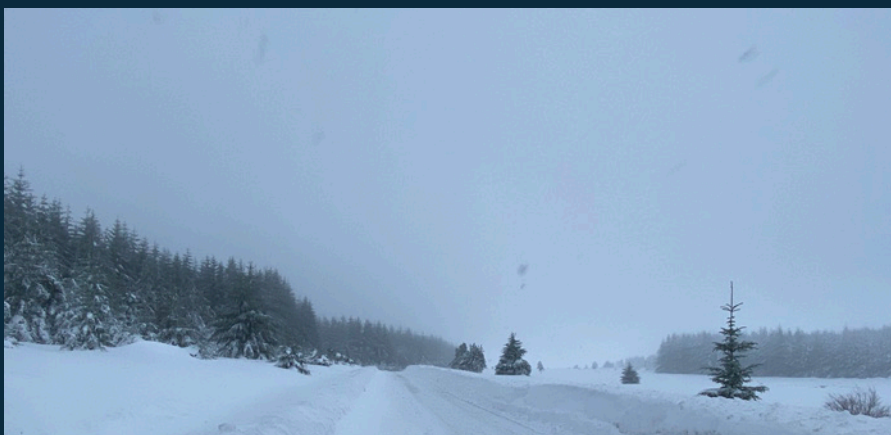


Everyday resilience on the roads

VAISALA

Case Study



The client:

Aberdeenshire Council

Vaisala solution:

GroundCast

Wx Horizon

RWS200

THE CHALLENGE:

Data gaps across the network

The Roads and Infrastructure Services department is responsible for managing every facet of the road network, including winter road maintenance. From one end of Aberdeenshire to the other, road conditions vary drastically with the changing seasons – the coasts can get bitter cold and freezing temperatures while the hills and mountains get snow in winter.

The department had Vaisala weather stations located in a few areas of the network to help them track conditions and maintain safe roads. Yet, remote locations and varied topography left some data gaps which led to inefficiencies maintaining long stretches of road.

Since the department sees an average of 125 winter treatment days each year, they strive to be as efficient and effective as possible. They sought

a modern solution that could fill data gaps with accurate road condition data and support data-driven decisions.

THE APPROACH:

Easy access to powerful data

Based on their successful use of Vaisala technology and the accuracy of new Vaisala tools, the Roads and Infrastructure department started modernizing with a trial of Vaisala Wx Horizon. Part of our Xweather family of subscription based products, Wx Horizon is a weather hazard impact portal that delivers insights to current and future road conditions. The fusion of accurate measurements with industry-leading weather forecasting and best-in-class road weather modeling delivers actionable information for specific use in transportation.

“GroundCast with Wx Horizon give us clear, visible data that is easy to use. We can be more confident about which areas need treatment and when they need it, which is a major advantage as we seek proactive ways to keep our road network safe for winter travel.”

*Natalie Wood
Roads Manager, Roads and Infrastructure Services,
Aberdeenshire Council*

The department was immediately impressed with the depth of information Wx Horizon delivers, so they took an even greater step toward filling road weather data gaps by installing Vaisala GroundCast sensors. Installed directly into the pavement, GroundCast IoT sensors are the easy way to get measurements from critical network locations that have not been practical or affordable to cover.

GroundCast measures surface temperature and state, amount of treatment material on the road surface, temperature at -6 cm / 2.4 in, and temperature at -30 cm / 1 ft. The data automatically transmits to Wx Horizon, where the Roads department easily gets graphical, tabular and map visualizations, alerting and notifications, 72-hour enhanced road weather forecasts and 10-day atmospheric forecasts.

THE RESULTS:

Data-driven resilience

The powerful combination of these tools gives the department all the information they need, in one place. With it, they can target treatments and avoid overtreatment – all while validating treatment success and gaining insight into the levels of protection on their network.

Not only are the embedded sensors highly accurate, they are also quick and easy to install to fill the road weather data gaps on their network. The additional visibility helps them make decisions more easily and with more confidence, and they can even easily detect deviations from local forecasts.

The Roads department enjoys having easy access to complete road weather information wherever they need it. The integration of GroundCast sensors means having even more data for their decision-making process.

The department is excited to look at further developments to further enhance their operations, efficiency and results. They also want to provide road weather information to the public so that they can use it to plan their own travel – all of which will boost day-to-day resiliency and quality of life across the shire.

Why Vaisala?

Vaisala’s weather and environmental technologies take every measure for unrivaled road network awareness – keeping roadways safe and efficient in any season.

Our instruments and intelligence are built on 85+ years of innovation and are known as the gold standard for precision and reliability. We understand how accurate data and insights do even more by driving sustainable road operations and climate action. Our holistic approach provides customers with end-to-end simplicity, valuable partnership, and a comprehensive portfolio that is constantly evolving.

As recognized experts in transportation, we continue to channel our curiosity into new ways of making roadways safer and more efficient than ever.

