

The weather station that never sleeps

How the World Trade Center tapped world-class Vaisala technology to create its own weather center



The client:

World Trade Center
Department of the Port
Authority of New York
and New Jersey

Vaisala provided:

Automatic Weather
Station AWS310

Air Quality
Transmitter AQT420

Goal: Gain local weather data for Lower Manhattan.

The World Trade Center is one of the most recognizable locations in the world, and one of the busiest transportation hubs in New York City.

The World Trade Center, and Lower Manhattan, experience weather conditions that can vary relative to the rest of New York City. The area can see blustery weather and other weather conditions that can fluctuate locally. The World Trade Center Department Operations Division monitors weather data through national channels, and had a vision to augment this data through local weather data collection at the World Trade Center. Customers and other stakeholders would

benefit from the information to understand local conditions and prepare for any changes.

Solution: Complete, hyperlocal weather insights

The World Trade Center Department team worked with Vaisala to create a state-of-the-art weather station to gather and disseminate a wide range of weather data regarding the Lower Manhattan area. Located at Liberty Park behind the America's Response Monument, the solution includes professional-grade sensors and technology for accurate, reliable weather data.

Combined with the Vaisala Air Quality Transmitter AQT420, the Vaisala Automatic Weather

Station AWS310 bundles together all the essential weather and air quality observations, creates meteorological calculations and reports, displays real-time data, and saves history files for operational review.

The automated Vaisala Ceilometer CL51 BL measures the atmospheric mixing layer and cloud height, which the Center uses to understand and build precision simulations of existing conditions. Accurate wind speed and direction are provided by the Vaisala WINDCAP® Ultrasonic Wind Sensor WMT700.

The Vaisala FD71P Present Weather Sensor measures visibility, present weather and precipitation.

Rounding out the solution is the Vaisala HUMICAP Humidity and Temperature Probe HMP155 which measures air temperature, dew point and relative humidity. Equipment is hardwired and the data is securely hosted through Vaisala's cloud solution services.

Results: Dependable data for greater resiliency

With its own unique weather center, the World Trade Center now has a wide range of weather

data that can serve as a valuable resource for the community, researchers and weather-dependent operations such as local aviation.

In addition to helping the larger community, the data will help the World Trade Center to be even more resilient. For example, the Operations team actively monitors local wind conditions to help determine whether to secure exterior doors on campus;

they also watch for local snow precipitation to prepare and mobilize for snow removal.

The team also tracks emergent weather conditions that may cause leaks or flooding. If heavy rain is expected in the area, they can prepare for potential leaks and may deploy flood protection systems around the campus.



This first weather center built specifically for the World Trade Center provides valuable local weather data and insights to support world-class facility operations and customer experience.

VAISALA

vaisala.com



Scan the code for more information

Ref. B212525EN-A ©Vaisala 2022

This material is subject to copyright protection, with all copyrights retained by Vaisala and its individual partners. All rights reserved. Any logos and/or product names are trademarks of Vaisala or its individual partners. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of Vaisala is strictly prohibited. All specifications – technical included – are subject to change without notice.