



July 24, 2017 Mitsui Fudosan Co., Ltd.

Mitsui Fudosan conducts Proof of Concept for drone in Nihonbashi, Tokyo with a CVC-backed startup.

-Generating 3D models of jobsites for construction management-

Tokyo, Japan, July 24, 2017 - Mitsui Fudosan Co., Ltd., a leading global real estate company headquartered in Tokyo, has conducted a PoC for drone-based, real-time image capturing at a construction site in Nihonbashi-Muromachi 3-chome, Chuo-ku, Tokyo in July 2017 with Dronomy Ltd., a portfolio company of "31 VENTURES Global Innovation Fund I," Mitsui Fudosan's first CVC fund.

■Drone-based, real-time image capturing demonstration in central Tokyo construction site

In the PoC, Mitsui Fudosan tested autonomous flight technology and real-time image capturing solutions developed by Dronomy. Through the test, Mitsui Fudosan took aerial photos of the "Nihonbashi Muromachi 3rd District Project (site size: approx. 1.2ha)" being built by Kajima Corporation and its JV partners. Following the autonomous drone flight, Dronomy's software generated a 3D model of the building under construction at the site using images that had been processed, viewed and analyzed on its cloud platform. Mitsui Fudosan will consider utilizing the data as tools for project management such as in the measurement of buildings and in communications among stakeholders. Mitsui Fudosan will also pursue a feasibility study of labor cost reductions and improvement of safety management on construction sites with this technology.





A drone scanning from the sky above Nihonbashi, Tokyo

Creating 3D data from aerial imagery

■Israeli startup Dronomy providing highly accurate drone-based reality capture

Dronomy was established in 2015 by former drone researchers in the Israeli Airforce and a former commander of the Israeli Air Force geoinformatics unit. Dronomy has developed software enabling autonomous flight at construction sites while capturing hundreds of images, and for processing those images on the cloud to create 2D, 3D and 4D models that provide actionable insights on construction projects. Specifically, drones can be flown not only above, but also along the sides of buildings, and 3D data is created with a degree of accuracy within 1 cm. This state-of-the-art, drone-based, real-time image capturing is currently available for construction sites, and the data is expected to enhance productivity and safety of construction. Dronomy plans further expansion of its services in Japan.

Dronomy Technology Points

- · Highly accurate aircraft control technology
- · Software capable of setting flight routes, taking photos and creating 3D models on a one-stop basis
- ·Capable of creating 3D data with only about a 1 cm difference in consecutive photographing
- ·Unique algorithms enable change detection between two consecutive scans or between 3D design and 3D scan

■Mitsui Fudosan's Venture Co-creation Department "31VENTURES"

Mitsui Fudosan has been accelerating its efforts in working with startups for the ultimate goal of creating new industries both to strengthen Mitsui Fudosan's business and to expand the scope of its operations. In 2015, Mitsui Fudosan established the Venture Co-creation Department to achieve co-creation of new industries together with startups by providing fully integrated venture capital services - "Finance," "Support" and "Community" - for ambitious startups.

Website: http://www.31ventures.jp/en/

■Comment by Akira Sugawara, General Manager of Venture Co-creation Department at Mitsui Fudosan

"Mitsui Fudosan has supported startups to create new industries. The PoC was conducted to support the expansion of Dronomy into the Japanese market, but has also become a major trigger for enhancing the utilization of technology for streamlining project management in the Nihonbashi-Muromachi 3rd District Project. Mitsui Fudosan will proactively continue to work with startups to open the way for a new era in the real estate industry.



Dronomy Representative Mr. Aphek (left) and a member of Mitsui Fudosan's 31VENTURES (right)



Drone-based, real-time image capturing