

## **Executive Summary**

Date Prepared: 24 September 2007

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### **Presentation Title**

Incremental Steps from Earth to Lunar Commerce: How to Do It, and How to Pay for It, One Step at a Time

### **Key Ideas**

Incremental business models start small and involve a gradual buildup, both financially and technically, moving through a series of milestones. At each milestone, existing investors and partners have the opportunity to enter or exit, base on performance and future prospects. Such approaches may help avoid the formidable challenges of all-or-nothing, large-scale ventures that require major investment at the outset.

### **Supporting Information**

Several organizations may be cited that are to at least some extent practicing an incremental approach. In the area of space infrastructure, The Boeing Company has worked with several other companies to create a concept for incremental buildup of propellant depot infrastructure. A multidimensional technical and economic capability, gradually developing a variety of Earth as well as space applications, can be found at the Canadian company MDA. Another Canadian enterprise, Optech, incrementally leverages the company's core expertise in lidar and laser-based surveying, and a strategic partnership with MDA, to offer a variety of space lidar solutions for planetary exploration, orbital operations and science. The Jamestown Group has a step-by-step process for enabling major electrical power generation using lunar materials. Examples of incremental commercial applications that might benefit from space infrastructure include multimedia efforts of the Lunar Explorer venture, the Kronos concept of meteorite prospecting on Earth laying a foundation for an expanding prospecting effort on the Moon, and the International Lunar Observatory effort in pursuit of an incremental approach to raising private capital and creating a lunar installation. Government efforts can facilitate both commercial infrastructure and application development. At NASA, new approaches are being developed to meet this challenge. The initiatives noted above represent only a sampling of industry and government initiatives working to apply or support well-founded, step-by-step approaches to commercial success.