

BUSINESS INNOVATION SYMPOSIUM (E6)  
Public/Private Human Access to Space - Supporting Studies (2)

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THE ROAD TO PRIVATIZATION OF SPACE EXPLORATION: WHAT IS MISSING?

**Abstract**

The space sector scenario is experiencing a great transformation in recent years led by multiples agents, evidencing the unfolding of a new space race. Different political, military, scientific and commercial agents are driving this new space race and efforts should be made for a better understanding of these factors and its interactions in order to outline the new space race. This paper contributes to analyze the commercial agent focusing on space private companies. The humanity may soon testify a new road to space exploration, not made by billionaire's space agencies like NASA, ESA and Roscosmos , but by small private companies, most of them located in the USA. The space sector faces a swarm of new investors entering specially in the branch of space launchers, human spaceflight, space tourism, space services and equipment, surface exploration of the Moon and Mars, and Asteroids mining. These emerging companies, after 60 years-old paradigm, can set a mark in space technology development via searching for cheaper, faster and easier access to space. This research gathered information from 105 private companies and through the application of forecasting tools it is demonstrated the burgeoning of a natural growth process of space private enterprises. It also points out some crucial factors which are influencing this new growth phase, like NASA's Program reformulation, appearance of private investors in high risk investments, potential market for space tourism, alarm of limited resources, among other. Despite the increase of private investment, governments are still the major investors in space activities. There are still several critical issues to be solved, mainly regarding technology, law, policy and economy which, depending on how they will be solved by the space actors, will influence the forecasted scenario of privatization of space exploration.