

Data-analytics driven supervision of the cooling & ventilation systems in public transportation stations

AFRY extends its tunnel ventilation services to the digital control and predictive maintenance of HVAC & TVS systems in train & metro stations

INDUSTRIAL DATA ANALYTICS

Industrial data analytics is the process of collecting, analyzing, and using plant data to harness the hidden value. Tools like e-DAP, are capable of building a model of a physical phenomenon on the basis of plant data collected over time. The insight gained is used to improve plant efficiency, control production, raise product quality, and plan maintenance ahead of time.

SITUATION & CHALLENGE

- Live monitoring of the climatic data in public transportation stations during operations
- Live supervision of the operations of the HVAC and tunnel ventilation systems (TVS)
- Take measures ahead of time in case of technical incidents (predictive maintenance)

SERVICE & APPROACH

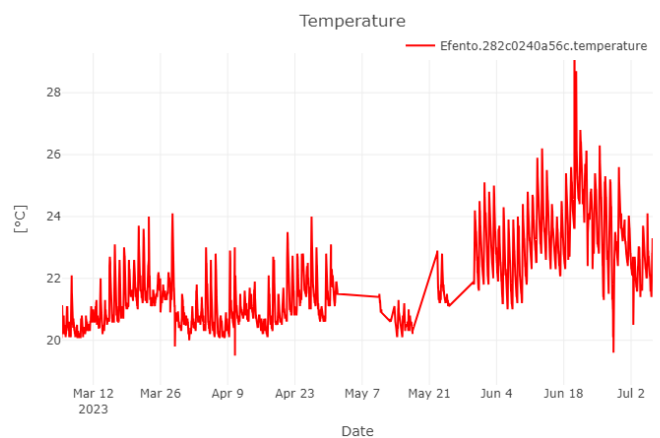
- Our IoT system is connected to the client's data repository system via an appropriate protocol
- The systems collects and ingests live data in the platform at a modifiable frequency (temperature, pressure, humidity, energy)
- Once sufficient data is collected, appropriate ML/AI algorithms are used for prediction
- The resulting model is used as the engine of the 'Station Digital Twin'. Forecasting VAC & TVS daily operations is the made on a click

E-DAP: the *end-to-end* data platform

A cloud-hosted infrastructure for the treatment of plant data: from IoT sensing, through engineering, dashboarding, ML/AI, digital twinning, to insight

IMPACT & ADDED VALUE

- Access to an on-line cloud-hosted tool for predicting and monitoring the asset's operation and health, and take action based on real-time information and logic
- Clients can interrogate the 'Station Digital Twin', or create their own ML model
- The platform can be used as an asset management tool for various stations and tunnels along several lines at the same time



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