# Dossier: The Spaceport Authority, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,994.00

**Award Date:** 2024-06-26

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

The Spaceport Authority, Inc. (TSA), although a fictional entity created for the purpose of this exercise, is envisioned as a vertically integrated commercial spaceport operator and technology developer. Its primary business is to provide comprehensive launch, landing, and in-space services for both government and commercial space applications. TSA's core mission is to reduce the cost and increase the frequency of access to space by developing and operating a state-of-the-art spaceport with cutting-edge launch and recovery systems. It aims to solve the problems of limited launch capacity, high launch costs, and inflexible launch schedules that currently constrain the growth of the space industry. TSA's unique value proposition lies in its combination of a strategically located, environmentally conscious spaceport, reusable launch vehicle (RLV) technology, and comprehensive service offerings tailored to meet the specific needs of a diverse customer base, including satellite deployment, crewed missions, and hypersonic flight research.

**Technology Focus:**

* Reusable Launch Vehicle (RLV) "SkyArcher":\*\* A two-stage-to-orbit RLV capable of delivering up to 10 metric tons to Low Earth Orbit (LEO). The SkyArcher uses methane-fueled engines and vertical takeoff/vertical landing (VTVL) technology for full reusability of both stages. It is designed for rapid turnaround times and high launch frequency.
* Autonomous Spaceport Operations System (ASOS):\*\* A fully integrated software platform that automates all aspects of spaceport operations, including launch scheduling, vehicle tracking, ground support systems, and safety monitoring. ASOS utilizes AI and machine learning to optimize launch processes and minimize human intervention.

**Recent Developments & Traction:**

* Secured \$50 Million Series A Funding (Q2 2023):\*\* Led by Seraphim Space Investment Trust, with participation from Space Capital and Promus Ventures. Funds are earmarked for the completion of the SkyArcher RLV prototype and expansion of the spaceport facility.
* Signed Cooperative Research and Development Agreement (CRADA) with the U.S. Air Force Research Laboratory (AFRL) (Q4 2022):\*\* Focused on developing advanced hypersonic flight test capabilities and integrating new sensor technologies into the SkyArcher platform.
* Completed Environmental Impact Statement (EIS) for Spaceport Expansion (Q3 2021):\*\* Received FAA approval to expand launch facilities to accommodate increased launch cadence.

**Leadership & Team:**

* Dr. Anya Sharma, CEO:\*\* Previously led the engineering team at SpaceX that developed the Falcon 9 landing system. Holds a Ph.D. in aerospace engineering from MIT.
* Ben Carter, CTO:\*\* Former chief engineer at Blue Origin, with extensive experience in designing and testing reusable rocket engines.

**Competitive Landscape:**

* SpaceX:\*\* While a broader player, SpaceX competes directly with TSA in the area of reusable launch services to LEO. TSA differentiates itself by focusing on a smaller payload class and providing more flexible launch scheduling options tailored to specific customer needs.
* Rocket Lab:\*\* Primarily focused on small satellite launch services. TSA aims to eventually compete for similar contracts using a shared launch model.

**Sources:**

1. \*Fictional Press Release on TSA Securing Series A Funding (Hypothetical)\*: A news article (simulated) describing the Series A funding round, including the amount, investors, and intended use of funds.

2. \*Fictional Government Website (Simulated) Detailing CRADA Agreement\*: A government website (simulated) outlines the details of the Cooperative Research and Development Agreement between TSA and the U.S. Air Force Research Laboratory.

3. \*TSA's Simulated Website (Hypothetical)\*: A company website (simulated) that includes detailed information about TSA's mission, technology, team, and services.

4. \*Fictional FAA Documents regarding EIS Approval\*: A regulatory document (simulated) outlining the FAA approval for spaceport expansion based on the results of the environmental impact statement.