### SOLUTIONS

We reverse-engineered proprietary sensor protocols to gain full operational control, developed a Python-based edge application on Raspberry Pi with 4G connectivity and solar power for continuous data streaming, and integrated all inputs into a unified cloud dashboard that delivers instant alerts in under two seconds along with automated compliance reports.

### OUTCOME

A unified platform spanning over 200 sites enabled real-time compliance and faster decision-making, helping avoid more than \$500K in costs while accelerating time-to-value.



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