

December 14th, 2021

Global Expansion of Weather Data Provision and Analysis Service for Corporations Weathernews launches 5km Mesh High Resolution World Weather Forecast Service Supporting Overseas Business Development in DX Era With Highly Accurate Weather Data Using AI Technology

Weathernews Inc. has globally expanded the weather data provision and analysis service known as "WxTech[®] (Weather Tech)," that promotes the digital transformation (DX) of companies with weather data and the latest technology, and started selling the 5km resolution Weather Forecast API (excluding some areas) for companies which develop overseas business. In recent years, the needs for world weather data are increasing in business situations. Therefore, we will provide such data with an hourly short-range forecast and a middle-range forecast up to two weeks ahead, through an API. This service provides highly accurate weather forecasts at high 5km-mesh resolution which combines AI technology and numerical forecast models by Weathernews and the world's meteorological organizations. Since data is provided by API and other means through the cloud, companies can obtain data just by specifying the longitude and latitude, making it easy to link with existing systems. Obtaining detailed weather data around worksites allows companies to use the data in every business situation such as display of overseas weather forecasts in their own systems, advanced business optimization, marketing, and safety management for employees. It is already expected that several companies will use our service for optimization of amounts of products to be prepared and ordered in new restaurants in Southeast Asia by major restaurant chains, and forecast of the demand for in delivery service. We will expand our overseas data lineup according to the needs of companies in the future.

Click the link below for inquiries regarding "Weather Forecast API"

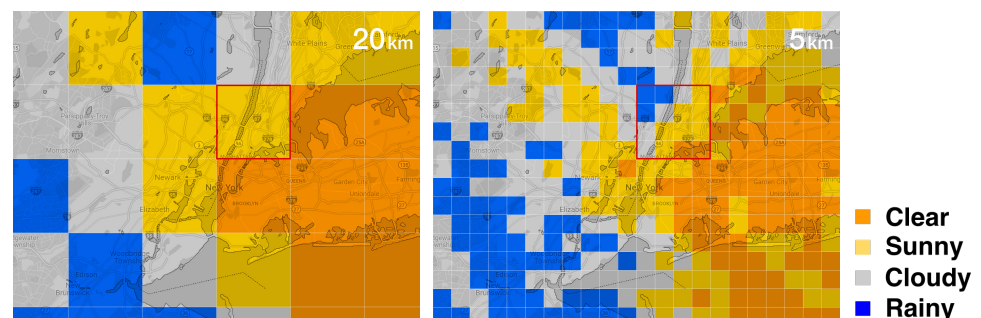
<https://global.weathernews.com/contact/>

Globally Developing WxTech[®] - Expanding the Field of Weather Data Use in Business to the World -

Our development of "Weather Forecast API" was triggered by opinions such as "we want reliable and detailed local weather data through an API" from globally-expanding companies, companies planning to expand globally from now on, and companies which procure products from overseas companies.

<Features of Weather Forecast API>

1. High resolution 5km-mesh data
2. Highly accurate forecasts using weather data from every country in the world and AI technology
3. It is possible to obtain data in real time and link with systems through the API



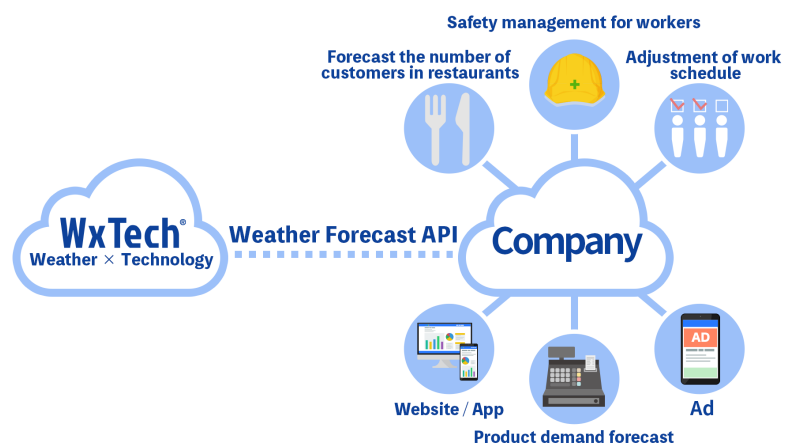
Weather forecast images of NY, comparison of 20 km and 5 km mesh resolutions (When compared between the 20 km and the 5 km mesh resolutions, forecasts might not be the same)

"Weather Forecast API" provides high resolution 5km-mesh, highly accurate data of short- and middle-range forecasts through the API and others. In the short-range forecast, you can obtain hourly forecasts for eight elements: weather code, temperature, humidity, rainfall amount, atmospheric pressure, wind direction, wind velocity, and amount of global solar radiation, up to 72 hours ahead. In the middle-range forecast, the API provides daily forecasts of weather code, maximum temperature, minimum temperature, average humidity, chance of rainfall, daily rainfall, wind direction at daily maximum wind speed, daily maximum wind speed, and amount of daily accumulated global solar radiation, up to two weeks ahead. It provides detailed, 5km resolution data regarding the middle-range forecast 14 days ahead.

Because making the finer mesh allows for more detailed expression of the weather, the accuracy of data also increases. A resolution of 10-20 km is generally used for global models. Even in a specific area where sunny weather is forecast with the 20 km resolution, a mix of sunny, cloudy and rainy weather is forecast when seen with the 5 km resolution, and rain might be forecast depending on the location.

Additionally, this service provides a more accurate forecast by using AI technology to correct and combine more than 70 numerical forecast models including models from each country around the world and the Weathernews' proprietary model.

The forecast data is stored in the cloud and then provided through the API and other means, therefore, companies can easily link their existing systems. By specifying the latitude and longitude, companies can obtain corresponding world weather forecast data with 5km resolution. Combining the data with corporate systems and business data also makes it possible to use it for their business in real time, and create new solutions.



Weather data is linked with corporate systems to be used for business

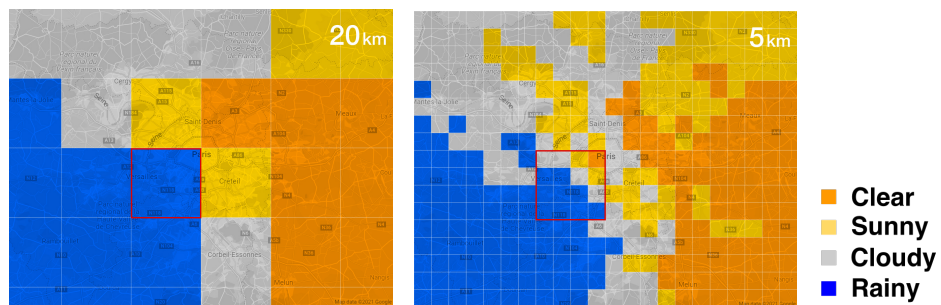
"Weather Forecast API" is already expected to be used by several companies for purposes such as optimizing preparation amounts and order amounts of products in restaurant chains, and forecasting demand for amounts in delivery services. In addition to this, it can be used for purposes such as displaying weather on applications or products (in-house systems, e-mails, digital signage, and others), ensuring safety of employees by alert notifications at times of high temperature, acquiring customers on a rainy day and promoting sales of products by distributing double point coupons linked to weather, forecasting the number of customers in restaurants, forecasting solar power generation amount by the amount of insolation, and developing consumer electronics linked with weather.

There are various ways to use weather data, and it is no exaggeration to say that the number of ways is equal to the number of businesses. New utilization methods are expected to also be developed in the global market.

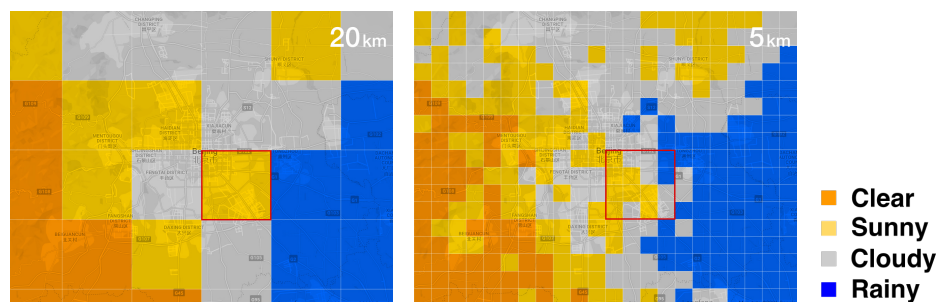
If your company is interested in using weather data for business purposes, please feel free to contact us from the link below.

Click here for inquiries regarding the Weather Forecast API

<https://global.weathernews.com/contact/>



Weather forecast images of Paris, comparison of 20 km and 5 km mesh resolutions
(Rain is forecasted at the 20 km mesh resolution, but sunny weather can be forecasted at the 5 km mesh resolution)



Comparison of 20 km and 5 km mesh resolutions in the weather forecast in Beijing
(In some cases, the forecast is sunny when seen at the 20 km mesh resolution, but rainy at the 5 km mesh resolution)

Service Specifications of Weather Forecast API

Data Type	Weather Element	Space Resolution	Time Resolution	Update Frequency
Short-Range Forecast	<ul style="list-style-type: none"> Weather code Temperature Humidity Rainfall amount Atmospheric pressure Wind direction Wind velocity Amount of global solar radiation 	5 km mesh (Excluding sea and some areas)	Hourly, up to 72 hours ahead	4 times/day
Middle-Range Forecast	<ul style="list-style-type: none"> Weather code Maximum temperature Minimum temperature Average humidity Chance of rainfall Daily rainfall Wind direction at daily maximum wind speed Daily maximum wind speed Amount of daily accumulated global solar radiation 	5 km mesh (Excluding sea and some areas)	Daily, up to 14 days ahead	4 times/day

About WxTech® Service

Since our foundation, Weathernews has developed systems dedicated to customers in an on-premises environment, and has been providing a risk communication service in which operators convey weather risks 24 hours a day. Recently,

however, digitalization of companies is rapidly progressing in line with the trend of DX (Digital Transformation), and there is a growing need for weather data itself. In companies which promote DX, they arrange an environment to digitally manage their own business data (number of sales/number of customers/work hours, etc.) and give attention to diversified data utilization combining their own data and external data. In terms of external data to be obtained, weather is first attracting attention as highly public data which has a possibility of correlation.

We started selling the weather data provision and analysis service, "WxTech[®] (Weather Tech)," to Japanese companies in 2020 in order to support the problem-solving activities of companies which are working on DX, from the standpoint of weather data. "WxTech[®]" provides high resolution and highly accurate weather data through an API and other ways which cloud engineers can easily handle. So far, many kinds of weather data including 1km-mesh resolution weather forecast, past data, blackout risk, pollen, and dryness have been processed to be used with the API, and we will improve weather data according to every need in the future. In addition, we also provide not only weather data, but also the analysis of correlation between weather and business data, advertisements linked to weather based on analysis results, and observation data by a high-performance weather IoT sensor.

"WxTech[®]" was introduced to more than 100 companies in the first year since its launch, and it is widely used for various purposes in not only large companies but also small and medium-sized companies and ventures. Weather data is utilized more and more for business in various forms including distribution of drink coupons linked to heatstroke information, effective sales promotion of insect repellents, and forecast of the number of restaurant customers.

We will support the realization of proactive business solutions such as the maximization of sales and creation of new business opportunities, in addition to high-level work optimization and a reduction of disposal loss through this service.