

BUSINESS INNOVATION SYMPOSIUM (E6)

New space industry segments, firms, actor groups, and multiple programs: innovation, entrepreneurship & investment at the mesoscopic level of analysis (2)

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O'MOON: ANALYSIS OF THE BUSINESS CASE FOR A LUNAR MODULAR POWER
INFRASTRUCTURE

Abstract

While no manned missions have gone beyond Low Earth Orbit since the end of the Apollo Program, recent years have seen a renewed interest in manned exploration, and in permanent settlements in space. Companies and space agencies from around the world are now trying to reach the Moon again, with the aim of establishing a permanent presence. Notable examples include ESA's Moon Village proposal and the private teams competing in the Google Lunar X Prize.

This new era of lunar exploration could create new opportunities for private enterprises as part of the transition towards privatisation known as New Space. In the long term, this could help develop a new space economy. The Moon could be used as a base of operations, while its resources may be extracted and used for several applications.

The O'Moon project aims to facilitate the development of these new applications and the growth of the lunar economy by building an electrical infrastructure on the surface of the Moon. O'Moon would be run as a private enterprise, and would support a growing and adaptable infrastructure, similar to that proposed by ESA's Moon Village concept.

This paper aims to analyse whether there is a business case for a project such as O'Moon to be undertaken by a private enterprise instead of a publicly funded agency such as ESA. This paper analyses different potential applications for the power produced for this infrastructure, some of the possible business opportunities which may arise and some of the private companies which to date have stated their aim of operating on the Moon.

This paper then analyses some of the potential business models which a private enterprise could adopt when providing utilities such as proposed by O'Moon and provides a preliminary cost analysis. The role of Public Private Partnerships in this endeavour is discussed, as are some of the key strategic partnerships which will be needed for such a project to succeed.

Ultimately, this paper aims to provide an analysis of the business viability of the O'Moon project. This paper is part of the O'Moon Youth Research Program, which led a series of studies centered on some of the key aspects of the project and including engineering, business, legal and organisational aspects of the project.