

## IAF SPACE EXPLORATION SYMPOSIUM (A3)

## Space Exploration Overview (1)

Author: Ms. Natalia Larrea Brito  
Novaspace, Canada

Mr. Simon Seminari  
Novaspace, France

Mr. Jan Clarence Dee  
Novaspace, Canada

Ms. Charlotte Croison  
Novaspace, France

Ms. Alexandra Jercaianu  
Novaspace, France

## A STRATEGIC OUTLOOK FOR SPACE EXPLORATION SECTOR

**Abstract**

Space exploration is gaining increasing momentum as it cements itself as a field of high strategic importance for governments around the world. Global government investment in space exploration totaled nearly \$20 billion in 2019 increasing at a 5% compound annual growth rate over the past five years. Looking forward, the vision for space exploration focuses on establishing a sustainable human and robotic presence on (and around) the Moon in this decade as a pathway to Mars. Plans for the Lunar Gateway by NASA and ISS partners have begun taking shape. Concurrently, worldwide space agencies plan future robotic and crewed missions to the Moon's surface. Governments also agree on the importance of maintaining a sustained presence in LEO, while robotic missions to Mars and other deep space will continue expanding scientific knowledge and technical capabilities. Space exploration, moreover, is attracting not only the interest of an increasing number of governments around the world but also the private sector. This decade promises the rise of a multitude of commercial initiatives, potentially marking the beginning of a new era for space exploration. This is having a significant impact on the strategic planning of governments in defining the agenda for space exploration. New public-private contractual schemes are taking shape, reflecting the willingness of space agencies to act as both strategic partner and future customer of commercial services to achieve a cost-effective sustainable model for space exploration. The global context surrounding the Covid-19 crisis, nonetheless, creates unprecedented challenges for these initiatives.

This paper provides an economic and strategic overview of the space exploration sector. It provides a review of the key trends and drivers in space exploration, providing an analysis of the government investment in the field. Moreover, it assesses the impact of the potential Covid-19 crisis in space exploration through detailed investment scenarios. This paper builds on Euroconsult's research report Prospects for Space Exploration 2nd Edition published in 2020.