

Near Earth Autonomy extends autonomy to large-scale VTOL aircraft

[Pittsburgh, PA – August 21st, 2020] — With support from Naval Air Systems Command (NAVAIR), [Near Earth Autonomy](#) and Kaman Aerospace have partnered to develop an intelligent autonomy system for the K-MAX helicopter, a large-scale transport aircraft capable of lifting a payload of 6,000 pounds. The capability developed will be broadly applicable to large aircraft that can take off and land vertically with a large set of commercial and military applications.

In 2014 Near Earth worked with the Office of Naval Research to develop a package of sensors and software for testing autonomy on a full-scale helicopter in the [Autonomous Aerial Cargo/Utility System \(AACUS\) project](#). Implementation of the technology has continued on small and medium-sized vehicles, under the [Joint Capability Technology Demonstration \(JCTD\)](#) military program. Near Earth's continued work on large-sized transport aircraft builds on past expertise, demonstrating that one architecture can work well across a wide range of different aircraft types and sizes.

Using sensors and computing onboard, the aircraft can sense its environment to make real-time flight decisions such as deciding to fly around objects in the flight path and selecting clear places to land or to drop off cargo. Applications for safe autonomous aerial logistics include the efficient movement of military supplies, patients, and Warfighters. Autonomous large-scale heavy transport also enables commercial applications for delivery and urban air mobility.

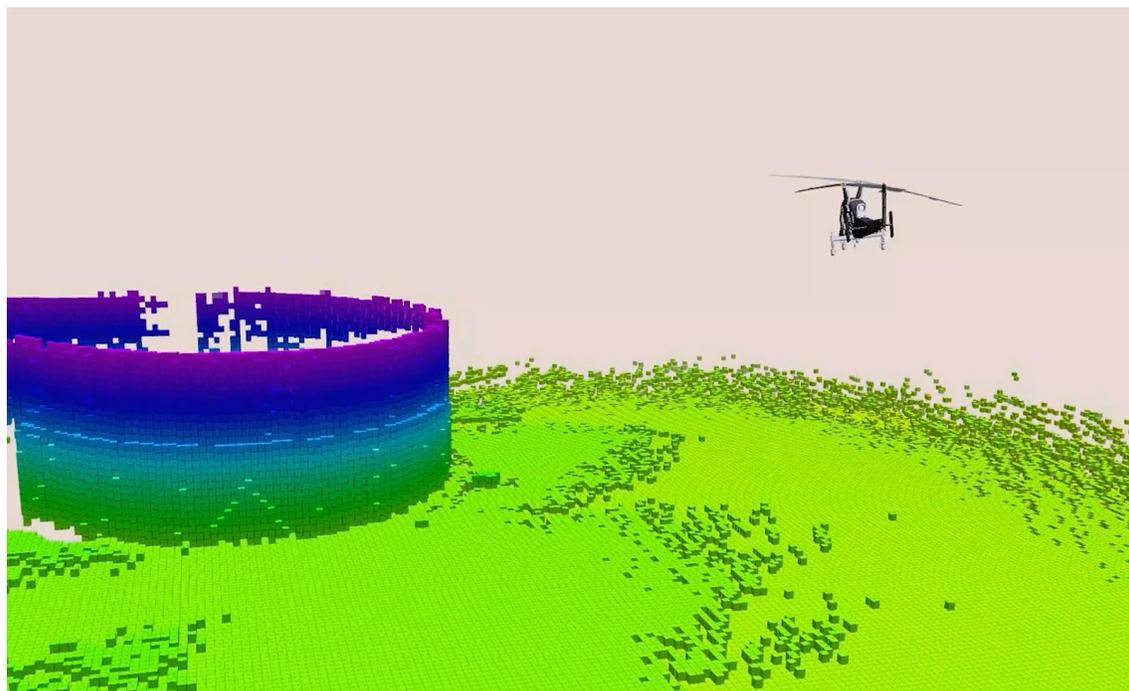


[Video of autonomy at full scale](#)

Environmental awareness is essential for the vehicle to be able to avoid obstacles and complete autonomous missions safely and efficiently. The graphics below show the autonomy system's awareness of the physical world around it.



Aircraft flying around structure



The real-time reconstruction of the structure



Near Earth system mounted on the K-Max



Near Earth system evaluating a landing zone to identify safe landing points

Sanjiv Singh, CEO of Near Earth, comments, "Our past efforts laid a strong foundation for solving complex autonomy challenges for small, medium, and large vehicles. Thanks

to our dedicated team, partners, and sponsors, we are moving from the art of the possible to the art of the practical and in specific, to making autonomous flight safe, efficient, and robust enough for daily operation. This program will serve as an important milestone in making autonomous logistics a reality.”

About Near Earth Autonomy

Near Earth’s technology allows aircraft to autonomously take-off, fly, and land safely, with or without GPS. Their solutions enable aerial mobility and inspection applications for partners in the commercial and defense sectors. Near Earth bridges the gap between aerospace and robotics with complete systems that improve efficiency, performance, and safety for aircraft ranging from small drones up to full-size helicopters. Their work won the 2018 Howard Hughes Award, which recognizes outstanding improvements in fundamental helicopter technology, and was a 2017 finalist for the Collier Trophy, one of the top aviation awards in the world.

For additional media and information, please visit:

- Website: <https://www.nearearth.aero/>
- Facebook: <https://www.facebook.com/Near-Earth-Autonomy-238476926498289/>
- LinkedIn: <https://www.linkedin.com/company/near-earth-autonomy>
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