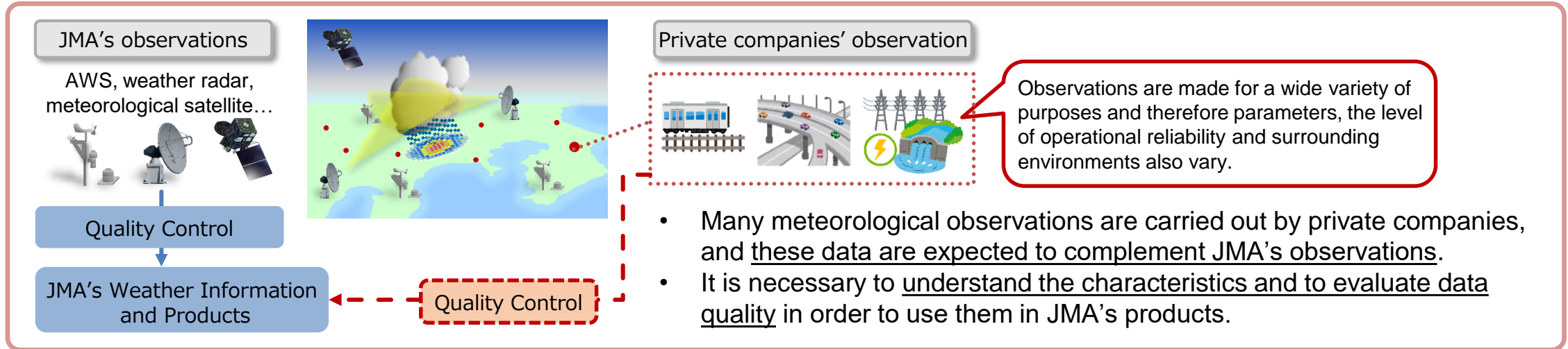


Public-Private Engagement in enhancing observation – opportunities and challenges

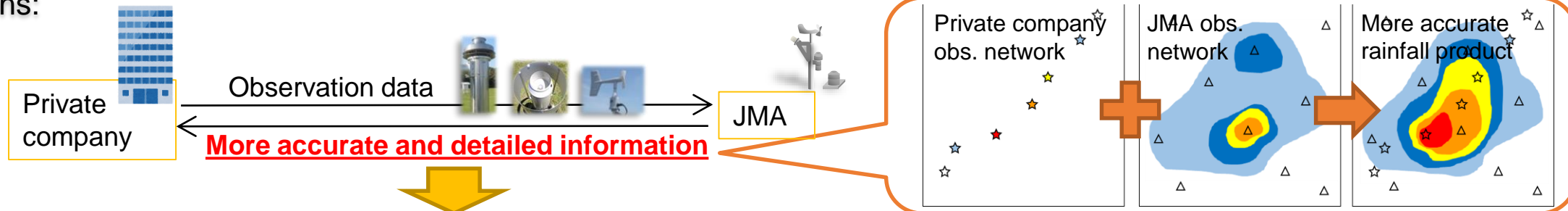
Eizi Toyoda (Dr./Mr.), Japan Meteorological Agency



JMA started a pilot study to investigate the possibility of use of observation data from networks operated by private companies in JMA's weather monitoring and forecasting operations.

- Key Question:**
- How can we present advantages of making observation data available to JMA?
 - How can we build win-win relationships between private companies and JMA?

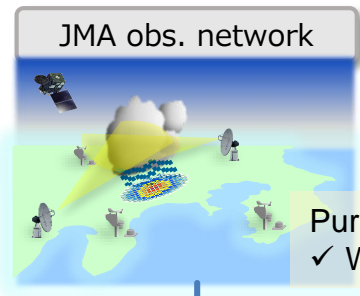
Idea of solutions:



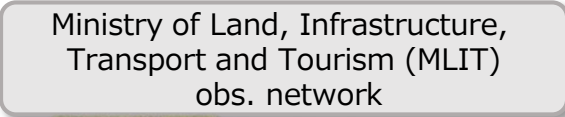
- **Increased consistency between government's disaster management actions and those of private sector**
→ For the private sector, it helps clarify the rationale for disaster management actions and enhance accountability.
→ For the public, it helps avoid confusion regarding disaster management actions.

Based on the above ideas, JMA will promote PPE and collaborate with private sector.

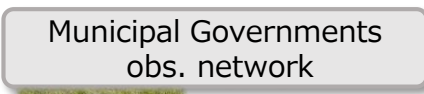
Case Study of Public-Public Cooperation ~ Radar/rain-gauge Analyzed Precipitation ~



JMA obs. network
Purpose:
✓ Weather monitoring



Ministry of Land, Infrastructure, Transport and Tourism (MLIT) obs. network
Purpose:
✓ Water management for rivers and dams
✓ Transportation infrastructure management

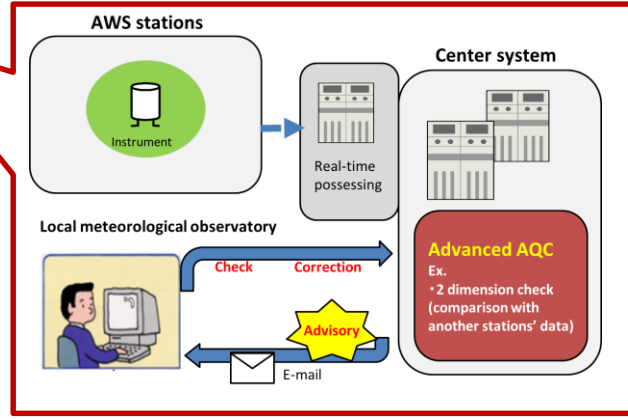


Municipal Governments obs. network
Purpose:
✓ Detailed monitoring of local weather conditions
✓ Evacuation decisions and disaster countermeasures

Quality Control

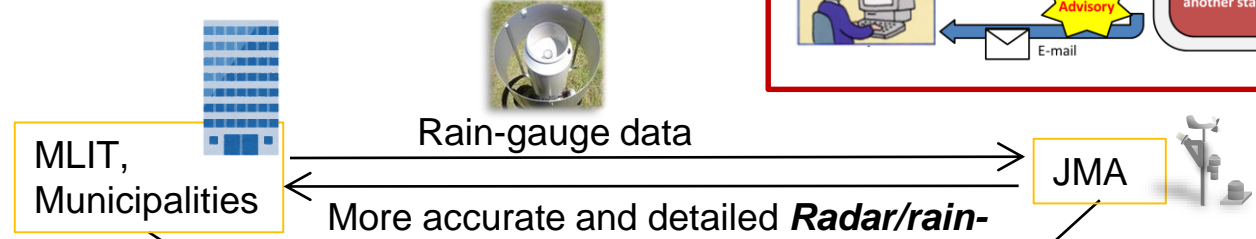
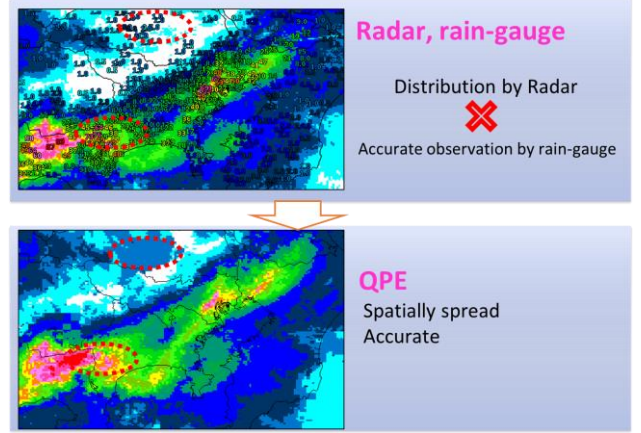
Quality Control in JMA

JMA has been collecting MLIT and municipal rainfall data since the 2000s. These rainfall data are used to create **Radar/rain-gauge Analyzed Precipitation** products.



What is JMA's Radar/rain-gauge Analyzed Precipitation?

✓ Ground-based rain gauge observations are used to calibrate for meteorological radar observations, and it gives precise rainfall distribution with no gaps in the plane.



➤ High quality and efficient administrative services (infrastructure management, disaster information release, etc.)

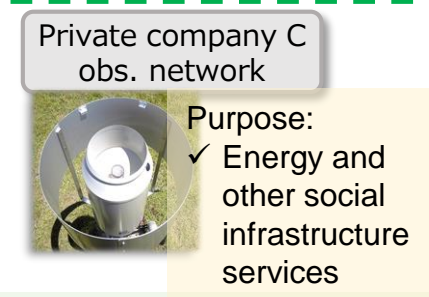
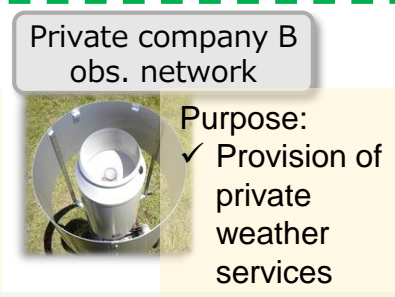
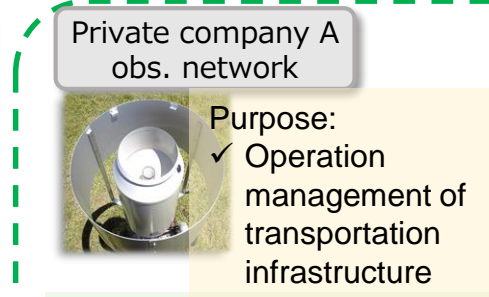
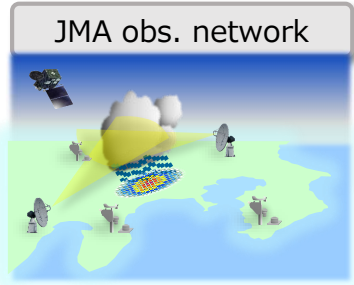
General Public

➤ Further improvements of the accuracy of weather information
➤ Provision of new products effective for disaster mitigation

→ It is expected that the more rainfall gauges on the ground, the more accurate the rainfall distribution will be. Therefore, JMA would like to collect as much rainfall data as possible, free of charge, for use in our services.

- **A win-win relationship was established** by strengthening the mutual disaster mitigation capability.
- **We would like to apply this successful case to the pilot study to investigate new data utilization possibilities.**

Pilot study to investigate the possibility of use of private companies' observation data



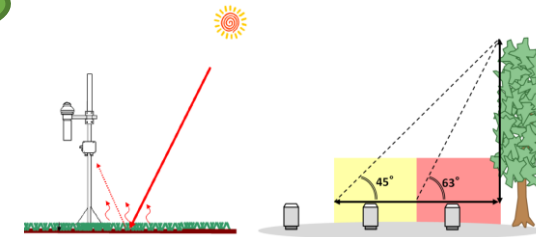
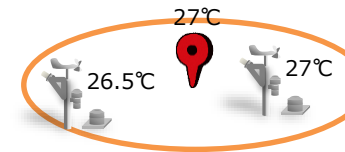
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In Japan, companies that provide social infrastructure services such as railways, highways, and energy, as well as companies that conduct weather observation on behalf of municipal governments, have developed their own observation networks.

JMA's Pilot Study:

- In March 2020, JMA publicly called for applicants from private sector who are willing to provide weather observation data to JMA at no charge.
- Currently, the pilot study has been conducted in partnering with several companies in multiple commercial sectors. Several private companies provide JMA with meteorological observation data and photographs of the observation sites. JMA is currently conducting characteristic surveys of the provided data.
- The study is aimed at examining quality control methods and find effective ways to use data from a variety of origins in JMA.
- The survey results will be shared with the participating companies, and will be used to examine how to make more effective use of the data for their own purposes.

How do we ensure data quality?



How do we build a win-win relationship?

