# Dossier: Launcher Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,545.00

**Award Date:** 2023-05-04

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Launcher Inc., acquired by Vast in 2023, focuses on developing high-performance, low-cost rockets and transfer vehicles for small satellites and in-space transportation. Its primary business was to provide affordable access to space, primarily for the small satellite market. The company's core mission centered on dramatically reducing the cost and increasing the reliability of space access. Launcher aimed to solve the problem of high launch costs and limited launch availability that hinder the growth of the small satellite industry. Their unique value proposition stemmed from developing highly efficient rocket engines and orbital transfer vehicles, enabling more frequent and cost-effective launches and in-space operations compared to traditional launch providers and in-space transportation solutions. Now as a part of Vast, these technologies are being leveraged in support of Vast's artificial gravity space station.

**Technology Focus:**

* E-2 Engine:\*\* A closed-cycle liquid oxygen (LOx) / kerosene rocket engine designed for high performance and reliability. It leveraged additive manufacturing to reduce complexity and cost. Specific impulse targeted was very high for a kerosene engine.
* Orbiter Transfer Vehicle:\*\* An in-space transfer vehicle designed to transport payloads from low Earth orbit (LEO) to other orbits, including geostationary orbit (GEO) and lunar orbit. Capable of multiple restarts and offering power, communication, and precise positioning for hosted payloads.

**Recent Developments & Traction:**

* Acquisition by Vast (February 2023):\*\* Vast acquired Launcher for an undisclosed amount, signaling a shift in Launcher's focus towards supporting Vast's space station ambitions.
* Orbiter SN1 Launch (January 2023):\*\* Successfully demonstrated in-space propulsion, power, avionics, and communication systems for the Orbiter transfer vehicle, although it ended early due to an anomaly during the deorbit burn.
* E-2 Engine Testing:\*\* Throughout 2021 and 2022, Launcher conducted extensive testing of its E-2 engine at NASA Stennis Space Center, achieving key milestones in performance and reliability validation.

**Leadership & Team:**

* Max Haot (Former CEO, Launcher):\*\* A serial entrepreneur with experience in the space and technology industries. He oversaw the strategic direction and growth of Launcher prior to its acquisition.
* Eric Haot (Former President, Launcher):\*\* Responsible for operations and engineering.

**Competitive Landscape:**

* Rocket Lab:\*\* Offers dedicated small satellite launch services with the Electron rocket. Launcher differentiated itself by focusing on engine technology that promised to deliver higher performance and lower costs and offering in-space transportation.
* SpaceX (rideshare program):\*\* A less expensive option for small satellites compared to dedicated launchers. Launcher aimed to be a middle ground, providing dedicated launches at a more competitive price point with in-space maneuvering capabilities.

**Sources:**

1. [https://www.vastspace.com/press/vast-acquires-launcher](https://www.vastspace.com/press/vast-acquires-launcher)

2. [https://spacenews.com/vast-acquires-launcher/](https://spacenews.com/vast-acquires-launcher/)

3. [https://techcrunch.com/2023/02/08/vast-acquires-launcher-a-rocket-startup-that-only-managed-one-launch/](https://techcrunch.com/2023/02/08/vast-acquires-launcher-a-rocket-startup-that-only-managed-one-launch/)

4. [https://www.youtube.com/watch?v=1s67k2tqHkQ](https://www.youtube.com/watch?v=1s67k2tqHkQ) (Launcher Orbiter SN1 Mission Overview)