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CASE STUDY FOR PUBLIC PRIVATE PARTNERSHIP TO ESTABLISH AN EQUATORIAL  
SPACEPORT

**Abstract**

The demand for more spaceports is on the rise. The compelling reasons include the drive to increasing access to space for all, diversification of launch options, promoting international collaborations in science and technology, etc. It is estimated that the population of active satellites in orbit is surpassing 10,000, and an average of 50 are being launched on a weekly basis. The industry shows no sign of slowing down, as private companies, governments and militaries embark on mega-projects such as space stations, Artemis, science missions, etc. The predicted demand through 2030 shows an overstretched supply. In the base case scenario, 27,000 active satellites are foreseen by the end of 2030, implying an annual launch capability of 15 kilotons (Chris Daehnick, 2023). Starship promises to launch every day, but it might be hindered by the weather conditions in the east coast of US.

Space News noted that “Space Launch Delta 45 received 329 requests for launch dates on the Eastern Range, of which it approved 238, leading to 58 launches and 11 scrubs for weather or technical issues.” This case demonstrates the need to seek for non-traditional launch site(s), and it is one of many rationales for establishing an equatorial spaceport. The inherent advantages for an equatorial spaceport are maximizing launch efficiency, increasing payload capacity, stable weather conditions for launches, enabling access to various orbital inclinations, facilitating international collaboration in space exploration and commercial activities, etc. The paper presents a practical approach for establishing an Equatorial Spaceport off the Kenyan coast to satisfy the demands for the growing launch traffic.