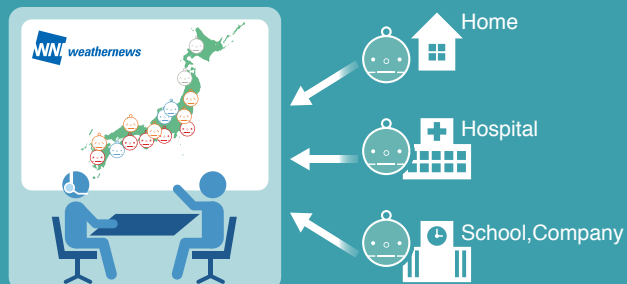# The History of the Pollen Project

It is said that more than one third of the Japanese population is allergic to cedar pollen, and its impact on health and lifestyles is considerable. The amount of cedar pollen dispersed each year fluctuates due to weather conditions, etc. Previously, the method used in Japan for measuring pollen was the mainstream "Durham method", in which glass slides coated with petroleum jelly, etc. were set up to capture pollen, which was then counted under a microscope the following day. Observations were carried out by universities and hospitals, but because they did not operate on weekends and holidays, and because measurement times varied by location, it wasn't possible to get a detailed view of pollen dispersion.
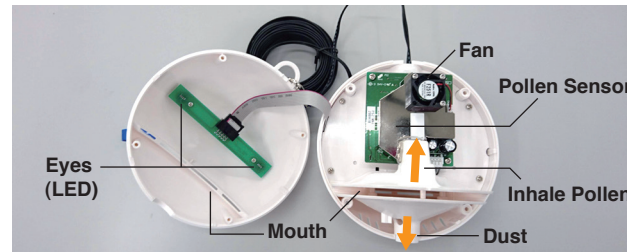
In 2005, Weathernews developed the Pollen Robo, which measures pollen automatically in real time, in order to provide people who suffer from pollen allergies with more detailed information and forecasts on pollen levels.

When we publicly invited people to cooperate with our observations by hanging a Pollen Robo on their balcony or from the eaves of their home, we received numerous applications. This has enabled real-time pollen observations that cover the entire country. Now, in addition to members of the public, we are working together with universities, medical institutions, schools, and broadcasting stations. The observation data we receive is entered into Weathernews' database and published through our Internet site and smartphone application.
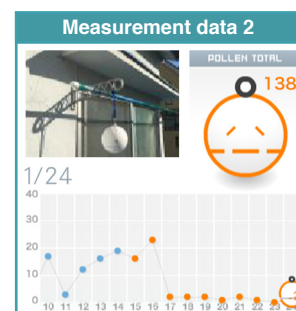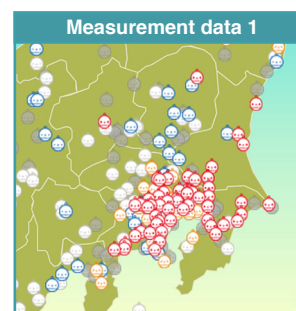
How the Pollen Robo works

Inhales Pollen through its mouth and measures by a sensor

Eyes (LED) · Mouth · Fan · Pollen Sensor · Inhale Pollen · Dust

Its eye color changes in response to the number of pollen particles

Pollen Robo Changes					
Eye color	white	blue	yellow	red	purple
Count/day	0-29	30-99	100-199	200-299	300-

Measured substances: Pollen and dust (dust particles finer than pollen) are measured

Time period: Cedar and cypress pollen are measured from February to early May

Update times: Data is delivered to Weathernews once per minute. Counts are displayed on an hourly basis on our Internet site, etc.

Observation sites: Installed in approx. 1,000 locations throughout Japan

Measurement data 1

Measurement data 2
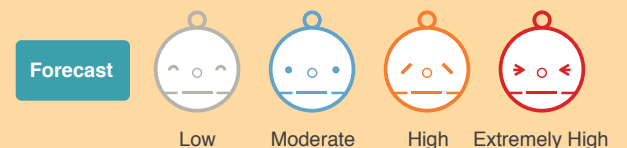
POLLEN TOTAL 138
1/24

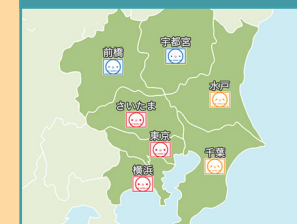# Pollen count prediction

The Weathernews AQ Center will use Pollen Robo`s measurement data as part of our independent weather forecasting to create "Pollen Forecasts".

Forecast items	Pollen count
Forecast range	24-hour forecasts hourly, 1-week forecasts daily
Announcement of trends	Pollen count trends and forecasts for each region are announced in October for the following year, and January for the current year
Summary announcement	Each year in June, we present a summary of that year's spring pollen conditions

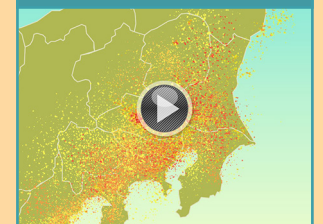**Forecast**: Low · Moderate · High · Extremely High

Pollen dispersal forecasts

Understand the daily pollen forecast at a glance, and use it as a reference for dealing with pollen during the following day

Pollen dispersal simulation

Hourly simulations of upcoming pollen dispersal can be checked on a map