

Two storms at once

How the Irish meteorological service modernized Europe's most westerly sounding station



The challenge: Upgrade to a Vaisala Autosonde sounding station in the middle of COVID-19

One weather station on the west side of Ireland, at the Valentia Observatory, provides crucial forecast model data for meteorological agencies across Europe.

Managed by Met Éireann — the Irish national meteorological service — the station uses automatic sounding technology to monitor weather systems headed for the continent. It is designated a critical station, and many European agencies rely on it for early warning about storms and systems headed their way.

Sounding systems at Valentia must operate in extreme conditions, which are characterized by strong surface winds and a location just beneath the jet stream. The Met Éireann team needed to replace their existing sounding system and looked to providers across Europe for an especially rugged, reliable replacement.

Confident from previous work with Vaisala and reassured by recent Australian and American deployments of the Autosonde AS41, the team selected Vaisala. They had to bring the new sounding station online quickly, however, to avoid running out of materials for the old system and creating gaps in the daily flow of data they were responsible to provide. They felt confident they could do it.

Then COVID-19 hit.

The client:

Met Éireann

Industry:

Meteorological
organization

Vaisala provided:

Autosonde AS41

The solution: Autosonde AS41 and a creative collaboration

Once the team selected the Autosonde AS41, they had to figure out how to deploy it under new COVID-19 travel restrictions and a difficult timeline.

It took some improvisation from both parties. Prohibited from traveling to Ireland to do the install, Vaisala technicians assembled and disassembled the entire AS41 unit in the factory in Finland, recording their progress at every step. Then they sent the Met Éireann team 20 assembly videos to guide them through the install.

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Once the AS41 structure and related equipment were delivered, Met Éireann had it all assembled, online, and deploying Vaisala RS41 Radiosondes within six days.

They did, however, need to consult Vaisala on a workaround for radio transmission. The Valentia Observatory is in a valley that experiences signal shadowing, and Vaisala helped the organization deploy a repeat antenna, quickly solving the problem.

The teamwork paid off immediately.

“With the Vaisala RS41 [radiosondes],” says Chief Scientist Mike Gill, “we have immense quality throughout the whole profile, from the surface to the top of the atmosphere. Plus, we’ve also been achieving consistent heights. We consistently meet our targets for EUCOS.”

Results: Modernization, adaptability, and improved standing for Met Éireann

Through a remarkable collaboration, Vaisala and Met Éireann modernized and improved the performance of Europe’s most westerly sounding station.

Met Éireann says it gets much-needed simplicity and peace of mind from the Vaisala sounding solution, as well as other important results:

- <1% sounding failure rate
- Financial savings from reduced helium consumption
- Improved communications

Met Éireann was also able to temporarily double its daily radiosonde deployments at the request of European authorities, to compensate for reduced airborne weather monitoring while many aircraft were grounded during COVID-19.

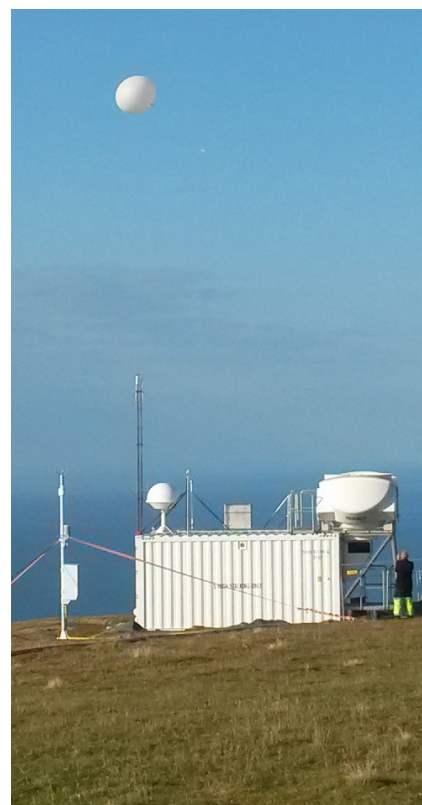
Organization leaders say they have improved their standing among their European partners, too, achieving consistent radiosonde performance and data reporting.

The ongoing relationship with Vaisala still pleases the Irish team. “Vaisala will always come back to us very quickly if we have any questions,” says Chief Operations Officer Charles Gillman. “With the deal done, Vaisala is as interested as before the sale wrapped.”

Most importantly, Met Éireann is delivering on its most important promise to Europe and beyond: providing excellent weather data how, when, and where it matters most.

“We were impressed with Vaisala’s quality control and professionalism. They showed us how they manufacture AS41 components and how they test the sensors. We were very confident the system would perform as advertised, and it certainly has.”

Charles Gillman
Chief Operations Officer



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