

First in Tokyo, Drone to Cross Eitai Bridge and Other Bridges in Pharmaceutical Delivery Experiment

-Looking ahead to Level 4, aiming for a society where medicines can be delivered by drone on a daily basis-

Japan Airlines Co., Ltd. (Headquarters: Shinagawa-ku, Tokyo, President: AKASAKA Yuji, Representative Director; hereinafter JAL), KDDI Corporation (Headquarters: Chiyoda-ku, Tokyo, President: TAKAHASHI Makoto, hereinafter KDDI), Weathernews Inc. (Headquarters: Chiba City, Chiba Prefecture, President: KUSABIRAKI Chihito), Terra Drone Corporation (Headquarters: Shibuya-ku, Tokyo, President: TOKUSHIGE Toru), and East Japan Railway Company (Headquarters: Shibuya-ku, Tokyo, President: FUKASAWA Yuji) will conduct a demonstration experiment from February 8 to February 10, 2022, (hereinafter "this demonstration") for the first time in Tokyo using a drone to cross several major bridges, including the Eitai Bridge over the Sumida River, as part of the "Social Implementation Project for Drone Logistics Platform in Tokyo" (*1) adopted by the Tokyo Metropolitan Government.

This is a demonstration experiment in anticipation of the "unassisted, non-visual flight in a manned zone (Level 4 flight)," which is scheduled to come into effect by fiscal 2022, and aims to realize a society that can provide immediate, on-demand transportation in times of emergency and disaster, and deliver medicines on a daily basis, regardless of road congestion.



<Drone flying over the Sumida River>



<Picking up the package>

In this demonstration, the flight route over the Sumida River was selected to minimize risk in preparation for the flight in Tokyo, one of the world's most densely populated areas with a population of approximately 14 million. By utilizing JAL's operational and safety know-how related to air travel and KDDI's flight management system, sufficient safety management was carried out and a flight system was established to enable demonstration.

Through this demonstration, we will verify operability and businessability closer to real life and contribute to the social implementation of drones.

【Outline of this demonstration】

1. Date: Feb. 8, 2022 to Feb. 10, 2022 (preliminary date: Feb. 15/16, 2022)

2. Flight Route:

Assuming a delivery from MEDICEO Shin Tokyo Building to St. Luke's International Hospital, it will fly about 2.0 km over the Sumida River, crossing three bridges from point A (near the Sumida River Bridge) to point B (near the Tsukuda Bridge).



< Flight Route >

3. Drone Aircraft: ACSL-PF2 (ACSL)

4. Contents of verification

- ① Quality Management...Based on the government's "Guidelines for drone delivery to pharmaceuticals" (*2)
Verify temperature changes and fixation conditions during delivery
- ② Delivery Times...Verify the number of deliveries that can be made per day per aircraft by conducting multi-frequency operations.
- ③ Feasibility of On-demand Delivery...Verify the time and process required from order to delivery

5. Cooperating Companies

MEDICEO CORPORATION

- ...Assistance in verifying pharmaceutical delivery business model, pharmaceutical transportation advisor
- St. Luke's International University, St. Luke's International Hospital
- ...Cooperation in verification of pharmaceutical delivery business model

※The demonstration will be conducted after thorough countermeasures against infection by the new coronavirus are taken. In addition, depending on the status of the infection in Tokyo, there is a possibility that the content of the demonstration will be changed.

■JAL's Approach

JAL has so far conducted a demonstration experiment assuming the delivery of pharmaceuticals in Sumoto City, Hyogo Prefecture, a densely populated area(*3), and a joint study with MEDICEO CORPORATION on the transport of pharmaceuticals using drones.(*4) In the future, we will utilize the knowledge gained from this demonstration to solve issues in overall pharmaceutical logistics, including the transportation of pharmaceuticals from hospitals and pharmacies to those who actually need them. By utilizing drones, we will contribute to the establishment of a new logistics network that can quickly and efficiently deliver medicines that are familiar and important to people's lives.

■KDDI's Approach

KDDI hopes to realize a world in which drones fly autonomously and help people through the smart drone that are compatible with mobile communications.

We are working together with our customers in the fields of logistics, surveillance, inspection, surveying, and agriculture to realize each of these ideas, such as delivering packages to the elderly who cannot go shopping, taking over dangerous tasks that put lives at risk, and automating agricultural work so that we can pass on our precious fields to the next generation, while paying attention to how we can be of service to others.

For more information on smart drones and examples of services provided, please refer to the website.

•the Smart Drone Website (<http://smartdrone.kddi.com/>)

(*1) Press Release, August 31, 2020 "KDDI, JAL, JR-EAST, Weathernews, and TerraDrone to Participate in Drone Logistics Business Development Project of Tokyo"

URL: <https://press.jal.co.jp/en/release/202008/005748.html>

(*2) Created by the Cabinet Secretariat, the Ministry of Health, Labour and Welfare and the Ministry of Land, Infrastructure, Transport and Tourism in June 2021

URL: <https://www.mlit.go.jp/common/001411070.pdf>

(*3) Press Release, November 24, 2021 "Demonstration Test was Held in Hyogo-prefecture with an Eye toward Drone Level4 Operation in Urban Areas."

URL: <https://press.jal.co.jp/en/release/202112/006405.html>

(*4) Press Release, November 30, 2021 "JAL × MEDIPAL Started Joint Study on Pharmaceuticals Transportation Using Drones"

URL: <https://press.jal.co.jp/en/release/202112/006407.html>