

Safer seafaring with real-time lightning insights

How Navimeteo is improving its marine weather forecasting, nowcasting and monitoring services with GLD360 lightning data and alerts



The client:

Navimeteo

Vaisala provided:

Vaisala Xweather
lightning data and
software solutions

“We provide reliable 24/48-hour forecasts for our clients, complemented with the insights on approaching thunderstorms and lightning activity from Vaisala Xweather. We have a special focus on coastal weather and port forecasts since, in these areas, changing weather conditions can strongly affect operations such as port calls; loading and unloading operations at port; berthing and maneuvering in port; and tendering operations for passenger ships and yachts. Especially in these cases, the lightning detection data provided by Vaisala Xweather helps to enhance our clients’ operational efficiency and increase the safety of their operations.”

Gianfranco Meggiorin
President, Navimeteo



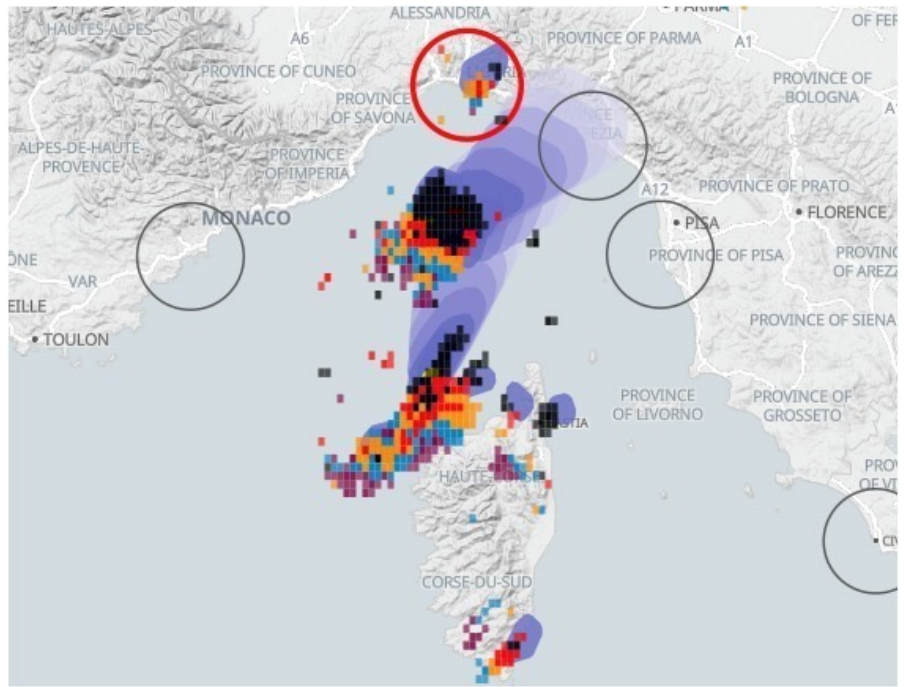
With over 30 years of experience in the field of marine meteorological and oceanographic forecasting, Navimeteo provides a broad range of marine weather services to 200+ clients in different marine sectors such as cruisers, yachts, commercial shipping, harbors, commercial ports and offshore industries worldwide.

Navimeteo’s forecasting team operates 24/7, 365 days a year where they focus on offering uninterrupted navigational safety and assistance. In addition to their industry clients, Navimeteo provides training and weather services for mariners and works in cooperation with maritime authorities to improve safety at sea.

The challenge:
Rising extreme weather events create more risk for safe marine operations

In recent years, especially in the Mediterranean Sea, severe storms with violent wind gusts have become more intense and frequent. These so-called squall lines — inflections of cold air that contrast with hot and humid air — form a series of thunderstorms close to each other that can move very fast, causing violent gusts at sea. They can also develop in various patchy maritime areas, making it difficult to choose safe areas at sea. Together with the sea waterspouts and lightning activity, squall lines can create dangerous situations especially if ships anchor in the coastal area or bays.

Weather forecasts and models have advanced significantly in recent years. However, there are still significant limits in their accuracy and reliability, as knowing the position and intensity of these sudden violent thunderstorms is not easy.



The solution:
Superior worldwide lightning detection with unrivaled local accuracy

To enhance the safety of seafarers during sudden thunderstorms and weather events, Navimeteo complements and refines their short- and medium-term forecasts with the help of real-time weather observations, satellite

images, radar data, and a Vaisala Xweather world-class lightning detection system.

Since March 2022, Navimeteo has been using Vaisala Global Lightning Dataset (GLD360), part of Vaisala's Xweather family of subscription based products, to enhance its forecasts with lightning alerts for approaching storms. GLD360 is a global lightning detection network owned and operated by Vaisala, and the data helps Navimeteo clients such as cruise ships, ferries, yachts, ports, and marinas all over the world to receive early warnings so they can take precautions and prepare for stormy conditions.

Navimeteo accesses GLD360 data through the cloud-based Vaisala Thunderstorm Manager software. Thunderstorm Manager is integrated with Navimeteo's own forecasting service to provide a real-time view of approaching thunderstorms and lightning activity everywhere in the world with 1 km accuracy. With this service, Navimeteo's forecasters help their clients minimize operational and safety risks with accurate and reliable weather forecasts and lightning threat alerts.



The benefits: Higher accuracy, better client services

Navimeteo now provides more accurate and reliable weather forecasts with detailed lightning data — enhancing the safety of seafarers and minimizing operational downtime.

With GLD360 and Thunderstorm Manager, Navimeteo can operate more efficiently by identifying and tracking risks for intense weather events, storms and lightning activity, especially in the Mediterranean Sea.

GLD360 data helps Navimeteo forecasters to make more timely and proactive expert validations

of early warnings: The result is greater quality and range of services, which improves value for clients and boosts market competitiveness. The more accurate and reliable weather forecasts help Navimeteo clients to make timely decisions on minimizing operational downtime and enhancing the safety of assets and people at sea.



Xweather and GLD360

Vaisala Xweather delivers the most reliable real-time lightning data with unparalleled detection efficiency and location accuracy worldwide. The GLD360 network captures lightning and storm data over every ocean and sea with a median location accuracy of 1 km, even in remote locations beyond the range of radars, standalone sensors, and independent weather networks. Uninterrupted global detection identifies 100% of thunderstorms, tracks storm intensity and trajectory, and supports nowcasting of lightning risks for the next 60 minutes with Lightning Threat Zone.

GLD360 data is offered as a service with instant web or mobile access when and where you need it without having to purchase, install, or maintain your own sensor equipment. The data is compatible with a wide range of weather monitoring and storm alert systems, enabling maritime operators and port authorities to seamlessly integrate it into their daily operations. Thunderstorm Manager from Vaisala Xweather provides lightning visualization and alerting tools for customers who prefer an end-to-end software solution.

Master the weather, master the sea

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