

PRESS RELEASE

Aizawa Concrete Partners with Heavy Lift Long Range UAV provider 'Top Flight Technologies' for Proactive Road and Bridge Aerial Inspection and Repair



- Aizawa teams up with Boston-based aerospace company to scale commercial UAVs for road and bridge network inspection and repair throughout Hokkaido and Japan
- The partnership to cultivates new business opportunities around specialized heavy-lift, long-range (HLLR) UAVs for aerial inspection, analysis and operations targeted specifically for concrete roads, bridges and infrastructure
- Top Flight's Airborg® UAV with its patented hybrid-electric power system allows for extended flight times and heavier payloads for commercial use

Hokkaido, May 31, 2019 — Aizawa Concrete Corporation (“Aizawa”) today announced a strategic partnership with Top Flight Technologies, Inc. (“Top Flight”), a leading provider of heavy-lift, long-range (HLLR) hybrid-electric unmanned aerial vehicle (UAV) technologies, as part of its broader effort to utilize new robotic technologies to proactively inspect and maintain concrete roads, bridges and infrastructures.

Aizawa will team up with the Boston-based aerospace company to accelerate the operational efficiency of both Line-of-Sight (LOS) and eventually Beyond-Visual-Line-of-Sight (BVLOS) inspection of transportation roads, bridges, and infrastructure throughout Hokkaido and Japan. Joint efforts will extend to cultivating new business opportunities around commercial UAVs configured specifically for concrete-based inspections and various types of repair, leveraging both Top Flight's patented hybrid-electric powered Airborg® UAV and its 3D Real-time Simulation Environment & Fleet Management System for remote UAV operations.

Top Flight's patented hybrid-electric power system is instrumental in developing HLLR semi and fully

autonomous mission UAV-centered business models. Top Flight Airborg® UAVs can stay airborne for up to two hours, while carrying a load of up to ten kilograms. The American aerospace company also offers a companion '3D Real-time Simulation Environment & Fleet Management System' used for pilot training and to build and test autonomous missions in simulation. The system also provides a "Remote Location Operation Console' that enables simultaneous operation of multiple UAV units.

Aizawa also seeks to enhance its existing operations with the application of robotic drone products and services – particularly for high-definition (HD) inspection, inventory and maintenance of assets under contract.

"In addition to solving the challenges of longer-duration flight for flying robots, Top Flight is developing the advance sensors and technologies that will maximize the effectiveness of our aerial inspection needs including quality analysis that will save our customers future ongoing maintenance costs," said Yoshihiro Aizawa President & CEO of Aizawa Concrete Corporation. "Aizawa continues to invest in technologies that can extend the life of concrete and infrastructure products while controlling the ongoing cost of maintenance."

"Aizawa's partnership with Top Flight confirms that many industries can develop "3-D mobility" new revenue-based quality services and improve operational efficiencies utilizing UAV technology," commented Dr. Long Phan, CEO, Top Flight Technologies. "This is an excellent example of bringing two entities that have deep knowledge in our respective areas of expertise but will spur new ways of addressing these same needs around the globe."

Founded in 2014, Top Flight Technologies, specializes in heavy-lift, long-range fully autonomous technologies for UAVs using its patented hybrid-electric power systems. The company is largely comprised of MIT alumnus in its engineering and management team and boasts a long list of world-renowned partners across aerospace, transportation, agriculture, and many other industries.

The global UAV (commonly referred to as 'drones') market, is growing at a fast pace, expected to garner \$22.1 billion by 2026.

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About Aizawa Concrete Corporation

Established in 1963, Aizawa Concrete Corporation is a quality manufacturer and sells cements, ready-mixed concretes, pre-stressed concretes, concrete piles, and other housing materials. Aizawa Concrete is steadily growing from its base in Hokkaido, Japan.

More information about Aizawa Concrete Corporation and its products can be found at:

<https://www.aizawa-group.co.jp/>

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