

VAISALA / SUCCESS STORY

METEOROLOGY

Czech Hydrometeorological Institute Chooses Long-Term Solution for its Weather Radars



Installation of WRM 200 antenna at Brdy-Praha site



WRM 200 installation at Skalky site

The Czech Hydrometeorological Institute (CHMI) has been using weather radar measurements since the early 1970s. Recently, CHMI deployed two, new Vaisala C-band Doppler Polarimetric Weather Radars, which replaced previous radar systems, located at the same sites. The new radars provide CHMI with the latest technology, including the ability to measure polarimetric quantities, while continuing to offer the reliability and stability that Vaisala weather radar systems are known for. “WRM 200 radar data are of good quality

and fully comparable with other European countries,” comments Hana Kyznarova, Ph.D., with the CHMI Radar Department. “Vaisala radars allow us to measure radar data in a sufficient quality to fulfill our requirements of identifying and forecasting precipitation, severe weather, and use in follow-up applications.”

The weather conditions of the Czech Republic are dependent on where you are located in the country. For example, the border mountain ranges receive significantly more precipitation, while on the other hand,

the driest region of the Czech Republic is northwest Bohemia, which is shaded by the Ore Mountains.

With such diversity in daily weather, the Czech Republic recognizes the importance of monitoring conditions, and providing forecasts and warnings for its citizens. In the Czech Republic, the institution responsible for weather monitoring and forecasting is the Czech Hydrometeorological Institute (CHMI). Besides a wide range of monitoring activities, CHMI is also responsible for early warning systems in case of a natural disaster.

Challenge

- Continue to improve weather forecasts and warnings
- Provide accurate, reliable data for government agencies
- Replace previous weather radar systems with new technology

Solution

- Doppler weather radar - Vaisala Weather Radar WRM200
- Dual-polarization measurement
- Real-time precipitation identification (hail, graupel, rain, snow, wet snow, non-met)

Benefits

- Supports operations of the hydrometeorological institute, aviation, roadway, and other applications
- Enables more efficient decision making
- Improves situational awareness
- Supports better forecasts and warnings for the public



Vaisala training in Finland

Decades of Weather Monitoring

CHMI has been monitoring and forecasting weather conditions for over 60 years and one of the most important weather tools that CHMI uses is weather radar data. Weather radar data are used in CHMI forecasting offices for identification and forecasting of precipitation and severe weather, in hydrological models for forecasting of large scale floods, and also for flash floods. Weather radar enables more efficient decision making, improved situational awareness, better forecasts, and warnings. Weather radar measurements and forecasts are an important part of operations for Czech air traffic control, the Integrated Rescue System, Czech Army, Czech TV, and the Road and Motorway Directorate.

A Long-Term Solution

CHMI chose Vaisala over other manufacturers after evaluating several options in a public tender. Kyznarova adds, "Vaisala fulfilled all of the mandatory criteria regarding radar parameters, and also provided sufficient warranty and subsequent services at the best price. It is also important that Vaisala is well known manufacturer with good references."

During the deployment and use of the new weather radars, CHMI has been pleased with Vaisala experts, who have offered their experience in weather radar data measurement, processing, and training. With new technology and a strong partnership with Vaisala, CHMI will continue to supply quality forecasts and data to their citizens for the years to come.

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