

# Titans Space Industries Partners with Virtual Moon to Develop Immersive VR Training for its Cis-Lunar Transport System

*By combining Virtual Moon's simulation technology with TSI's expertise in spacecraft and lunar infrastructure, this partnership will redefine space exploration.*

ORLANDO, FL, UNITED STATES, January 28, 2025 /EINPresswire.com/ -- [Titans Space Industries Inc. \(TSI\)](https://www.einpresswire.com/---Titans-Space-Industries-Inc.-TSI), a leading innovator in space exploration and commercialization, and [Virtual Moon LLC](https://www.einpresswire.com/---Virtual-Moon-LLC), renowned for its advanced virtual reality simulations of the lunar environment, have announced an exciting partnership. Virtual Moon will support TSI's "MoonBound" cis-lunar transport system and future missions with their cutting-edge digital tools. TSI will use the VR simulations to train its civilian astronauts at the Titans Space Academy, headed by Inspiration4 astronaut Chris Sembroski, TSI's Chief Astronaut.

TSI is on a mission to establish a sustainable cis-lunar economic zone through innovative spacecraft, lunar infrastructure, and exploration technologies. MoonBound is an end-to-end multi-vehicle cis-lunar transportation system designed to provide seamless access to Low Earth Orbit (LEO) and the Moon.

**The Selene Mission: Moon Settlement Timeline (2027-2030)**

- 2028/2029: Horizontal Takeoff (from a runway) to Low Earth Orbit (LEO)**  
✓ Launch the reusable Single-Stage-To-Orbit (SSTO) Titans Spaceplane to LEO.
- H1-2029: Spaceship for Earth Orbit to Lunar Orbit Transport**  
✓ Place the first Titans SpaceShip/Orbital Transporter in LEO.
- H2-2029: Bridge to the Moon**  
✓ Deploy an uncrewed Orbital Transporter from LEO to Lunar Orbit and back, paving the way for human missions.
- H1-2030: Building Blocks in Space: Titans OrbitalPort Space Stations (TOPSS)**  
✓ Assemble two large space stations: one in LEO and another in Lunar orbit.
- H2-2030: First Crewed Lunar Mission: Rendezvous with the Lunar TOPSS**  
✓ Deliver cargo and Lunar base modules to the Lunar surface using the Lunar Transporter, return to LEO.
- 2031: One Giant Leap for Mankind: Settling the Moon Permanently**  
✓ Full Moon Mission; Astronauts start building out Titania Lunar for Commerce and Science

[www.TitansSpace.com/Selene-Mission](https://www.TitansSpace.com/Selene-Mission)

**MoonBound Flight Plan - From Earth to the Moon and Back (Frequently from 2031 onwards)**

**A Earth Escape and Lunar Trajectory**

- ✓ Titans Spaceplane transports astronauts from air/spaceport to the LEO Titans OrbitalPort Space Station (LEO TOPSS).
- ✓ Spaceplane docks with LEO TOPSS.
- ✓ Astronauts transfer from spaceplane to LEO TOPSS.
- ✓ Astronauts transfer from LEO TOPSS to Orbital Transporter.
- ✓ Orbital Transporter conducts a translunar injection (TLI) maneuver that precisely targets a specific velocity and direction, initiating a trajectory towards the lunar sphere (of influence).

**B Lunar Orbital Rendezvous**

- ✓ After approximately three days, as the Orbital Transporter nears the moon, another crucial maneuver, a Lunar Orbit Insertion (LOI), will be executed. This delicate burn will gently lower the Orbital Transporter's speed, allowing it to remain into a Lunar orbit, a critical staging point.
- ✓ The Orbital Transporter docks with the Lunar Titans OrbitalPort Space Station (Lunar TOPSS).

**C Lunar Descent and Ascend**

- ✓ Astronauts transfer from the Lunar TOPSS to the Lunar Transporter
- ✓ The Lunar Transporter separates from the Lunar TOPSS and embarks on its powered descent to the Lunar surface. This intricate descent involves gentle maneuvers and precise engine burns to ensure a safe and controlled touchdown.
- ✓ Lunar Transporter lands on pad near Lunar habitat.
- ✓ Astronauts transfer from Lunar Transporter to habitat.
- ✓ After a predetermined stay, astronauts transfer back from the habitat to the Lunar Transporter.
- ✓ The takeoff maneuver requires precisely calculated thrust and trajectory adjustments to achieve rendezvous and docking with the Lunar TOPSS.
- ✓ Astronauts transfer from Lunar TOPSS to Orbital Transporter.

**D Earthbound Homecoming**

- ✓ Orbital Transporter undocks from Lunar TOPSS in a Trans-Earth Injection (TEI) burn, propelling it out of Lunar orbit and onto a trajectory back towards Earth.
- ✓ Orbital Transporter deploys Hypersonic Inflatible Aerodynamic Decelerator (HIAD) as it approaches Earth.
- ✓ Orbital Transporter skims upper atmosphere to slow down from Lunar return velocity to LEO speed (24,000 mph down to 17,500 mph).
- ✓ After achieving stable LEO, the Orbital Transporter detaches the HIAD, then docks with LEO TOPSS.
- ✓ Astronauts transfer from Orbital Transporter to LEO TOPSS.
- ✓ Shortly after, astronauts transfer from LEO TOPSS to Titans Spaceplane.
- ✓ Spaceplane returns astronauts to Earth.

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## MoonBound End-to-End Cis-Lunar Transportation System

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## Titans Selene Mission - Moon Settlement Timeline and Flight Plan

Virtual Moon's hyper-realistic simulations, developed as part of their evolving digital twin of the Moon, offer an unmatched platform for mission planning, engineering analysis, and operational testing.

Virtual Moon will play a key role in bringing TSI's MoonBound vision to life by developing a comprehensive suite of VR-based training and simulation

tools for the entire MoonBound system. These immersive experiences will enable TSI's astronauts and support personnel to familiarize themselves with the intricacies of each vehicle and operational phase, preparing them for the challenges of space travel in a safe and controlled environment.

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As a former astronaut, I understand the value of realistic training for spaceflight. Virtual Moon's VR platform will provide our civilian astronauts with an unprecedented level of immersion...”

*Chris Sembroski, Titans Space Chief Astronaut*

astronauts, and stakeholders to visualize each phase in detail, from takeoff on Earth to lunar surface activities.

- Route Planning to and on the Moon: Virtual Moon's simulations will analyze and recommend optimal pathways for TSI's vehicles to and on the lunar surface, taking into account the challenging topography and the capabilities of the vehicles.
- Solar and Shadow Analysis: Detailed studies of lighting conditions over lunar day and night cycles will be conducted, particularly focusing on the south polar region, which is of strategic importance due to its potential for sustained sunlight. These insights will ensure effective power management and operational readiness.
- Material Interaction Modeling: Virtual Moon will simulate how TSI's robotic and excavation equipment interacts with lunar regolith. These tests will help refine designs for efficiency and reliability in challenging environments.

“We are excited to partner with Virtual Moon to create a truly immersive training experience for

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**Titans Space Industries**

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**Titans Selene Mission - MoonBound Flight Plan**

our MoonBound system," said Neal S. Lachman, CEO of Titans Space Industries. "I have first-hand experience with their incredible VR testing; I went back in time, stood on the lunar surface at Tranquility base, and saw Apollo 11 crewmembers Neil Armstrong and Buzz Aldrin land their Apollo Lunar Module Eagle - with the real mission control communications, telemetry, and other details integrated into the experience. The interactivity and personalized approach is stunningly accurate and this approach will make learning and training exponentially more intuitive and fun. Virtual Moon's expertise in VR technology will be crucial in preparing our crews for the complexities of operating a multi-vehicle space transportation system."

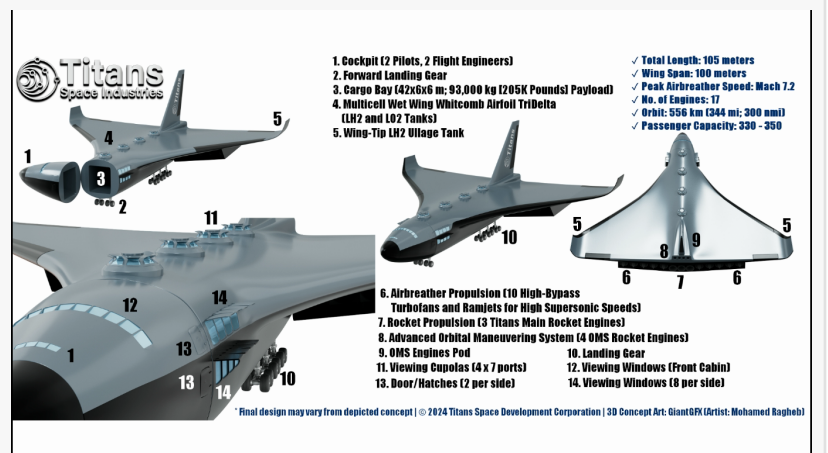
Doug Kohl, COO of TSI, added, "Virtual Moon's VR solutions will not only enhance the safety and efficiency of our operations but also accelerate the development of a robust and accessible space infrastructure."

"Virtual Moon is thrilled to join forces with Titans Space Industries on this groundbreaking project," said Manuel Pimenta, CEO of Virtual Moon. "Our VR technology will provide TSI with a powerful tool for training, planning, and executing missions across the entire MoonBound system, ultimately contributing to the democratization of space access. Our mission has always been to provide tools that make the Moon accessible and understandable, and this collaboration allows us to contribute directly to groundbreaking advancements."

Chris Sembroski, TSI's Chief Astronaut and Head of the Titans Space Academy, commented, "As a former astronaut, I understand the value of realistic training for spaceflight. Virtual Moon's VR platform will provide our civilian astronauts with an unprecedented level of immersion and preparation, ensuring their confidence and competence across all phases of the MoonBound



Titans Spaceplane and Titans OrbitalPort Space Station in Low-Earth Orbit



Titans Spaceplane Design Overview

journey."

The partnership between TSI and Virtual Moon marks a significant advancement in the development of comprehensive and accessible space transportation solutions. By combining TSI's vision for MoonBound with Virtual Moon's cutting-edge VR technology, the two companies are poised to revolutionize space travel and open new frontiers for human exploration and commercial activities.

#### About Virtual Moon LLC

Virtual Moon LLC is a leading provider of VR-based solutions for space exploration and training. The company's immersive technology enables astronauts, researchers, engineers, and the public to experience and interact with realistic space environments, facilitating mission planning, training, and scientific discovery.

Virtual Moon's team includes retired NASA Astronaut and MIT Professor Jeff Hoffman, former Disney Imagineering VP, inventor and former NYU Professor Eric Rosenthal, Star Trek special effects producer Dan Curry, and "A Man On The Moon" author Andrew Chaikin, among other well-known leaders in the space and space technology community.

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#### About Titans Space Industries Inc.

Titans Space Industries is a privately held company dedicated to developing innovative and cost-effective space exploration technologies. The company is committed to making space accessible to all and is working to develop a variety of spaceflight programs, including human spaceflight, cargo transportation, and space tourism. TSI's vision is to lead the way in making space travel a reality for millions of people around the world.

With a combined 600 years of experience in business and aerospace, Titan Space Industries' founding team boasts an unparalleled depth of knowledge and expertise. This seasoned leadership brings together the sharpest minds in both fields, ensuring strategic brilliance and operational excellence. Further amplifying this expertise, the company's \$1 billion development of factories and facilities throughout the U.S. in 2025 will be under the leadership of a senior management team with a combined 1,000 years in aerospace, including director roles of the NASA Space Shuttle program and ISS missions. This wealth of hands-on experience guarantees the highest standards in manufacturing, safety, and innovation for all Titans Space projects.

TSI's MoonBound system is designed to cater to a discerning clientele, including [Titans Astronauts](#) – ultra-high-net-worth individuals seeking unparalleled experiences. Virtual Moon's immersive training platform will be a key differentiator, providing these individuals with exclusive access to cutting-edge preparation options.

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