Paper ID: 28881
oral
student

26th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Models for Successfully Applying Space Technology Beyond Its Original Intent (2)

Author: Mr. Prateep Basu
India

Ms. Rachana Reddy
India
Mr. Umang Rathi
India
Mr. Narayan Prasad Nagendra
Dhruva Space Private Limited, India

BUSINESS INCUBATION FOR FOSTERING INNOVATION IN SPACE COMMERCE: AN INDIAN PERSPECTIVE

Abstract

The space sector has been traditionally led by government organizations because of the long gestation periods, low rate of return, and high initial investment involved. However, a few 'NewSpace' companies, triggered by NASA's need for commercial space transportation, began demonstrating innovation in their approach by achieving capital and cost efficiency. These companies, led by innovators working at the intersection of space technology and commercial needs, established new business models to ensure faster times-to-market and higher degrees of profitability than traditional space companies. The success of these 'NewSpace' companies brings forth the concept of having a thriving space industry ecosystem, where technologists, investors, and the government bodies co-exist and act in a mutually beneficial manner.

The Indian space program, which has experienced remarkably high success in the past decade despite its shoe-string budget, has had strategies and policies in place to facilitate user involvement, industry participation, commercial spin-offs, and international cooperation. Nevertheless, the private space industry landscape of India is no match when compared to its American or European counterparts. As the ambitions of the Indian space program increase in the field of scientific research, capacity building, and space commerce, the existence of a robust space technology-oriented domestic SME landscape will be an asset for supporting the long term goals of the Indian space program. This paper outlines the need and scope for the process of business incubation to act as a means of managing innovation, enhancing technology transfer between the government and private parties, and fostering international collaborations across the value chain of the industry.

The proposal covers aspects of kick-starting, funding and managing a Business Incubation Center (BIC) under the ambit of a public-private partnership involving the Indian Space Research Organization (ISRO), entrepreneurs, domestic and international space industry players, government departments associated with entrepreneurship and economic development, other incubators, and venture capital firms. This paper also reviews similar international endeavors that are challenging and continuously evolving the scope of traditional space business, to set a benchmark for the proposed Business Incubation Center. Ultimately, this proposal attempts to establish a framework for an ecosystem that allows early-stage space-based businesses to thrive in India and share knowledge on a common platform, overcoming the natural barriers of entry to the space industry.