

October 9, 2025

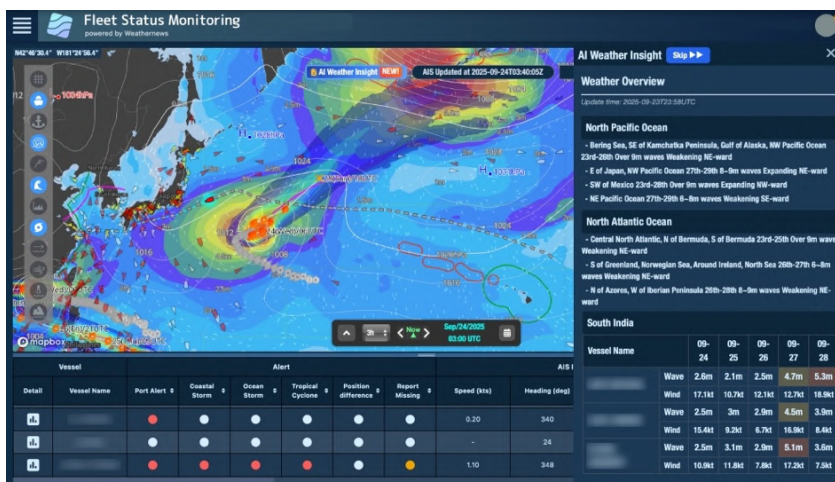
AI Derives Optimal Solutions From Vast Weather And Voyage Data: Marine Weather Service SeaNavigator Equipped With AI Engine for Swift Decision-Making on Ship Operations

Stronger Monitoring of Vessels Affected by Inclement Weather, Waves, and Wind, and Faster Analysis of Vessel Performance

Weathernews Inc. (Headquarters: Chiba, Japan; President and Representative Director: Tomohiro Ishibashi) has equipped SeaNavigator, its integrated marine weather service that takes into account environmental performance, safety, and economic efficiency to support vessel operations, with an AI engine and has commenced offering AI Weather Insight, which automatically generates weather and marine insights and automatically identifies vessels affected by inclement weather, and AI Agent, which helps optimize operations through analysis of vast marine and voyage data.

AI Weather Insight uses AI to automatically generate weather and marine insights in text and table format oceans throughout the world up to five days in advance and also identifies vessels affected by inclement weather based on vessel position and route information by instantly calculating wave and wind forecasts as well as the duration of the impact. This lets users check real-time forecasts even during inclement weather, allowing for safer route selection and greater understanding of delay risks. AI Agent allows users to simply ask a question in text format, which then accesses and analyzes past marine data, customer vessel position data, vessel performance, and other data and responds in chat format (conversational format). For example, a question such as “Which vessels have had good fuel efficiency and speed over the past three months?”, which would normally take time to analyze manually, can be analyzed instantly using AI, achieving faster operational analysis of vessel performance.

Going forward, Weathernews will work to expand the features of AI Agent and develop new AI solutions based on feedback from customers in the shipping industry (shipowners, ship management companies, and operating companies) to make this service even more convenient to use. Weathernews will continue to offer



「AI Weather Insight」

List of vessels affected by inclement weather and wave and wind forecasts.
(Table in the lower right)



「AI Agent」

Questions and analysis results in chat format.

support for safe operations for shipping operators by leveraging over 40 years of marine data, data from a cumulative one million voyages, and knowledge gained through communication with captains and operators.

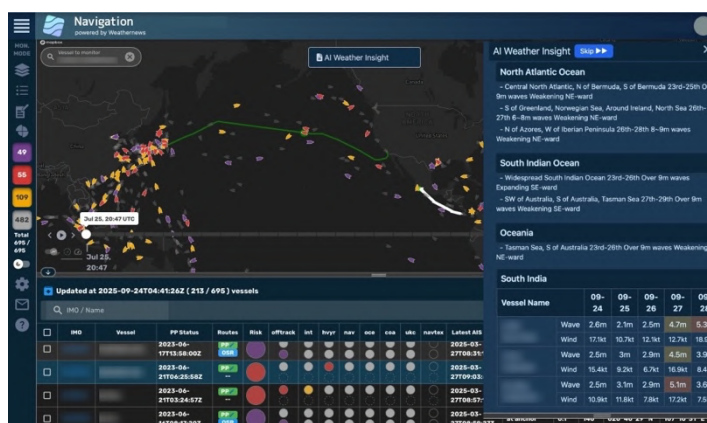
See the service website	Inquiries
https://sea.weathernews.com/seanavigator/	https://sea.weathernews.com/contact

◆ AI Weather Insight : Using AI to automatically detect inclement weather risks for vessels and deliver timely wave and wind forecasts

Understanding which vessels may encounter inclement weather is crucial for shipping operators. Increasingly extreme weather and marine conditions as well as rapid changes in recent years means that shipping operators now gather data at a higher frequency than ever before, spending more time identifying vessels that might be affected. Previously, experts in the Marine Weather Division at Weathernews would create weather insights based on global forecasts and identified vessels heavily affected by inclement weather such as typhoons based on vessel position data and routes then inform shipping operators of these insights; however, the strain on operations during inclement weather often made providing data at the normal frequency difficult, posing a challenge. To deliver the latest information in a timely manner, Weathernews has developed AI Weather Insight, which uses AI to communicate the latest weather and marine insights as well as vessels affected by inclement weather.

AI Weather Insight uses AI to automatically generate weather and marine insights in text and table formats for oceans throughout the world up to five days in advance, allowing SeaNavigator users to obtain the latest summaries that account for such factors as the probability of a tropical cyclone, at any time. The service also uses AI to automatically analyze the duration of impact and risk of encounter regarding inclement weather based on the latest vessel position and route data, allowing users to instantly identify vessels affected by inclement weather.

This eliminates the need for users to estimate which vessels will be affected by inclement weather by adjusting weather and vessel positions on their computers or contacting the experts at Weathernews, as was previously necessary. Faster internal information sharing on vessels affected by inclement weather as well as accelerated decision-making regarding route changes and greater understanding of the delay risks is expected to further improve both safety and efficiency.



Clicking on AI Weather Insight displays weather and marine summaries, vessels affected by inclement weather, wave height, and wind forecasts. (Text and tables on the right)

◆ AI Agent : Leading to better operations through analysis of vast weather, marine, and voyage data

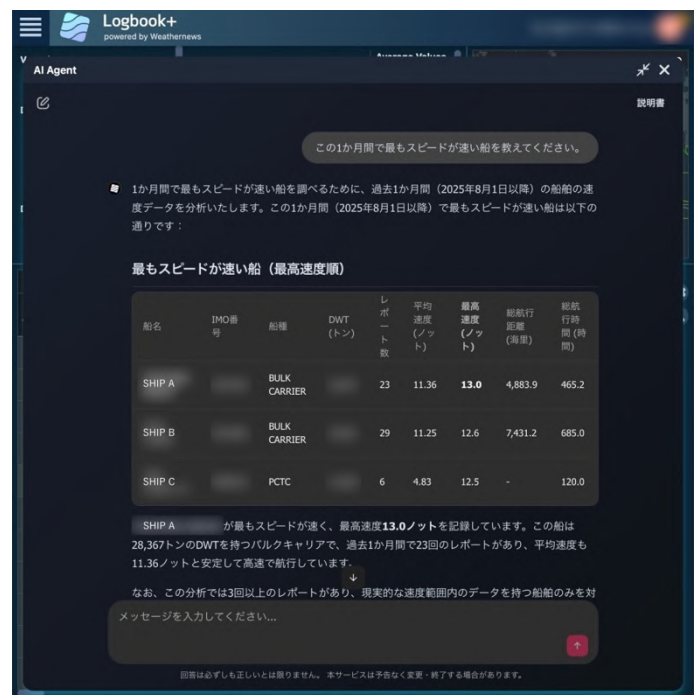
Understanding vessel performance and optimizing operations requires analysis of all kinds of data, including wave and wind data as well as reports from vessels and navigation equipment used to measure wave height. Up until now, Weathernews has displayed reports on screen that could be exported as PDF and CSV files, so that shipping operators could analyze the data themselves. Weathernews has now developed and commenced offering a new AI solution to make it easier to perform more profound analysis.

AI Agent allows users to obtain information on vessel performance in chat format based on vast voyage data from vessels under contract, something that previously required time-consuming manual analysis. In addition to performance data for vessels under contract, it can also a basic voyage information (such as IMO number and vessel specifications), voyage history, and vessel position data. This lets users obtain analysis results in text, graphs, and charts simply by asking questions in chat format, such as “Rank my vessels by those with the best fuel efficiency and fastest speed over the past three months” or, “Tell me which vessel has the best fuel efficiency when wave height exceeds four meters.” This eliminates the need to manually set complex filters or navigate back and forth between multiple screens as was previously necessary, greatly improving the time and quality of analysis.

Weathernews has accumulated not only data on marine conditions and voyages but also operational insights gained through routine communications with operators, ship managers, captains, and crew, as well as ongoing feedback from 900 shipping operators annually. Precisely because this data has been cleansed into a form usable for DX and retained all these years, we are able to combine vast amounts of data with AI to provide practical solutions for use in actual operations. Weathernews strives to provide AI technology and data in a highly reliable, transparent form without creating a black box so that these can be used with confidence in the industry, where safety and accountability are required.



Open Logbook+ in SeaNavigator and ask AI Agent questions on something you wish to analyze.



Asking AI Agent about high speed vessels and its response.

Weathernews plans to continue expanding the features of AI Agent in the future. SeaNavigator will evolve as a platform that autonomously navigates multiple menus and data to provide support for work involved in a wide variety of use cases within the maritime industry.

◆ Comment from Kwon Keemoon, Executive Officer in Charge of the Sea Business Division at Weathernews Inc.

Protecting the lives of seafarers and the future of the planet has been our unwavering commitment since Weathernews was founded, and it is with this in mind that we have worked ceaselessly to develop new services that comprehensively take into account safety, economic efficiency, and environmental performance. For over 40 years, we have accumulated vast amounts of data on ship operations and knowledge of this industry, as well as expertise gained from offering our services to 900 customers worldwide each year. Fusing all of this in an optimal

manner with AI to continuously solve the complex challenges faced by the shipping industry through innovation is the future we aim to achieve.

We believe that, rather than replace decision-making, AI should serve as powerful support for human decisions. Route optimization is a particularly critical process that directly affects crew safety, vessel assets, and cargo value. For this reason, all optimal route recommendations generated by AI are carefully reviewed by experienced in-house experts. We are keenly aware that technology is at best a tool, and that final accountability always lies with humans. With this in mind, we will continue working to develop new, even more convenient services that take into account economic efficiency and environmental performance.

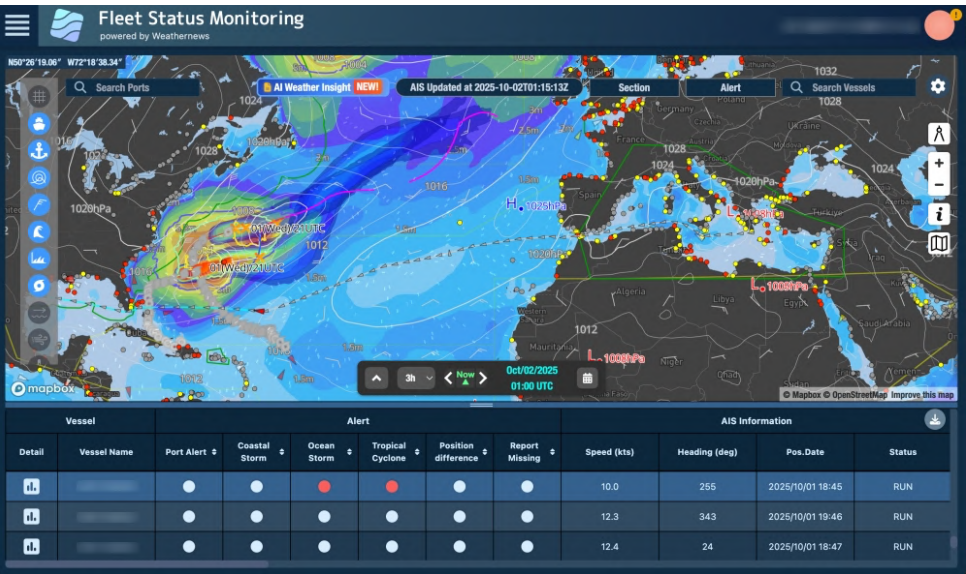
◆ **SeaNavigator, an integrated marine weather service**

Starting in October 2024, Weathernews provides an integrated marine weather service called SeaNavigator that takes into account environmental performance, safety, and economic efficiency to support operations for all vessel sizes. In addition to optimal route selection, users can access all information needed before, during, and after a voyage to visualize CO2 emissions, ensure safety, prevent grounding, and more, all on a single platform.

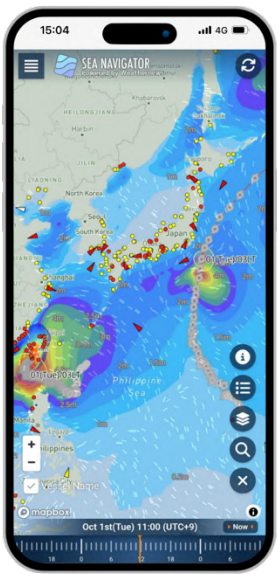
The most frequently used features of SeaNavigator are Fleet Status Monitoring, which monitors the latest weather and marine information as well as vessels affected by inclement weather; Logbook+, which analyzes vessel performance based on information from vessel reports; and Voyage Monitoring, which identifies risks in operational status. In addition, we offer Voyage Comparison, which calculates arrival times and fuel consumption by route and vessel speed for optimal operations; Navigation, which identifies risks such as running aground using voyage plans and nautical chart data; and Emission Dashboard, which analyzes environmental data such as CO2 emissions and fuel performance rating systems. Mobile display is now supported as well in response to demand to make it possible to check information immediately on a smartphone during an earthquake, tsunami, or other emergency.

With “protecting the lives of seafarers” as our unwavering commitment since our foundation, Weathernews will continue leveraging our track record of supporting more than a cumulative total of one million voyages to help ensure safe vessel operations. Weathernews is promoting the use of AI across the company and will continue to develop a variety of AI solutions that make it easy to address customer needs and insights.

※October 2024: Launch of integrated marine weather service SeaNavigator <https://jp.weathernews.com/news/49134/>



Fleet Status Monitoring screen



Mobile version

Yellow and red are used to alert vessels and shore operators of danger when there is a risk of encountering inclement weather, when vessels are sailing in locations that differ from the plan, or when no reports have been received.