BUSINESS INNOVATION SYMPOSIUM (E6)
Entrepreneurship and Investment for Commercial in-Space Activities (2)

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OPENING THE FRONTIER - STIMULATING SPACE INDUSTRIALIZATION WITH SHACKLETON ENERGY COMPANY'S DEPOT INFRASTRUCTURE

Abstract

Access to lunar based resources is a cornerstone requirement for the balance of our terrestrial economy and civilization as well as sustained expansion in space. The establishment of propellant depots at key locations in near Earth space enables reusable transportation in space to become a viable proposition. Establishing the cis-Lunar highway required to access lunar sourced water from the cold traps of the polar craters provides the backbone infrastructure for exponential growth for a space-based economy. With that infrastructure in place, space-based solar power generation systems, debris mitigation capabilities and other necessary infrastructure can be established on a fully commercial basis.

Shackleton Energy was founded from the space, mining, energy and exploration sectors to meet this challenge as a fully private venture. Following successful robotic precursor missions, our industrial astronauts combined with robotic mining capability will make first landing on the South Pole of the Moon by mid-2019 to begin deliveries of propellant to our depots in early 2020. Customers, partners, technologies, and most importantly, the investor classes aligned with the risk profiles involved have been identified and all the components for a viable business are available. Infrastructure investment in space programs has traditionally been the province of governments, but sustainable expansion requires commercial leadership and this is now the responsibility of dynamic new industry. The technologies and know-how are ready to be applied. Launch services to LEO are available and the industrial capability exists in the aerospace, mining and energy sectors to enable Shackleton Energy to build an in-orbit and Lunar infrastructure. What is required right now is bold leadership to integrate these assets into an ongoing program.

This paper introduces Shackleton Energy Company's business model and outlines the opportunities for advanced in-space commercialization and industrialization once a commercially self-sustaining propellant depot architecture is in place.