# Dossier: VAYA SPACE, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,976.00

**Award Date:** 2024-05-15

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Vaya Space, Inc. is a US-based space technology company focused on developing sustainable and affordable access to space. They aim to solve the problems of high launch costs and environmental pollution associated with traditional rocket propulsion by utilizing repurposed thermoplastics from recycled materials in their hybrid rocket engines. Their unique value proposition lies in their patented Vortex-Hybrid engine technology, which leverages these recycled plastics as fuel in combination with liquid oxygen, aiming to significantly reduce both the cost and environmental impact of space launches. They are focused on enabling more frequent and accessible space launch services, particularly for small satellites and payload delivery.

**Technology Focus:**

* Vortex-Hybrid Engine:\*\* A patented hybrid rocket engine technology utilizing Direct-Digital Manufacturing (DDM) to construct the solid fuel component from recycled thermoplastics. This approach purportedly offers increased safety, reliability, and cost-effectiveness compared to traditional solid or liquid rocket engines.
* Dauntless Launch Vehicle:\*\* A small launch vehicle under development designed to deliver payloads up to 1,000 kg to Low Earth Orbit (LEO). The vehicle is envisioned for responsive launch capabilities and designed for minimal environmental impact.

**Recent Developments & Traction:**

* Partnership with L3Harris Technologies (February 2023):\*\* Vaya Space announced a multi-year strategic partnership with L3Harris to develop and manufacture advanced hybrid rocket propulsion systems. The collaboration aimed to leverage L3Harris's expertise in aerospace technology and manufacturing to accelerate the development and production of Vaya Space's hybrid rocket engines.
* Test Firings and Engine Development:\*\* Ongoing testing and development of their Vortex-Hybrid engine technology, with reports of successful static fire tests demonstrating the engine's performance and stability. Specific details regarding test results such as thrust levels, burn duration, and specific impulse are not broadly publicized but development is confirmed.
* Cooperative Research and Development Agreement (CRADA) with the U.S. Army (2021):\*\* Announced a CRADA with the U.S. Army Combat Capabilities Development Command (DEVCOM) Aviation & Missile Center (AvMC) to conduct research and development related to Vaya Space's hybrid rocket propulsion technology.

**Leadership & Team:**

* Brent David Willis (CEO):\*\* Experienced executive with a background in consumer packaged goods and the beverage industry. He appears to have transitioned into the space industry with Vaya Space.
* Robert Lauer (Chief Technology Officer):\*\* Held positions in several aerospace engineering firms and research organizations, suggesting strong background in rocket propulsion.

**Competitive Landscape:**

* Rocket Lab:\*\* Offers small satellite launch services with its Electron rocket. Vaya Space differentiates itself primarily through its focus on sustainable practices via the use of recycled materials and its Vortex-Hybrid engine technology.
* Virgin Orbit (Defunct):\*\* Similar focus on small satellite launch, used air launch. Vaya Space's differentiator is the vortex-hybrid engine.

**Sources:**

1. [https://spacenews.com/l3harris-and-vaya-space-partner-on-hybrid-rocket-engine-development/](https://spacenews.com/l3harris-and-vaya-space-partner-on-hybrid-rocket-engine-development/)

2. [https://www.army.mil/article/251959/devcom\_avmc\_teams\_up\_with\_vaya\_space\_to\_develop\_recycled\_rocket\_fuels](https://www.army.mil/article/251959/devcom\_avmc\_teams\_up\_with\_vaya\_space\_to\_develop\_recycled\_rocket\_fuels)

3. [https://www.rocketcenter.com/SpaceCamp/Alumni/alumniNews/6475](https://www.rocketcenter.com/SpaceCamp/Alumni/alumniNews/6475)

4. [https://www.crunchbase.com/organization/vaya-space](https://www.crunchbase.com/organization/vaya-space)