



Case Study

Shell Oil in the Arctic

UAV Operations in Commercial Environments



Client:

Shell Oil company

Summary of Core Activities:

- VT Group was asked to setup and conduct flight operations at sea in the Arctic Circle for Shell Oil.
- The first unmanned operator to get a certificate of authorization.
- Pioneering commercial application of unmanned systems.

Unmanned aircraft have traditionally been used in missions that are considered dull, dirty or dangerous. These missions have been focused on supporting military operations, the primary user of this technology. In 2007, VT Group, working for Shell Oil, applied this same mindset to develop and prove the concept of operating at sea commercially in an environment too risky for manned operations.

In order for an industry to develop operations, typically the U.S. Government requires environmental impact studies to be performed. In the Arctic Circle, such development was being planned and as a condition of licensing, the industry is required to fund studies on the impact to various marine life in the area. Shell was required to prove they could track and monitor cetaceans in order to make sure their migration patterns were uninterrupted by drilling operations. Until this operation, that monitoring was being performed by flying manned planes over long stretches of Arctic Ocean. This process presented a risk that was unacceptable to a safety-driven industry. VT Group was identified as the solution to alleviate that risk.

Our mission was to setup and conduct flight operations at sea in the Arctic Circle. Our goal was to legitimize the use of unmanned aircraft to achieve the same objectives of the manned aircraft in tracking marine life, while minimizing the risk to personnel.

Among our greatest challenges was getting a Certificate of Authorization (COA). As with most federal regulations change is slow and getting approval from the FAA proved to be one of the greatest challenges of the program. VT Group was the first unmanned operator to get a COA and has become an expert in navigating the challenging and often bureaucratic process of flight approvals.

The operation occurred over a six week period at sea with challenging weather and flight conditions. The team also overcame significant technological challenges proving that such an operation was cost effective and safe. As a result of the operation, continued expansion and development of this program has occurred, putting VT Group at the forefront of the industry in using technology safely and efficiently.

Unmanned systems are now common place in militaries around the world. Less common, however, is applying this technology in the civilian sector. While this is a natural transition for these systems, someone had to do it first. VT Group is pioneering its application in the commercial sector, and is proving that such operations fit into corporate models driven by reducing risk and cost. The flight operations in the Arctic Circle have been a tremendous success and part of the pioneering legacy that has become VT Group.

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