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Game changers in the space economy (3)

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FUTURE INDIAN SPACE - PERSPECTIVES OF GAME CHANGERS

**Abstract**

In past 50 years, Indian Space has seen many successes – demonstrating excelling Indian technology and widespread utilization of space services. Present capabilities and capacities of Indian Space are mainly in the unitary system of the national space agency – this has enabled the nation to achieve about 6-8 high-quality domestic missions annually. Meeting future domestic needs AND accessing large global market of space will require a quantum jump in Indian capabilities and capacities.

Another aspect is growth and aspirations of Indian economy - GDP growth around 7-8

In an earlier study, we have outlined the future 10-20 years of policy perspectives for Indian Space and also outlined the perspectives of a National Space Eco-system of a “public-private-academia triad”.

We now envisage critical developments that will bring impacting and paradigm shifts to Indian Space through the “triad” – Game Changers. With about 100-150 possible missions in coming 10-20 years – encompassing EO, satellite communications, positioning, space science, planetary missions, launch missions and the initiation of a human space flight programme, the “critical shifts” would be not just technological advancements but more towards organizational re-structuring from emerging newer organizational arrangements, industrialization and emergence of private space industry, deeper penetration of space services in Indian society, increasing global presence of Indian players and a vibrant collaboration at international level.

What will drive these game-changers? Cost efficiency will be one key - amply demonstrated by India in many global sectors, this will impact not just national BUT global space markets and bring a “levelling effect”. Indian human resources skills will be another driver – Indian scientists, engineers and managers will play a larger role in national and global space. Third will be “Indian innovation” (called “jugaad”) – ability to improvise and innovate with simple, low-cost BUT effective solutions. These will bring a new economic model that balances systems, costs and performance.

The paper provides a perspective of future Indian Space and outlines “game changers” impacts that will emerge for space activities in India. The paper also discusses how, in an integrated manner, Indian Space can and should reach greater heights by key policy, strategy and actions for the coming few decades.