wasabi hot cloud storage

AI Robot Association

CASE STUDY

# Wasabi Creates Petabyte-scale Data Hub for AI Robotics Model Development

AIRoA, a Japan-based non-profit organization, developed a shared data lake to power a robot data ecosystem across industries.

**USE CASE:**

- Data lake
- AI data utilization
- Scientific research

**INDUSTRY:**

- Nonprofit Industry Association

## Overview

The AI Robot Association (AIRoA) is a non-profit organization aiming to build a "Robot Data Ecosystem" that enables data sharing, reuse, and continuous improvement across industries through the fusion of robots and AI. The team used Wasabi to successfully establish a petabyte-scale data hub infrastructure supporting the organization's robot data ecosystem.

## Challenges

In building the "Robot Data Ecosystem," AIRoA acquires and integrates real-world data from sectors such as retail, manufacturing, and logistics to enable cross-domain learning for foundation model development, post-training, and real-world deployment. The core component of the ecosystem is the data hub, which plays a pivotal role in storing and distributing raw data for AI model development.

- **High-volume transfers –** AIRoA's data hub would need to continuously upload dozens of terabytes of data.
- **Maintaining data integrity –** Any data loss during upload, storage, or download would render the data unusable.
- **Budgetary constraints –** As a non-profit organization, AIRoA needed to avoid solutions with variable costs.

> *Building this AI robot foundation model is a highly advanced effort that few have attempted at this scale, with many uncertainties still involved. Within this context, Wasabi is operating flawlessly despite its dynamic usage that continuously scales up. We can trust the data integrity, and it's contributing to AIRoA's activities.*
>
> **—Yoshihiro Noumi, Academic Specialist, Matsuo/Iwasawa Laboratory, Department of Technology Management and Strategy, Graduate School of Engineering**

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## Solutions

Given the data hub's strict requirements, Wasabi Hot Cloud Storage emerged as the leading candidate. AIRoA's project involves not only distributing and synchronizing data across GPU clusters and cloud environments to support large-scale model training but also extensive API usage for data uploads/downloads, differential checks during backups, and object listings. Utilizing Wasabi Hot Cloud Storage, which incurs no charges for these operations, makes cost management significantly easier. Initial testing confirmed that upload speeds were fast, and feedback from team members indicated regular processes were working normally. This led to the formal decision to adopt Wasabi.

- **Cost performance –** Wasabi's lack of data transfer and API fees meant AIRoA could perform extensive API operations without incurring additional costs.
- **Rapid ingest –** Thorough testing proved Wasabi could stand up to terabytes of raw data sent by AIRoA team members.
- **Data durability –** Data remained unaltered after upload, storage, and retrieval.

> *Since our budget has a cap, we wanted to avoid adding items with high cost uncertainty. In that regard, Wasabi seemed well-suited because it doesn't incur data transfer fees or API costs.*
>
> **— Yoshihiro Noumi, Academic Specialist, Matsuo/Iwasawa Laboratory, Department of Technology Management and Strategy, Graduate School of Engineering**

## Conclusion

AIRoA's vision for the future is an established AI model actively utilized across various industries, and robots equipped with these models can significantly enhance real-world applicability across industries. The data infrastructure supporting this development is already running on Wasabi.

- **Predictable pricing –**Wasabi's lack of data transfer or API fees kept AIRoA within budget and helped reduce projected costs by more than JPY 100 million compared with alternative providers.
- **Petabyte scale –** AIRoA's storage volume exceeds 2.2 Petabytes with more data to be added as the project continues. (As of March, 2026)
- **Operational stability –** Wasabi's reliable performance eliminates infrastructural uncertainty.

> *If you plan to do anything with AI, I recommend saving all your data. In that sense, thoroughly planning your data storage systems and infrastructure from the start is crucial.*
>
> **— Yoshihiro Noumi, Academic Specialist, Matsuo/Iwasawa Laboratory, Department of Technology Management and Strategy, Graduate School of Engineering**

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