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## BUSINESS INNOVATION SYMPOSIUM (E6)

Unique Perspectives of Space Entrepreneurship and Investment (3)

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## ROAD MAP TO THE FUTURE OF PRIVATE COMMERCIAL SPACE INDUSTRY IN INDIA: VISION FOR SPACE ENTREPRENUERSHIP AND INVESTMENT

## Abstract

India is an emerging space faring nation with a space program driven by indigenous research and development spanning more than 4 decades. The National Space Program (with Indian Space Research Organization as the pivotal agency under the Department of Space, Government of India) has strived to provide self-reliance to the country in space technology and is aimed to serve the citizens with various space applications. As an Industry, the space sector in India is still in a developing stage; Antrix Corporation, the Commercial wing of ISRO is the only dominant player (although there are support industries and agencies that provide inputs to ISRO and its various programs) that provides commercial space launches, operations and space related services in the country.

India is going through a phase of rapid and progressive development with an industrious economy powered by the large workforce of young entrepreneurs and professionals. These developments are yet to transpire into the space sector; however, it is to be expected to happen in the near future. In this paper, the authors provide an account of the state of the art of the space sector in India and a road map to the future of private commercial space industry in the country. Various factors including policy issues, laws of the land, socio-economic, political and strategic aspects are considered to lay-down a scenario based prediction. The authors provide recommendations that may be implemented in order to promote private investments, entrepreneurship and development in the space sector.

Private commercial space industry in developed space faring nations such as USA and EU has evidently provided great support to research and development. The authors compare the space industry in the developed nations to that in India to further emphasize the need of private players in the sector. The Far and near future beholds diverse applications of space technology including but not limited to suborbital and orbital flights, commercial launches, tourism, mining, colonization and deep space exploration. Private entities around the world are already showing interest in these activities, India is an emerging economy and it has sufficient advances in technology to invest in such activities. This paper provides a roadmap and vision for the future of Private Commercial space Industry in India, keeping in view the roadblocks, challenges and measures.