Navigating weather & visibility with precision at Keflavik Airport

VAISALA

Case Study

The client:

Isavia ohf.

Vaisala solution:

Vaisala Runway Visual Range System

Vaisala Transmissometer LT31

Vaisala Forward Scatter Sensor FD70

Isavia is a state-owned airport operator in Iceland, responsible for the management and operation of Keflavik International Airport and several other airports across the country. Known for its commitment to safety, reliability, and customer satisfaction, Isavia plays a crucial role in facilitating air travel and supporting the Icelandic economy.

THE CHALLENGE:

Addressing weather-related visibility issues

Iceland's Keflavik Airport faces significant weather challenges, including mountains with low-lying fog, rapid weather changes, and heavy snow.

These conditions often lead to reduced visibility, posing risks to flight operations and safety. Frequent and rapid weather changes make real-time weather data crucial, and the airport needed a reliable and accurate Runway Visual Range (RVR) system to ensure continuous and safe operations.

THE APPROACH:

Implementing advanced RVR sensors

Isavia implemented advanced Vaisala Runway Visual Range Sensors, which have been in operation since 2015.

These integrated sensors are designed to provide real-time, accurate visibility readings, even in extreme weather conditions. Not only does it consistently deliver reliable and accurate weather and visibility measurements, but the solution also features a robust design that protects the sensors from extreme weather conditions. The backup battery, sophisticated self-diagnostics, and continuous operation ensure 24/7 monitoring and data availability for top performance.

The system includes Vaisala Transmissometers LT31 at the runway ends and Vaisala Forward Scatter Sensors FD70 at the midpoint, providing redundancy and more consistent readings.

THE RESULTS:

Improved safety and operational efficiency

The implementation of AviMet RVR has significantly improved visibility readings and enhanced the safety and efficiency of flight operations at Keflavik Airport.

Here are the most significant improvements:

- Reduced technical support needs: High reliability has minimized the need for technical support, reducing maintenance costs and downtime.
- Enhanced safety: Accurate RVR measurements have improved decision-making during critical weather conditions, ensuring safer takeoffs and landings.
- High satisfaction: Isavia is highly satisfied with the sensors' performance. The airport is open to future enhancements to further improve its capabilities.

Spare parts have been replaced over the years, but the main RVR solution has remained in place for a decade — a strong testament to its durability. It has proven to be a valuable asset for Keflavik Airport, addressing the unique weather challenges and ensuring the highest standards of safety and operational efficiency.

"Thanks to the AviMet RVR system, we can now provide real-time, accurate visibility data, enhancing our ability to manage flights safely and efficiently, even in Iceland's unpredictable weather."

Brenton Birmingham,
Shift supervisor – Air Traffic Controller Tower Control Keflavik, Isavia

Why Vaisala?

For 50 years, Vaisala has been a pioneer in aviation weather technology, ensuring that every measure is taken for unparalleled safety, efficiency, and sustainability.

Our gold standard suite of solutions is trusted in more than 170 countries and over 2000 airports globally. In fact, every commercial flight around the world will use weather observations produced by Vaisala equipment or forecasts driven by our sensor measurements at some point in their journey.

With a commitment to constantly evolving our portfolio, Vaisala remains at the forefront of the industry, continuously exploring new horizons.

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