Kenya Meteorological Department Chooses Vaisala Weather Monitoring Solutions for Three Airports

Weather affects the efficiency and safety of almost every operation at an airport, regardless of its size or location. But with the right technology and expertise in place, an airport can continue to operate whatever the weather. The Kenya Meteorological Department relies on Vaisala weather-monitoring technologies, including the Vaisala AviMet® Automated Weather Observing System (AWOS), to ensure safe and efficient operations at three of the country’s airports.

Through competitive tendering process, Kenya Meteorological Department (KMD) acquired the Vaisala AviMet® system for three of its airports, including the country’s main international gateway, Jomo Kenyatta International Airport in Nairobi, which was already operating an older Vaisala AWOS system together with Moi International Airport in Mombasa. The other two airports included in the project scope were Eldoret International Airport and Kisumu International Airport in western Kenya, the country’s third busiest airport.

Everything on track from day one

At the start of the project Vaisala experts visited all three sites during the summer of 2016 to agree on the optimal way to move forward and build relationships with key personnel. This ensured that the

Challenge

- The Kenya Meteorological Services (KMS) offices at various airports across the country needed to provide information required for aviation operational planning and flight operations to ensure the safety of landings and takeoffs.
- Some airports were relying on limited weather data gathered using simple automatic weather-monitoring systems, while others were lacking any kind of system.

Solution

- Vaisala AviMet® AWOS provides air traffic controllers, pilots, and other airport users with aviation meteorological data. The accurate and reliable weather observations provided by the system conform to ICAO and WMO requirements and ensure operational safety at all three airports regardless of weather conditions.
- Vaisala Observation Network Manager NM10 allows the weather across three airports to be monitored from a single location and enables remote fault diagnosis and maintenance, saving costs and time.
- Potentially hazardous thunderstorm activity can be identified and tracked in real time with Vaisala Thunderstorm Manager, improving situational awareness and increasing the safety of airport operations.
systems precisely matched the customer’s needs. Key personnel from KMD also visited Vaisala’s facility in Finland during December 2016 to participate in factory acceptance testing and take part in dedicated training sessions organized by Vaisala.

“Everything was carried out professionally and according to schedule by Vaisala’s skilled product and project engineers, and their work matched the project plan and project specifications exactly.”

Peter Ambenje
Director
Kenya Meteorological Services

Once the systems had been delivered to the sites in early 2017, a Vaisala field service engineer worked closely with the local partner to perform installation and on-site testing. This ensured that everything was up and running on schedule in the spring of 2017.

At all the three airports, the field sensor data is transmitted by UHF radio modems to the AviMet® central data units, which collect, process, monitor, distribute, and archive the data.

Saving time and increasing safety with remote monitoring and thunderstorm detection

In addition to the Vaisala AviMet® AWOS, KMD also acquired the Vaisala Observation Network Manager NM10 to connect the systems together and enable remote fault diagnosis and maintenance for all three airports. In many cases this eliminates the need for KMD personnel to travel to the site to resolve potential faults. Different users can also view aviation weather information from all three airports in real time via a customizable browser-based view.

Furthermore, the project scope also included Vaisala Thunderstorm Manager, a web-based lightning display and alarm system for alerting users of approaching thunderstorms. The system helps to ensure the safety of local ground and maintenance crews while minimizing operational downtime at the airports.

Vaisala has been delivering weather observation systems to aviation authorities and meteorological offices in Africa since 1980. In September 2017 the company opened a permanent office in Nairobi to support its customers in Eastern and Southern Africa.

“Vaisala’s deep knowledge of meteorological measurements and field practices makes them an outstanding provider of meteorological systems for airports. We are extremely pleased with the performance of the systems and our continued collaboration with Vaisala.”

Peter Ambenje
Director
Kenya Meteorological Services