## 21st IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)

Space Technology and System Management Practices and Tools (3)

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## LUNAR ECONOMY OR HOW OPPORTUNITIES IN SPACE CAN IMPROVE BUSINESSES AND LIFE ON EARTH

## Abstract

Staying at the forefront of technological advances and leveraging on synergies between different Sectors is critical not only for ESA, but more importantly for industries. The technology and expertise that is constantly being developed by European companies should be used for new space challenges, with the next step being a return to the Moon. Moonlight is the first Lunar infrastructure project created at ESA with our industrial partners. But Moonlight is much more than a constellation of satellites, it is Europe's first move towards a future Lunar Economy. Providing commercial communication and navigation services to the moon and therefore providing one of the key drivers will help to reduce the complexity and cost of a lunar mission and make it accessible to a wide range of businesses pioneering Lunar Economic activities. But a Lunar Economy requires more than key infrastructure elements like Moonlight, it needs technologies from many fields. For that reason, it is sustainable supporting companies that can potentially be part of a lunar supply chain and therefore benefit from multiple applications. By focusing on ideas that already have a business case on earth and improving life right now, ESA can make sure time, money and effort are spent wisely. Because the technologies that are needed to support a mission on the Moon often exist in their own right and are needed on Earth as well. ESA currently supports European companies to improve their business on Earth using space technology. In this way, ESA wants to give industry a competitive edge and help businesses unlock their full potential. The overall goal of ESA is to improve life, business and the environment today whilst creating innovative solutions for the problems of tomorrow and by that also enabling industry in developing and providing relevant services and products for Space and especially possible Lunar activities. Through this interconnected approach, which supports companies in developing relevant technologies and providing important infrastructure elements, ESA can facilitate aims for sustained and sustainable activities beyond Earth. This paper is therefore elaborating more on this new approach for supporting a future Lunar Economy.