



VOLATUS CASE STUDY **A NEW FLIGHT PATH** **FOR HEALTHCARE: THE** **DRONECARE PROJECT**

2024 / CASE STUDY

A NEW FLIGHT PATH FOR HEALTHCARE: THE DRONECARE PROJECT

INTRODUCTION

The COVID-19 pandemic exposed critical gaps in healthcare logistics, particularly the timely transport of short-lived medical products. In response, Drone Delivery Canada (DDC) a Volatus Aerospace ("Volatus") company and Halton Healthcare expanded the Care by Air project to a phase two pioneering drone logistics initiative called DroneCare. This initiative is the first in Canada to deliver vital medical supplies from hospital-to-hospital for on-site diagnosis, treatment and care via drone technology.

CHALLENGES & OBJECTIVES

Traditional transportation systems for medical deliveries are often delayed by traffic congestion, road conditions, and scheduling inefficiencies.

Time- sensitive items like blood and urine samples require rapid, secure, and reliable delivery to ensure patient care is not compromised.

Halton Healthcare sought a solution to reduce delivery times for critical medical supplies, improve the efficiency of inter-hospital logistics and increase resilience during public health crises

SOLUTION

DDC/Volatus deployed a drone logistics network using DDC's Canary RPAS ("Remotely Piloted Aircraft System"), flying between: Milton District Hospital (Milton, ON) and Oakville Trafalgar Memorial Hospital (Oakville, ON).



The 10.7km bidirectional route is completed in 13–15 minutes, depending on weather conditions. The Canary transports various patient lab specimen, including blood and serum chemistry tests, blood bank materials and urine cultures.

DroneCare also achieved official approval for Beyond Visual Line-of-Sight (“BVLOS”) flights in tandem with the transportation of dangerous goods for its DroneCare route, marking a significant milestone in the development of its drone delivery capabilities in the healthcare market segment.

The system operates unmanned and fully automated, monitored from DDC’s Operations Control Centre in Vaughan, ON, in full compliance with Canadian aviation regulations.



RESULTS

The DroneCare project has enhanced the chain-of-custody for critical medical samples, offering a reliable and traceable method of transport that minimizes the risk of contamination or loss. By shifting the transport of medical samples from traditional courier services to autonomous drones, the project has helped alleviate logistical burdens on hospital staff and third-party providers. Additionally, the success of this initiative offers a scalable model that can be replicated across healthcare systems nationwide, especially in regions facing transportation challenges.

Building on several of DDC’s previous healthcare collaborations, this project further demonstrates the transformative role drone technology can play in improving public health outcomes and modernizing the logistics that support patient care.

Visit dronedeliverycanada.com/care-by-air for more details.

