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H3 Dynamics' Aerial Hydrogen Fuel Cells to Boost Range of Autonomous Cargo VTOL Aircraft Built by Qdot (UK).

- **New zero emissions VTOL UAV can fly 600km, or carry 200kg for up to 250 km**
- **Enabling technologies offer new possibilities for the broader UAV & Aviation Sector**

Oxford (UK), and Toulouse (France), September 18, 2024 – Oxford's Qdot Technology and Toulouse-based H3 Dynamics are working together on the world's first emissions-free long range cargo UAV, creating new ways to transport heavy payloads to remote locations.

As part of this collaboration, H3 Dynamics' hydrogen-electric fuel cell system is hybridized with Qdot's unique battery technology and new ultra-light heat exchangers. Furthermore, a new multi-pitch propeller system provides a seamless transition between vertical hover and fixed-wing flight.

By bringing together these advanced technologies into one platform, electric flight endurance is greatly increased, and payloads of up to 200 kilograms could be flown over long distances.

Qdot is a spin-off from Oxford University's Thermofluids Institute, and is comprised of a team of world-class scientists and technology experts. Its one-of-a-kind approach on thermal management across various elements of the aircraft powertrain gives it a unique advantage over traditional UAV developers and system integrators.

These capabilities provide an aerial platform for many different kinds of mission profiles, including middle-mile aerial logistics, medical transport, search and rescue to name a few - while also exceeding the range and payload capacity of similar-sized aircraft and helicopters currently deployed for these duties.

"Our hybrid powertrain strategy enables uncrewed aircraft to meet the necessary range and payload capacity, paving the way for new applications, stated Dr Jack Nicholas, CEO of Qdot Technology.

H3 Dynamics is supporting Qdot Technology by providing hydrogen-electric solutions designed to aerospace standards to ensure qualification and validation by aviation authorities. H3 Dynamics' fuel cell system is now an integral part of Qdot's hybrid powertrain. "

We are excited in our partnership with Qdot and are looking forward to integrating Qdot's capabilities into our solution offering" stated Bertrand Gauthier, co-Founder and Head of European Operations at H3 Dynamics.

As Qdot plans to scale its technologies from heavy-lift cargo UAVs to larger manned aircraft including eVTOLs and light business jets, H3 Dynamics is already paving the way with a number of adjacent developments together with a number of Aircraft OEMs and Institutions, all of which will soon benefit from Qdot's innovations.

About Qdot Technology www.qdot.tech

Qdot Technology Ltd. is an Oxford University spin-out company whose mission is to enable clean flight by leveraging thermal management expertise to create hybrid propulsions systems. Qdot Technology brings together a world-class engineering team with extensive knowledge in various fields, such as avionics, thermal management, battery chemistry, fuel cells, additive manufacturing and more.

The founding team's first thermal management innovation was a heatsink design for a nuclear fusion power plant – a component that must endure 100,000 times the power of the sun. Building on this background, Qdot has developed new IP in thermal management systems for high power density batteries as well as compact heat exchangers using advanced additive manufacturing methods.

About H3 Dynamics www.h3dynamics.com

H3 Dynamics is accelerating the world's transition to sustainable aviation by bridging the gap between hydrogen technologies and aerospace requirements, while also working on dropping the cost of green hydrogen – a key ingredient in the production of sustainable e-fuels. From its locations in Toulouse and Austin, the company offers a broad range of aviation-specific fuel cell power solutions to aircraft OEMs, Airports – enabling light aviation, CS25 main power and auxiliary power, as well as e-VTOL, and Unmanned Systems. The company is an active contributor at EUROCAE Working Group 80 and Alliance for Zero Emission Aviation Working Group-4 in Brussels, as well as drafting fuel cell certification strategy for both EASA and FAA.