Meteomatics to Predict Future Weather Challenges for Norwegian Residents and Economy

Working with NORCE, Meteomatics will Install 30 of its Autonomous Meteodrones to Forecast Weather Accurately and Offset Economic and Ecological Challenges

EXTON, PENNSYLVANIA, UNITED STATES, June 4, 2024 /EINPresswire.com/ -- Meteomatics, the weather intelligence and technology company that enables the world to accurately forecast hyper-local weather conditions in real-time, today announced its new collaboration with the Norwegian Research Centre (NORCE). Through the multi-million euro project, Meteomatics will install 30 of its autonomous weather drones, or "Meteodrones," across Norway as part of the country's work to future-proof itself against challenges to its economy, people, and infrastructure.

Severe weather conditions around the world are significantly impacting economies, infrastructure, and public safety. In Scandinavia, in particular, strong winter snowfall and storms, heavy rainfall and flooding, and summer forest fires increasingly impact everyday life and the economy. These extreme weather events are only becoming stronger and more frequent across the world.

Meteomatics eliminates the gap in weather visibility in Norway.
To forecast the weather in Norway more accurately, Meteomatics, in cooperation with NORCE, will install 30 of its weather drones, also known as Meteodrones, and their accompanying Meteobases, which enable autonomous flights.

Meteomatics' autonomous flight system can fly 6,100 meters (20,000 feet) above the Earth's surface, enabling it to close a significant meteorological data gap in the lower and mid atmosphere–regions not regularly or accurately observed by traditional weather sensing technology and radar.

This work is part of NORCE's mission to prepare Norway for economic and ecological challenges through innovative technologies. Meteomatics is the organization's latest technology partner.

Installation of the Meteodrones will begin this summer.
The Meteobases, which will store and launch the drones, will be installed beginning this summer.

A team of experts is currently evaluating meteorologically significant locations where the Meteodrones will have optimal access to aspects of weather modeling. The project is expected to be fully implemented and operational by the end of 2025.

Lack of data for precise forecasting.
Weather models have long been limited by insufficient observations from the atmospheric boundary layer, hindering accurate predictions of local weather phenomena, such as heavy rain, snow formation, or thunderstorms. The only technology currently used for weather data from the lower and middle atmosphere are radiosondes on weather balloons. Because these single-use devices are dependent on the availability of Helium for the balloon, radiosondes are very expensive and unsustainable.

Meteomatics' Meteodrones overcome the challenges of radiosondes. Meteodrones can carry out several measurement flights in longer time periods, allowing for more extensive data collection compared to radiosondes. While radiosondes are typically used only two times a day, Meteodrones can fly every 30 minutes to collect atmospheric data.

A new era of precision in meteorology.
Meteodrones can capture high-resolution, direct measurements of critical meteorological elements such as temperature, humidity, air pressure, and wind speed. The Meteodrone data is injected into EURO1k, the European high-resolution weather model, exclusively developed by Meteomatics. EURO1k is the only model to cover Europe, large parts of the East, and parts of North Africa at a resolution of 1 kilometer and update every hour.

Norway expects various economic and societal benefits from the project.
With this project, weather forecasts will become much more accurate in Norway, benefiting the economy and society. Renewable energy, which depends heavily on the weather, becomes more manageable and thus more cost-effective when weather is accurately predicted. Further, increasing its production will help the country meet net-zero emissions goals. Logistics on sea and land also become safer and more efficient when it's possible to predict weather conditions, moment by moment. Improved weather forecasts also have local and national implications for agriculture, insurance, and emergency services.

The additional stream of weather data delivered by the Meteodrones will help the country to understand the formation of severe weather events.

"NORCE will conduct scientific research to validate the EURO1K forecasts and compare their accuracy with other weather forecasts used by the Norwegian Army for tactical decision-making," said Camilla Stoltenberg, CEO of NORCE. "Meteomatics shows great confidence by allowing us to validate and share the performance of their weather forecasts. This demonstrates that independent scientific research can significantly contribute to the successful transfer of such technology to Norway."

“We are honored to play a part in Norway’s forward-looking initiative to prepare itself for weather-related challenges. Our 30 Meteodrones and Meteobases will significantly improve the data basis for accurate weather forecasts across the entire country,” says Martin Fengler, CEO and Founder of Meteomatics.“The technology readiness of our Meteodrones has already been demonstrated in several countries, and we’re excited to see our Meteodrones take flight in Norway.”

Meteomatics’ Meteodrones are already operational and contribute to improved weather forecasting in several countries, including Switzerland, France, Italy, and the United States.

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About Meteomatics

Meteomatics is the world's leading provider of weather information. The Swiss company combines meteorology, engineering, and IT expertise to develop complex industry solutions and high-precision technologies for a world where accurate weather and climate analysis is becoming increasingly important.

Meteomatics' EURO1k weather model has a unique resolution of one kilometer and provides unrivaled accurate weather data for the whole of Europe. The easy-to-use API technology provides direct real-time access to around 1,800 weather parameters. Using NASA's 90m digital terrain model, historical analysis and hyperlocal forecasts are possible worldwide. The Meteodrones developed by Meteomatics and manufactured in Switzerland fly at an altitude of up to 6,000 meters and close the meteorological data gap from the Earth's lower atmosphere, which is particularly relevant for weather events.

Meteomatics helps institutions and companies worldwide plan their business processes perfectly, increase productivity, and minimize risks. More than 600 companies from the energy, transportation, agriculture, and insurance industries rely on Meteomatics, including industry-leading companies such as Volkswagen, Airbus, Swiss Re, Tesla, Toyota, and EDF Energy. Meteomatics was founded in 2012 and employs over 130 people. The company is headquartered in St. Gallen, Switzerland.

You can find more information about Meteomatics at www.meteomatics.com

About NORCE

NORCE (Norwegian Research Centre AS) is an independent research institute that engages in research, development and innovation in collaboration with both the public and the private sector. We have extensive research operations spanning energy, health, climate, environment, society and technology. Our ambition is to be a national and European leader in our chosen areas of focus. NORCE provides solutions to key societal challenges and contributes to value

creation on a local, national and global basis. We deliver research, innovation and skills development for key topics in policy formulation, administration, business and civil society. NORCE contributes to the adaptation of industry and business – in conjunction with businesses and universities, clusters and centres. In addition, NORCE has an important role in research-based renewal of the public sector and the commercialisation of new technologies and systems.

NORCE employs approx. 800 people. The largest owners are the four universities in Bergen, Stavanger, Agder and Tromsø, either as direct owners or through regional holding companies.

You can find more information about NORCE at https://www.norceresearch.no/en/

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