# Dossier: Yates Electrospace Corporation

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,513.00

**Award Date:** 2024-08-23

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Yates Electrospace Corporation (YEC) is a privately held aerospace and defense company specializing in the development and deployment of heavy-lift, autonomous unmanned aerial systems (UAS) designed for logistics and resupply in austere environments. Their core mission is to provide a cost-effective and rapidly deployable solution for transporting critical supplies, equipment, and personnel to locations inaccessible or too dangerous for traditional aircraft or ground vehicles. YEC aims to solve the logistical challenges faced by military units, disaster relief organizations, and commercial entities operating in remote or contested areas. Their unique value proposition lies in their hybrid-electric propulsion system enabling significantly increased payload capacity and range compared to purely battery-powered drones, coupled with autonomous navigation and precision delivery capabilities.

**Technology Focus:**

* Silent Arrow® Cargo UAS:\*\* A purpose-built, heavy-lift UAS designed for autonomous, precision air delivery of up to 1,400 pounds of cargo to austere locations. The airframe is constructed primarily from low-cost materials, is capable of single-use or recoverable operation, and is designed for rapid deployment from various platforms (e.g., fixed-wing aircraft, helicopters).
* Hybrid-Electric Propulsion System:\*\* YEC leverages a proprietary hybrid-electric propulsion system combining internal combustion engine(s) with electric motors to achieve extended range, increased payload capacity, and reduced noise signature compared to conventional UAS platforms. They focus on optimized power management and efficient fuel consumption for extended operational endurance.

**Recent Developments & Traction:**

* Signed a Cooperative Research and Development Agreement (CRADA) with the U.S. Army Combat Capabilities Development Command (DEVCOM) Soldier Center (September 2021):\*\* The CRADA focuses on further exploring and developing the Silent Arrow’s potential for autonomous resupply missions and assessing its capabilities in complex operational environments.
* Demonstrated successful autonomous cargo delivery during Army Expeditionary Warrior Experiment (AEWE) 2021:\*\* Showcased the Silent Arrow's ability to precisely deliver cargo to designated landing zones without human intervention.
* Silent Arrow featured in various industry publications and defense trade shows highlighting its capabilities for logistics and resupply applications (2021-2023).\*\* These presentations helped raise awareness and generate interest from potential customers and partners.

**Leadership & Team:**

* Chip Yates (Founder & CEO):\*\* Previously a successful electric vehicle racer and serial entrepreneur. Possesses deep technical expertise in electric and hybrid-electric propulsion systems.
* Details on other leadership team members were unavailable through open web searches.

**Competitive Landscape:**

* Bell Textron (V-280 Valor, potentially future unmanned variants):\*\* Bell's focus is on larger, more complex VTOL platforms. YEC differentiates itself with a focus on single-use or recoverable, cost-effective solutions designed for specific cargo delivery missions.
* Various drone companies focusing on smaller, battery-powered logistics drones (e.g., Zipline, Wing):\*\* YEC's advantage lies in their substantially larger payload capacity and extended range enabled by their hybrid-electric propulsion system.

**Sources:**

* [https://silent-arrow.com/](https://silent-arrow.com/)
* [https://www.army.mil/article/250237/silent\_arrow\_gliding\_to\_the\_rescue\_in\_army\_experiment](https://www.army.mil/article/250237/silent\_arrow\_gliding\_to\_the\_rescue\_in\_army\_experiment)
* [https://www.nationaldefensemagazine.org/articles/2022/6/3/a-silent-arrow-for-austere-resupply](https://www.nationaldefensemagazine.org/articles/2022/6/3/a-silent-arrow-for-austere-resupply)