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Weathernews Inc. (WNI)

Business oriented weather and climate services for climate change adaptation

An Efficient PPE / PPP Framework

**India-Japan Environment Week, 12-13 January 2023
Panel Discussion**



“I want to protect the lives of mariners.”

“I want to help in time of crisis.”



January 1970, an explosive low-pressure system hit the port of Onahama, Japan, and lives of 15 crew on the vessel has lost.

“If there had been really useful weather information, maybe this accident could have been prevented.”

Weathernews Inc. was established with a sense of responsibility and will of company founder Hiro Ishibashi in 1986.

Since then, our “Risk Communication service” have expanded to cover all types of business and our daily lives.

Weathernews Inc. (WNI) in Brief



Global Operation Network Supporting 24 x 7, from 32 offices in 21 countries



Established in 1986
 Sales in 44 areas of global market
 1,100+ employees
 (including 200 Certified Forecasters,
 300 Risk Communicators & 250 IT Experts)
 2,500+ BtoB customers in 50 countries
 2,000,000+ BtoS "Supporters"
 180,000 Weather Reports / Day

SEA Planning



SKY Planning

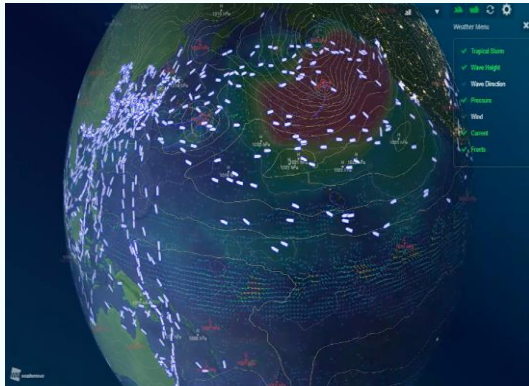
LAND Planning



LIVING Planning



Services for Climate Change



▶ CO2 Reduction by Optimum Ship Routing (OSR)

WNI provides global ship routing services which optimize both engine speed and fuel consumption. Along with safety support services, WNI is challenging in monitoring and visualizing CO₂ reduction, and in fact, the Optimum Ship Routing service has contributed to the reduction of 2.8 million MT of CO₂ from June 2018 to May 2019.



▶ Minimize Food Waste with Supply/Demand Forecast

WNI's demand and supply planning support service is also utilized in the distribution and retail markets. Especially for an issue of food waste, predicting future demand with weather/climate risk analysis can avoid excess production waste in the supply chain.



▶ Accurate Forecast for extreme weather with users' supports



WNI has been creating original weather forecasts along with its mobile/internet users since 2005. The user weather reports based on photo images they capture and weather conditions observed by their physical senses are incorporated into our forecasts, allowing us to provide pinpoint and detailed weather forecasts, such as the first 5-minute forecast in the industry, as well as forecasts for sudden and localized guerrilla thunderstorms, which are extremely hard to predict. WNI has officially achieved “the most accurate weather forecast in Japan” in June 2022.

Public Private Engagement (PPE)

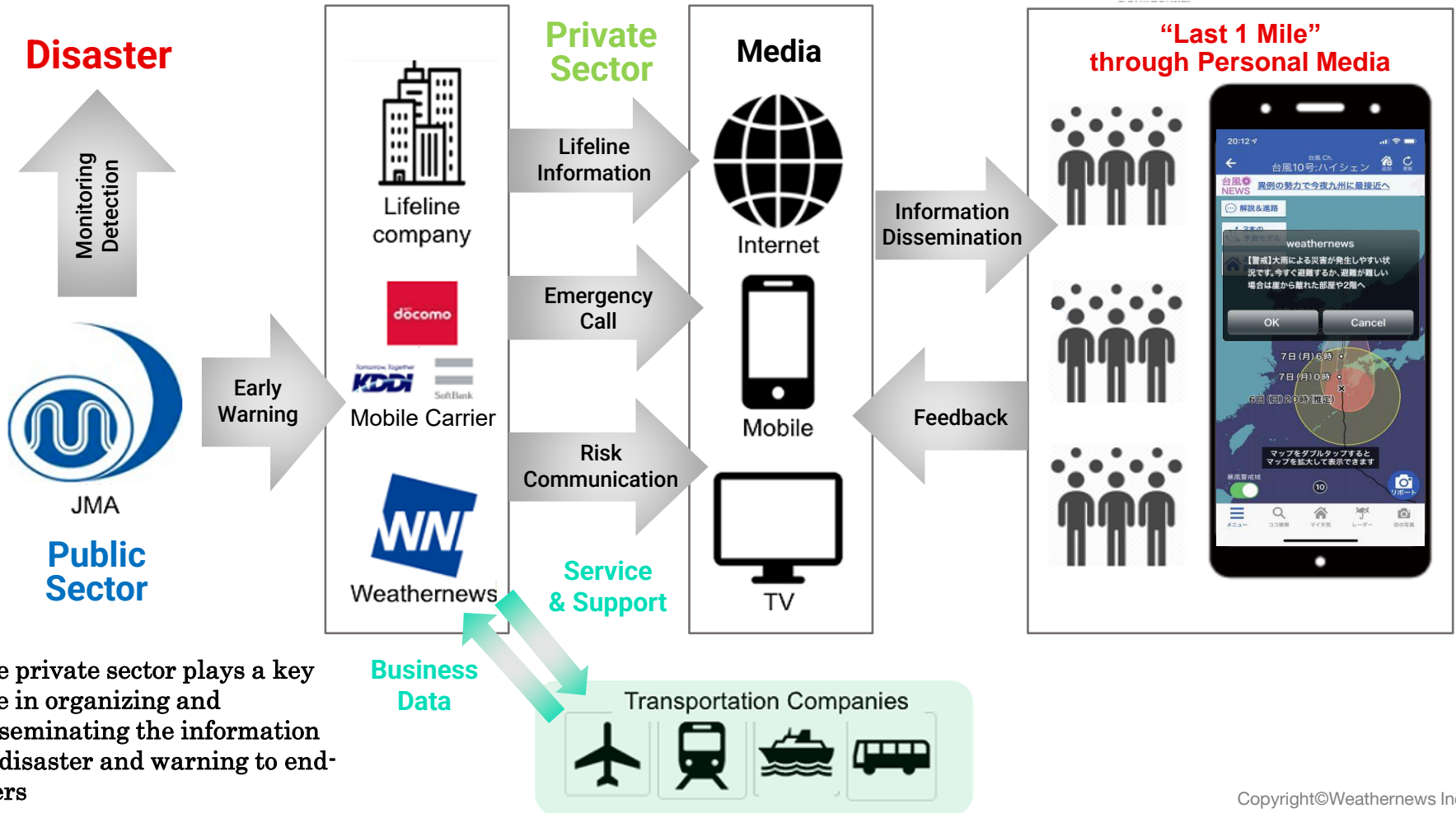
Legal Framework for Meteorological Services in Japan - Meteorological Service Act - (1952)

1993: Enhancement of Public-Private Partnership

- Establishment of an authorized organization for dissemination of meteorological data to the private sector
- Establishment of “certified meteorological forecasters” system
- Authorization of Public Weather Forecast by the Private Sector

 Japan Meteorological Agency	 <i>Always WITH you!</i>
Public Weather Platform	Your Weather Information Exchange Platform (interactive communication)
Weather Forecast Warning	Weather Forecast Solutions for Risks Warning Dissemination
Basic Observation	Original Obs. for Specific Services

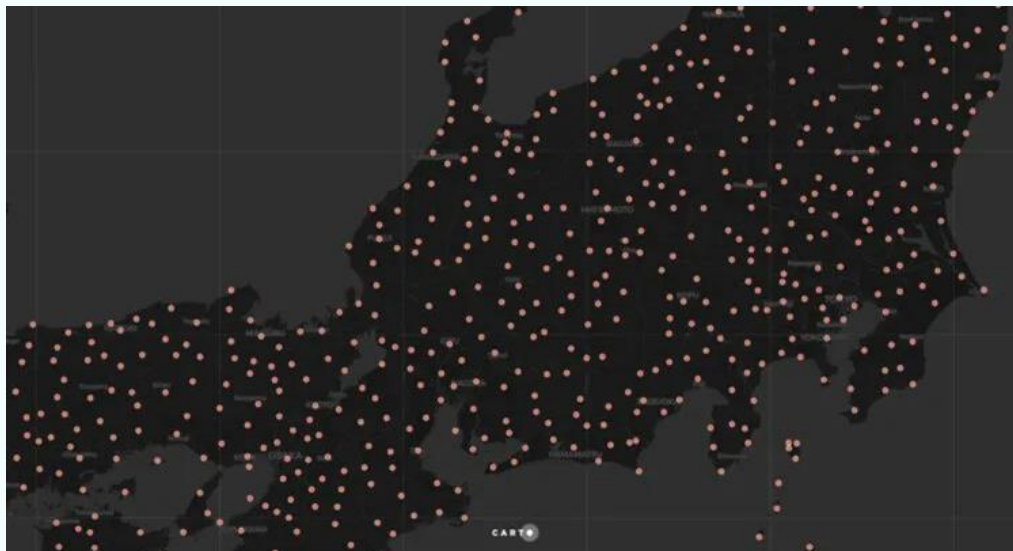
PPE: Warning Dissemination in Japan



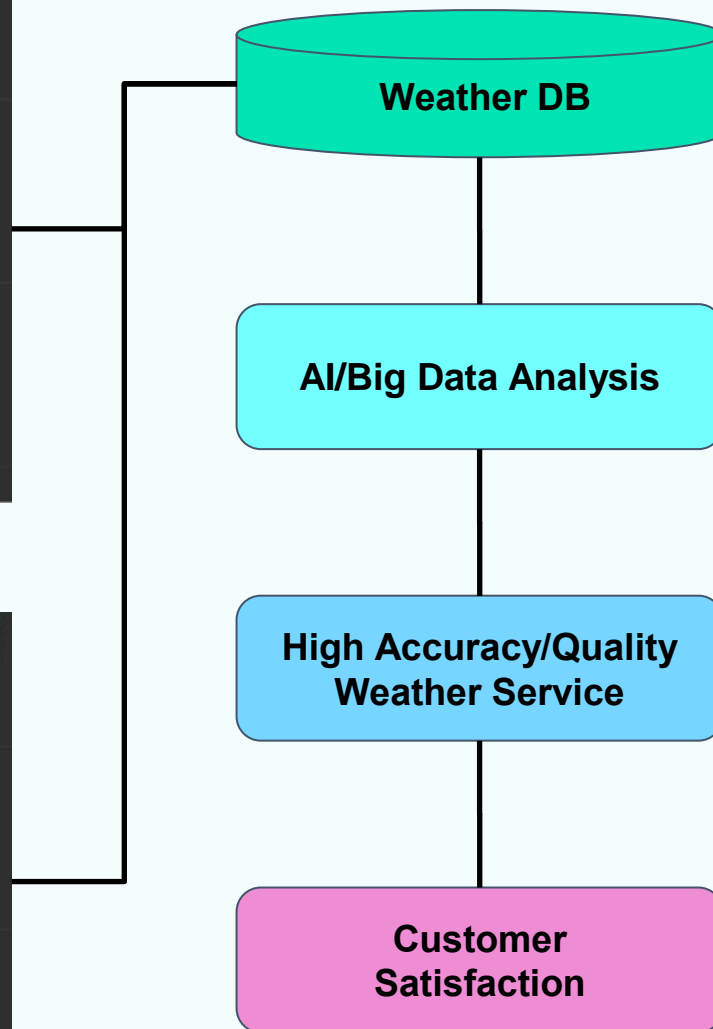
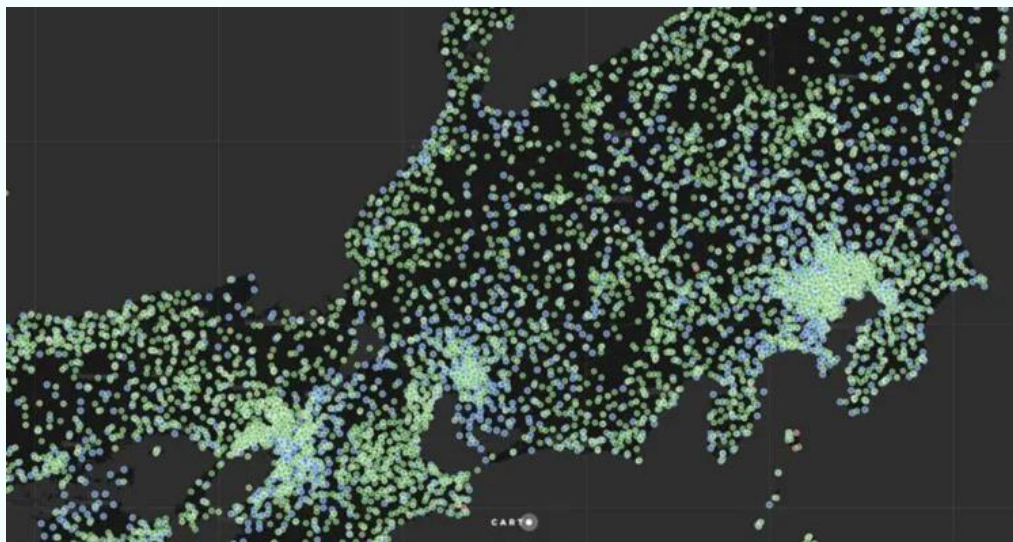
The private sector plays a key role in organizing and disseminating the information on disaster and warning to end-users

Public and Private Observations in Japan

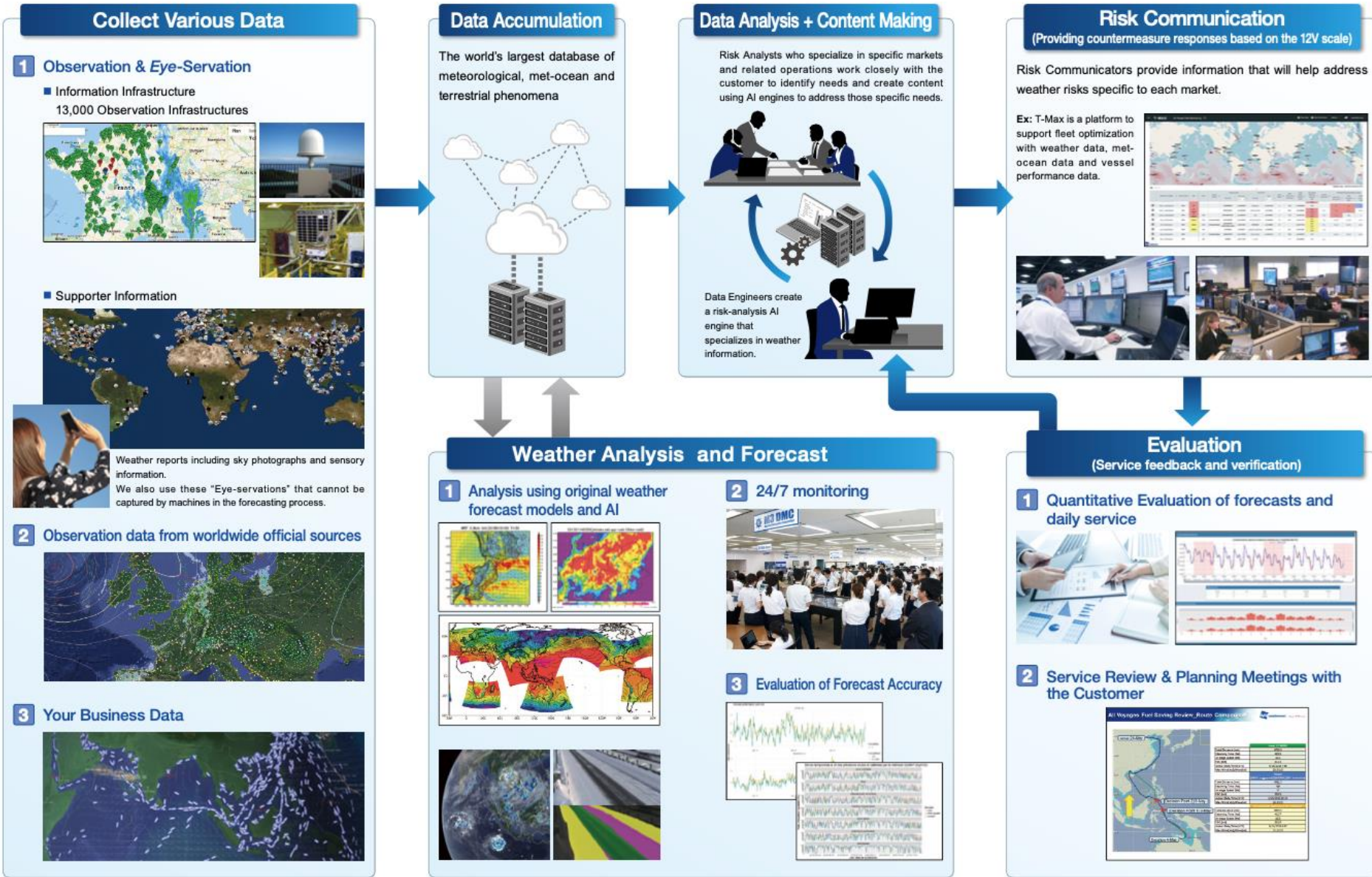
Observation Network of JMA (1,300 stations)



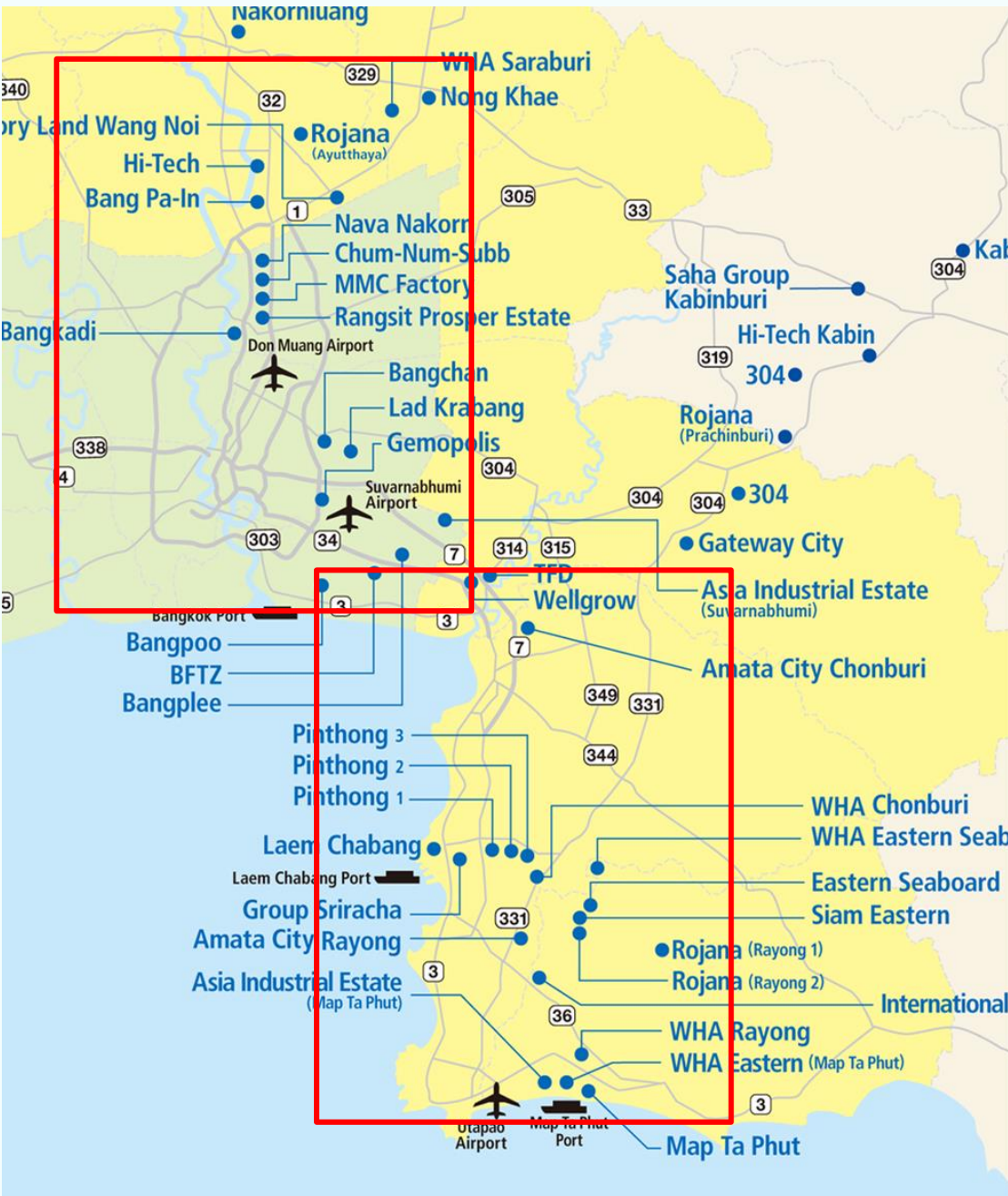
Observation Network of WNI (13,000 stations)



For Global Service and Development

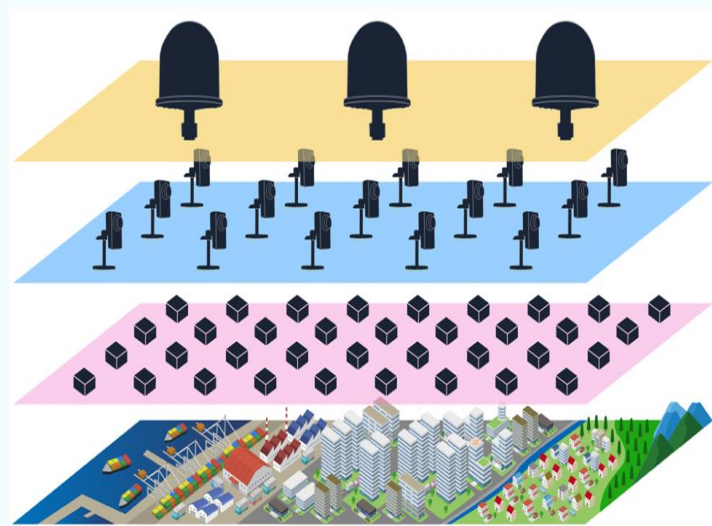





Service Case in Thailand (Start in Jan 2023)



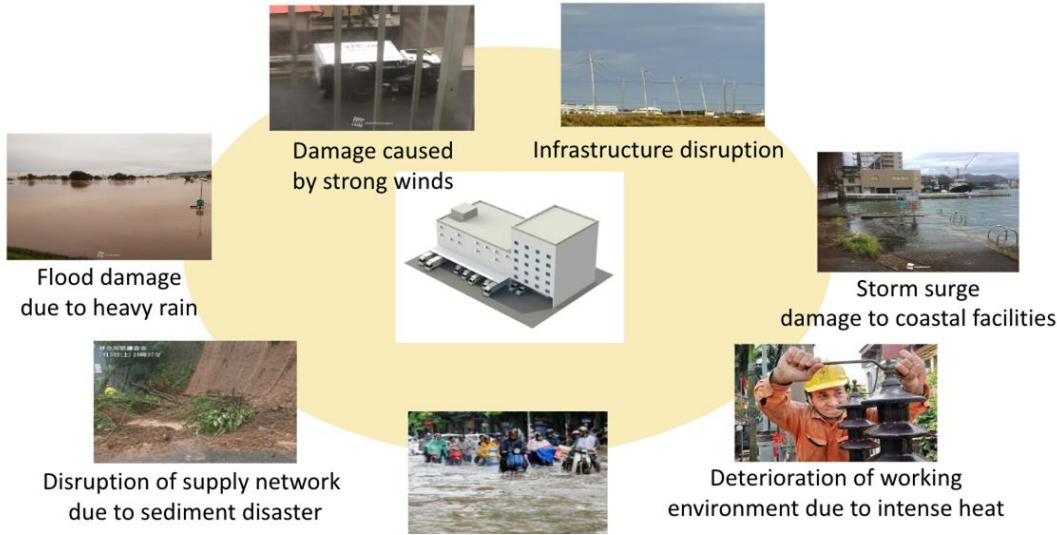
WNI invests and attempts to build an observation network with the same level of density as Japan with the Thailand society in the designated area.

WNI plans to set a station in each grid (at least) with the combination of existing public and academic stations to deliver advanced weather information service for disaster mitigation.

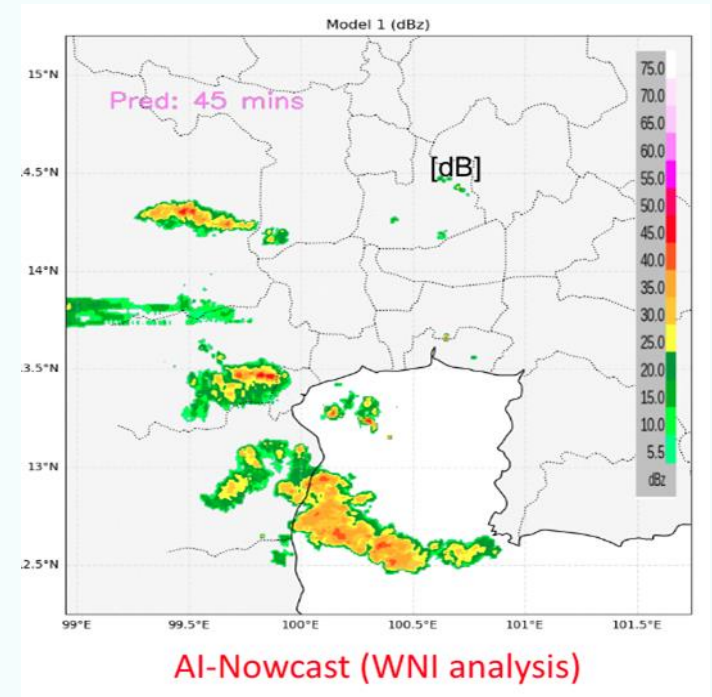
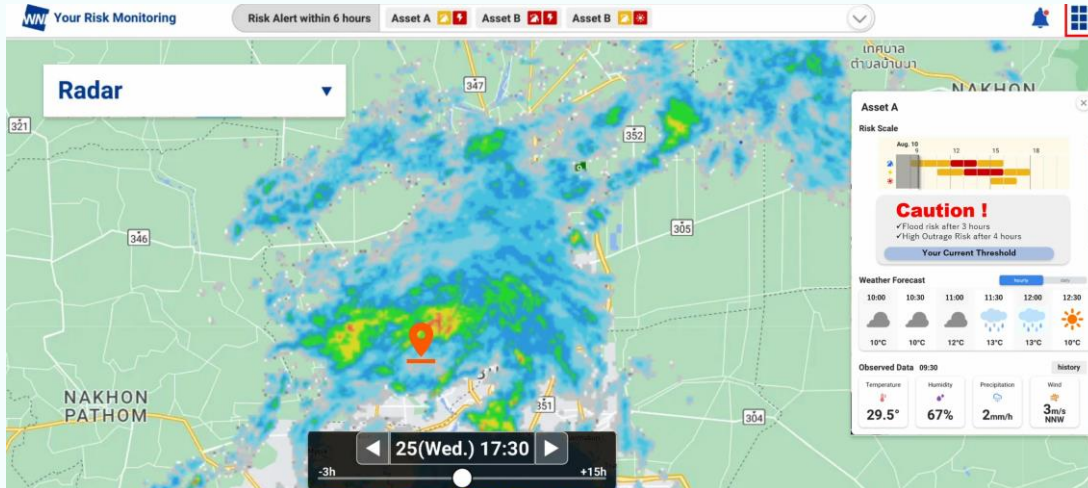


-  X-Band Radar
 -  Web Camera
 -  Weather IoT
- 17km x 17km Observation density
30km x 30km Camera Observation
C-Band / X-Band radar

Service Image in Thailand



With a number of observation networks in order to create / provide our weather information services especially short-range “nowcast” and “analysis” contents, WNI is attempting to sincerely contribute to the disaster risk management and support early warning in Thai society with our experiences & technologies.



Flood Risk in Climate Change (Thailand Case)

As information for flood countermeasures for factories, etc., we analyze and provide inundation depth due to floods and storm surges with a global 1km mesh.

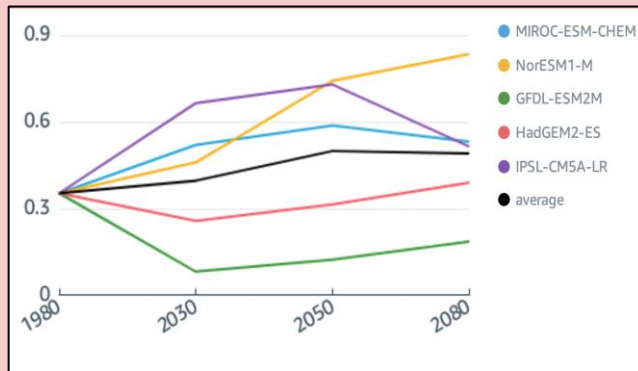
Thailand

Bangpoo Industrial Area



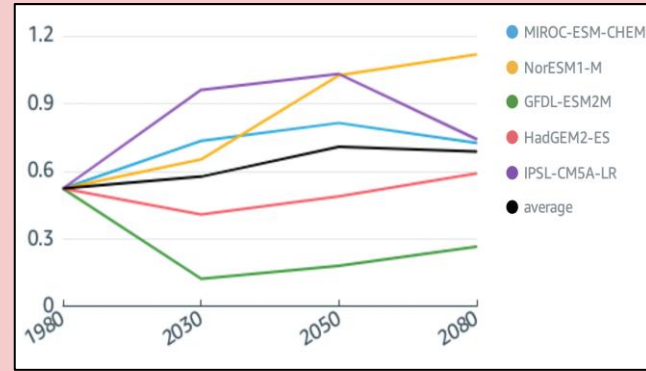
Estimated Flood Depth Equivalent to once in **100 years** (Occurrence probability 1% / Year)

[m]	2030	2050	2080
Max.	0.66	0.74	0.83
Avg.	0.4	0.5	0.49
Min.	0.08	0.12	0.19



Estimated Flood Depth Equivalent to once in **1000 years** (Occurrence probability 0.1% / Year)

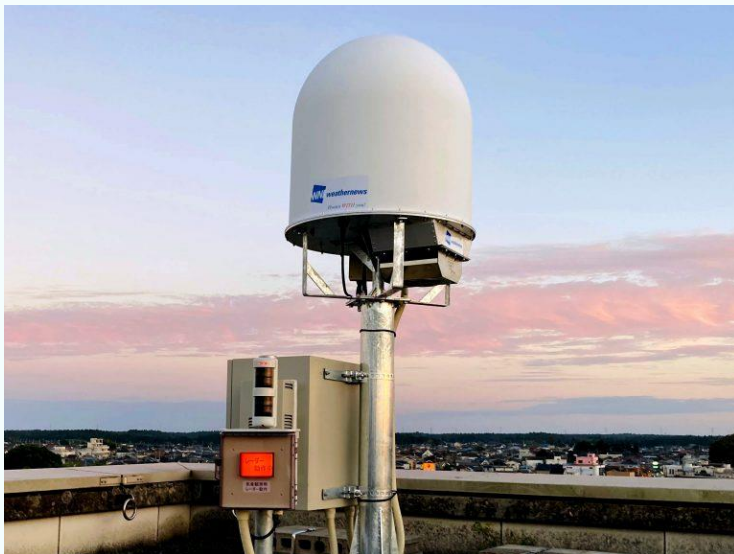
[m]	2030	2050	2080
Max.	0.96	1.03	1.12
Avg.	0.58	0.71	0.69
Min.	0.12	0.18	0.26



PPP : VCP (Voluntary Cooperation Programme of WMO)

A high-frequency compact X-band meteorological radar - "EAGLE Radar" is being installed in Hanoi, Viet Nam, within the framework of the Voluntary Cooperation Programme (VCP) of WMO, in cooperation with the Japan Meteorological Agency (JMA).

With higher-resolution observation data by the EAGLE radar, Weathernews Inc. and the Viet Nam Meteorological and Hydrological Administration (VNMHA) will contribute to the enhancement of resilience by improving the accuracy of weather forecasts and the detection of flood risks and decision-making regarding the issuance of warnings. The radar data is also expected to be used in connection with railways, roads, airports and other transportation infrastructures.



The EAGLE Radar is a new meteorological radar that performs 3D observation of 50-km periphery in 30 seconds.



Signing Ceremony of the Letter of Agreement for VCP Project Implementation at VNMHA HQ.

PPP : Joint Project for East Africa

Weathernews is joining the “SIP” national program led by the Council for Science, Technology and Innovation (CSTI) of the Japanese Government and developing “AI Chatbot” system for disaster prevention with the collaboration of National Research Institute for Earth Science and Disaster Resilience (NIED), National Institute of Information and Communications Technology (NICT) communicating through the mobile app platform of LINE.



In collaboration with UNESCO, Weathernews attempts to contribute to disaster prevention in East Africa nations by collecting and providing information related to disasters through mutual communication with end-users by utilizing the mobile app platform, which is most used in Japan as well as other countries. This joint training workshop has been organized with UNESCO and local governments.

Our Dream in India

Through business oriented service to decrease the weather and climate risk, WNI would like to contribute to the Indian society.

Business oriented service delivery with the private sector by:

1. Making investment and develop the dense observation network as Japan by WNI with the Indian society to provide the brand new services to avoid the weather risk based on “Nowcast(Short range forecast)”. Start from the BtoB factory customers.
1. Maximizing socioeconomic benefits of meteorological services with clearly defined roles and responsibilities of public and private sectors based on the mutual trust
1. Increasing accuracy of data and information with user feedback
1. Broadening the meteorological market through creating new value of the meteorological information
1. Through PPE, disseminating timely and reliable information to end-users, as a key component of People-centered Early Warning System

Challenges: Private Weather Services

Our experiences in Countries:

1. Requirements from customers for timely information
2. Requirements for site-specific quality data and information
3. No mechanism for data exchange
4. Premature business environment (data policy, market maturity, etc.) for private meteorological services

Due to insufficient “Data”:

- ▶ Data and information not available
 - No (open) data policy
 - No system for data distribution
 - Data ownership: not NMHS
- ▶ Data and information available on the NMHS Website but only images/charts/low-resolution data are provided
- ▶ Data and information available and accessible but much more expensive than the value of data (high barrier to purchase)

Our dream is to be the Weather Information Platform
to reduce the weather / climate risks & damages
for 8 billion people living in the world.

We hope, appropriate mechanism/system for PPE/PPP
will enhance and maximize the contribution of
Weather and Climate Enterprise to the Society **in India**.

Thank you

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

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