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POTENTIAL CONTRIBUTIONS OF COMMERCIAL ACTORS TO SPACE EXPLORATION

Abstract

Fostering the involvement of commercial actors in public programmes is nowadays a dominant consideration of governments and agencies who are increasingly eager to explore new mechanisms to take advantage of private contributions to engage in future programmes. In general, various announcements and institution-led initiatives such as ESA calls for ideas to trigger a commercial utilization of the ISS for example, underline the increasing interest of space agencies in opening exploration programmes to commercial contributions and reap associated benefits.

The growing opportunity of a more prominent contribution of commercial actors to space exploration also lies in the so-called “NewSpace” ecosystem, a general business-driven dynamic observed in the space sector recently and encompassing various trends among which:

- **New entrants** in the space sector including large Information and Communications Technology (ICT) firms, start-ups and new business ventures
- **Innovative industrial approaches** with announcements and initial developments of ambitious projects based on new processes
- **Disruptive market solutions** providing for example integrated services, lower prices, reduced lead time, lower complexity among other value proposition features.
- **Substantial private investments** from different sources and involving different funding mechanisms
- **New industry verticals and space markets** targeting the provision of new space applications

In this emerging ecosystem, space exploration and Human spaceflight have become a driver of entrepreneurship and investment, stimulating the emergence of various private endeavours pursuing the goal to conduct business in these fields. Among new target markets pursued by commercial actors, space launch systems, commercial services, space mining, orbital tourism or planetary colonization, were recently put under the spotlight with ambitious private project announcement.

In this context, the European Space Policy Institute (ESPI) and the Italian Space Agency (ASI) decided to conduct a study on Potential contributions of commercial actors to space exploration. The general objective of the study is to provide European institutions involved in space exploration programmes with key takeaways on the evolving commercial ecosystem and insights on potential ways to foster successful contributions of commercial actors to achieve European strategic space exploration objectives.

More specifically, the study will investigate the space exploration geopolitical, commercial and programmatic environment and assess how foreseen evolutions could benefit from a more prominent contribution of private actors to space exploration. The study will also examine the conditions for successful contributions of commercial actors and assess the potential impacts and benefits of such contributions.