# Dossier: IMPULSE SPACE, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,699,899.00

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

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Impulse Space, Inc. is a space transportation company focused on providing in-space transportation services, including last-mile delivery, hosted payloads, and orbital transfer. Their core mission is to develop versatile and cost-effective in-space transportation infrastructure to facilitate the burgeoning space economy, including satellite deployment to precise orbits, sample return missions, and lunar/planetary surface logistics. Impulse aims to solve the limitations of traditional launch services, which often deploy payloads into non-optimal orbits, requiring costly and time-consuming on-orbit maneuvers using onboard propulsion. Their unique value proposition lies in their "Space Tug" technology, which acts as a dedicated orbital transfer vehicle, capable of delivering payloads directly to their desired final destination in space with increased precision and efficiency, thereby reducing mission complexity and cost.

**Technology Focus:**

* "Mira" and "Halo" Space Tugs:\*\* These are modular, multi-mission orbital transfer vehicles designed to deliver payloads to specific orbits, perform on-orbit servicing, and enable complex maneuvers in space. The architecture uses a common propulsion system across multiple sizes allowing for mission flexibility.
* Proprietary Propulsion Systems:\*\* Development of high-performance, storable propellant propulsion systems designed for extended mission durations and precise orbital control. This includes electric propulsion and chemical propulsion options tailored to different mission requirements. Impulse is focusing on using green propellants.

**Recent Developments & Traction:**

* May 2023:\*\* Successfully completed an initial closing of a $10 million convertible note financing, led by Founders Fund, with participation from Space Capital, Lux Capital, and others. The funding will be used to accelerate the development and testing of their in-space transportation vehicles.
* May 2024:\*\* Awarded a Phase II Small Business Innovation Research (SBIR) contract from the U.S. Space Force, focused on further refining propulsion systems and maneuver capability.
* August 2023:\*\* Announced plans for a collaborative mission with SpaceX to deploy a spacecraft to Geostationary Orbit (GEO) using the Mira space tug. This is projected to occur in late 2024/early 2025.

**Leadership & Team:**

* Tom Mueller (Founder & CEO):\*\* Previously a founding member and Propulsion CTO at SpaceX. He was instrumental in developing the Merlin engine and other core propulsion technologies used by SpaceX's Falcon launch vehicles.
* Barry Matsumori (COO):\*\* Former Senior Vice President of Sales and Business Development at SpaceX, bringing experience in securing and managing large government and commercial contracts.

**Competitive Landscape:**

* Momentus:\*\* Focuses on in-space transportation and infrastructure services using water-based propellant technology. Impulse differentiates itself through its leadership experience from SpaceX and modular design.
* Spaceflight Inc.:\*\* Primarily focuses on rideshare launches and deployment services. Impulse offers more extensive orbital transfer and in-space maneuvering capabilities than traditional rideshare providers.

**Sources:**

1. [https://www.impulsespace.com/](https://www.impulsespace.com/)

2. [https://www.spacenews.com/tom-mueller-impulse-space-funding/](https://www.spacenews.com/tom-mueller-impulse-space-funding/)

3. [https://techcrunch.com/2022/08/04/impulse-space-hopes-to-disrupt-space-logistics-one-orbital-transfer-vehicle-at-a-time/](https://techcrunch.com/2022/08/04/impulse-space-hopes-to-disrupt-space-logistics-one-orbital-transfer-vehicle-at-a-time/)

4. [https://www.payloadspace.com/news/spacex-impulse-space-partner-for-geo-transfer-mission/](https://www.payloadspace.com/news/spacex-impulse-space-partner-for-geo-transfer-mission/)