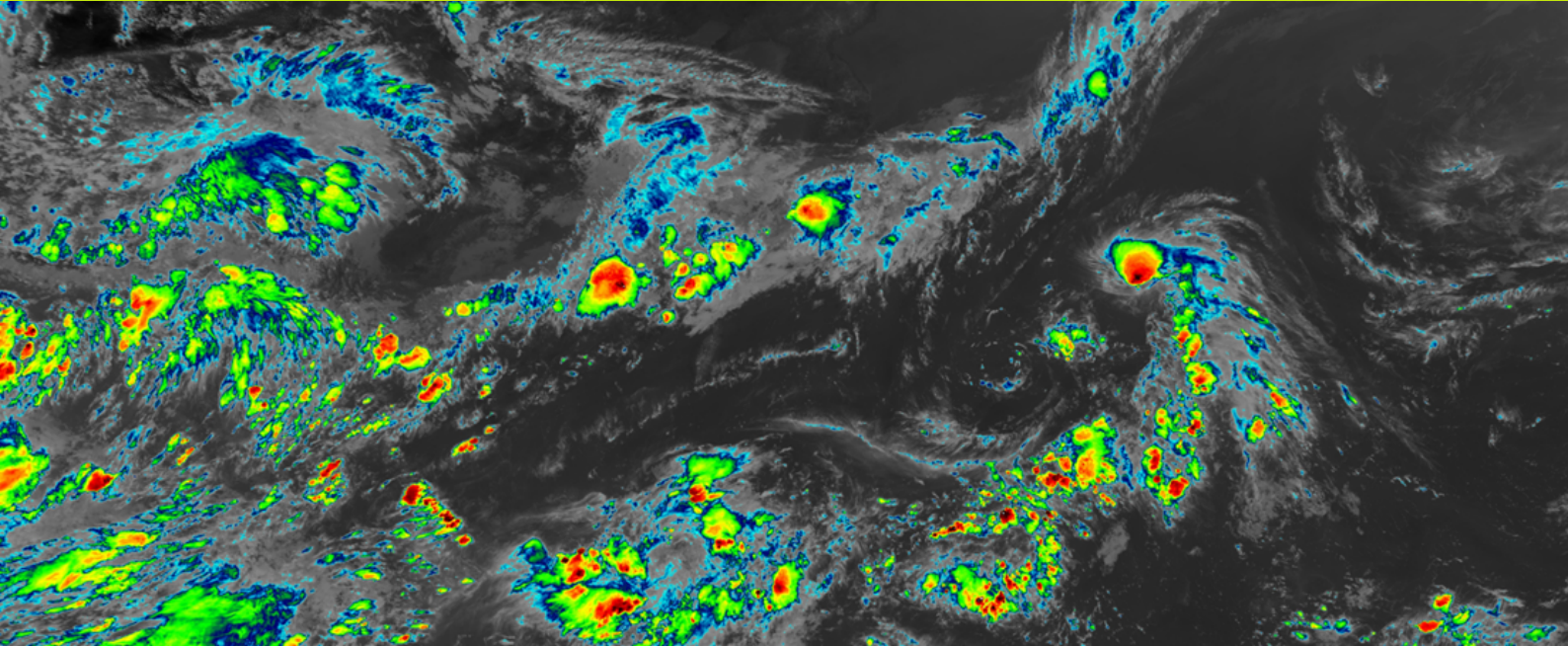


## Case Study



# Innovative weather solutions: The role of Met Office satellite data in Japan Weather Association

## Overview

Japan Weather Association (JWA), a leading weather forecasting company, was established in 1950 as the first weather forecasting organisation authorized by the Minister of Transport in Japan. Since its establishment, JWA has consistently employed cutting-edge weather observation and forecasting technology and provides accurate and highly reliable weather information both domestically and internationally.

JWA offers a range of services, including product demand forecasting and electric power demand projections, energy transparency, emergency response to weather disasters, support for public transportation operations, route logistics, and climate-change related survey and research. Recently, JWA developed a 2-Year Long-Term Weather Forecast, which predicts weather conditions up to two years in advance and improves prediction error by 20-40% compared to conventional methods.

JWA provides global weather forecasting and consulting services worldwide using meteorological satellite data that covers the entire globe. High quality data from the Japanese Himawari satellite can be obtained from the Japan Meteorological Agency (JMA) through a dedicated domestic line, however obtaining real-time meteorological satellite data of the same high quality of other global regions has been a challenge. To address this issue, JWA reached out to the [Met Office for their overseas meteorological satellite data](#).

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## How we help

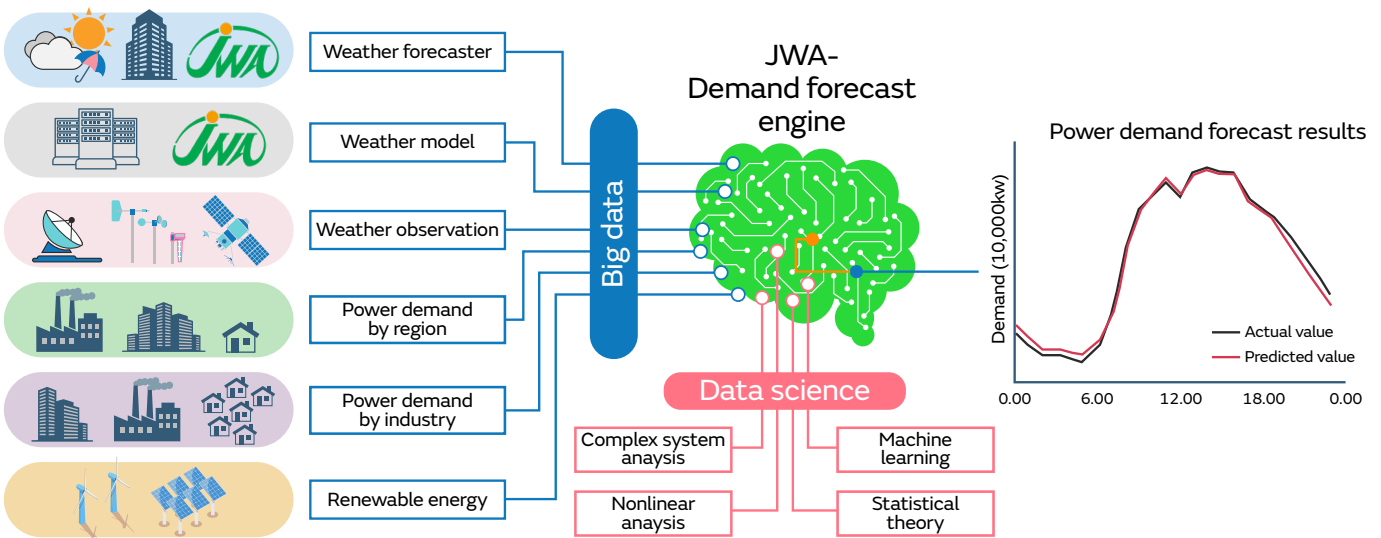
The majority of JWA's customers, who demand high quality satellite data or data generated from satellite data, are electric power companies, airline companies, aviation organisations, and mass media. JWA provides the following services using high-quality satellite data from the Met Office.

- Optimising the balance between power supply and demand: Electric power companies are required to maintain a consistent balance between the amount of electricity generated and the amount consumed, especially renewable energy such as solar and wind power. Weather plays a crucial role in this balance. For example, temperature changes can cause heating or cooling demand – a few degrees difference can result in millions of air conditioners running in summer, or heaters running in winter. JWA utilizes satellite observations to estimate solar radiation, and with the assistance of satellite service and its own detailed forecasts, utility companies can anticipate this fluctuation in demand with high precision.

- Safe and efficient flight operations: Weather has a significant impact on aviation. JWA's support for the aviation industry, which is enhanced by satellite data, including Met Office data, greatly improves flight safety and efficiency. For each route, airlines provide weather briefings that include forecasts of en-route weather, such as storms, turbulence, icing conditions, and winds aloft, as well as airport conditions for takeoff and landing. JWA determines cloud-top heights via infrared satellite data, which can observe storm cells and typhoon movements that impact airspaces.
- Faster and more complete weather coverage: JWA is trusted by media outlets (television, radio, newspapers, and digital media) for up-to-date and accurate weather content around the clock. Thanks to receiving the satellite data quickly, the media can access high-quality satellite images and predictions in almost real-time. For example, when a typhoon is approaching Japan, JWA provides live satellite loops and forecast tracks to TV stations and online news sites for broadcasting to the public. Viewers can visually understand the size and trajectory of the storm through these images.

## Our impact

JWA acknowledges that the Met Office offers several key advantages, including the ability to transfer data in real time via FTP, consistently offering prompt and attentive responses to inquiries, and competitive pricing. Additionally, the data is delivered in Level 1 (L1) format, making it easy to process. JWA will continue to proactively use satellite data provided by the Met Office to meet and exceed the customer's expectations.



*“Met Office data is a vital component of our forecasting infrastructure. It enables us to deliver high-precision forecasts and real-time insights to clients both in Japan and around the world.”*

**Hideyuki Kurata,**  
Chief Information Officer, Japan Weather Association

To find out more:

0370 900 0100

<https://www.metoffice.gov.uk/services/data>

DPT@metoffice.co.uk

[www.twitter.com/MetOfficeB2B](https://www.twitter.com/MetOfficeB2B)