

An economic & strategic  
assessment of the space  
exploration sector

## Prospects for Space Exploration

**2020 edition**

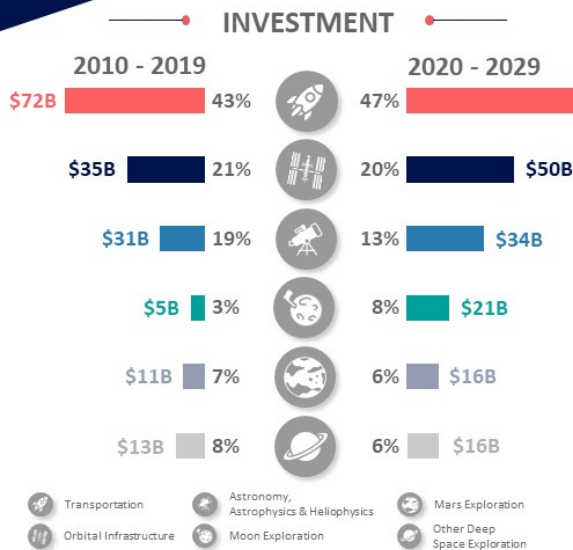
[euroconsult-ec.com](http://euroconsult-ec.com)

# THE 2020S: THE SPACE EXPLORATION DECADE WITH \$260 BILLION INVESTED BY GOVERNMENTS

## SPACE EXPLORATION IN A SNAPSHOT

GLOBAL PROSPECTS

Euroconsult



### TOP 5 INVESTORS

Over 30 countries contributed to the global investment in space exploration in 2019



### # MISSIONS\* LAUNCHED



According to Euroconsult's latest research, "Prospects for Space Exploration", global government investment in space exploration totalled nearly \$20 billion in 2019, a 6% increase year-on-year. Thirty-one countries and space agencies lead this global investment with the U.S. accounting for 71% of spending. Global funding for space exploration is expected to experience sustained growth to reach around \$30 billion by 2029, driven by Moon exploration, transportation, and orbital infrastructure. Approximately 130 missions are expected over the coming decade, compared to 52 missions conducted over the past 10 years.

Exploration is the space application of the coming decade. Forecast funding growth of about 50% over the coming decade illustrates government support for large-scale plans that are now materializing, with the Moon as a core focus. Recent announcements - such as NASA's Plan for Sustained Lunar Exploration and Development and the U.S. Executive Order on Space Resources - reaffirm governments' ambitions to achieve long-term sustainability in lunar exploration.

While the current health and economic crises may impact near-term investment and strategies, they are less likely to disrupt long-term space exploration objectives. The next decade also promises numerous commercial exploration initiatives. 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.



# ABOUT PROSPECTS FOR SPACE EXPLORATION

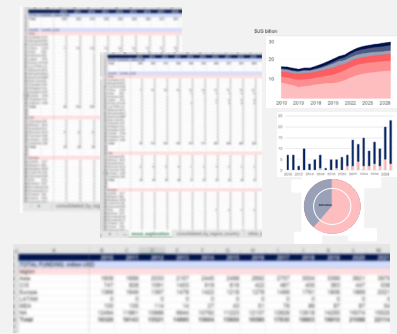
## AN ECONOMIC AND STRATEGIC ASSESSMENT OF THE SPACE EXPLORATION SECTOR

This Executive Report provides an economic and strategic assessment of the space exploration sector. It includes an analysis and benchmark of government and commercial space exploration programs worldwide. The report identifies existing and upcoming new entrants in space exploration, as well as global trends related to space exploration, and it analyzes collaborative undertakings for exploration, including both international space agency partnerships as well as public-private partnerships.

### EXTENSIVE FIGURES & ANALYSIS FOR THE COMING DECADE

All Euroconsult reports have, at their core, data derived from over 30 years of tracking all levels of the satellite/space value chain. To this we add dozens of dedicated industry interviews each year, along with the continual refinement of our data models, and the collection and interpretation of company press releases and financial filings. Our consultants have decades of experience interpreting and analyzing our proprietary databases in light of the broader value chain.

When you purchase research from Euroconsult, you receive thousands of data points and the expert interpretation of what this means for specific verticals and sectors of the satellite value chain, including forecasts based on years of data and highly refined models.



#### THE REPORT INCLUDES:

- ✓ Government funding by country and application. Two periods of reference are considered: 2010-2019 for historical trends and 2020-2029 for forecasts
- ✓ Missions launched and to be launched in space exploration: The forecast includes both government and commercial programs
- ✓ Six applications assessed in detail: Orbital Infrastructure, Transportation, Moon exploration, Mars exploration, Other deep space exploration, Astronomy, astrophysics & heliophysics
- ✓ Strategic Outlook containing global trends, forecasts and benchmarks by countries and applications

#### A MUST READ FOR:

- ✓ Satellite & launch vehicle integrators
- ✓ Satellite & launch vehicle parts manufacturers
- ✓ Launch & service providers
- ✓ Banks, investors & insurers
- ✓ Satellite operators
- ✓ Space & other government agencies

#### KEY TRENDS, DRIVERS & FORECASTS FOR THE PROSPECTS FOR SPACE EXPLORATION REPORT:

- ✓ 2020s will be the decade of space exploration with \$260 billion invested by governments
- ✓ Establishing an international long-term sustainable lunar presence in partnership with the private sector remains the global core focus in space exploration moving forward

Detailed profiles of 11 government space programs :

- ✓ United States
- ✓ China
- ✓ ESA
- ✓ Japan
- ✓ Russia
- ✓ European national programs
- ✓ Canada
- ✓ UAE
- ✓ India
- ✓ South Korea
- ✓ Australia



# TABLE OF CONTENTS

## 1 \ STRATEGIC ISSUES AND FORECASTS

- Space exploration: the context in 2020
- Space exploration: the context in 2020 – key trends by application
- Space exploration in a snapshot
- Global trends in government funding for space exploration
- Missions launched and to be launched
- Government cooperation
- Public-private cooperation
- Commercial organizations involved in space exploration
- Private investment
- Enablers and challenges for commercial organizations
- Prospects for orbital infrastructure programs
- Missions roadmap
- Prospects for transportation programs
- Missions roadmap
- Prospects for moon exploration programs
- In-situ resource utilization: opportunities and challenges
- In-situ resource utilization: value chain – case of the moon
- Missions roadmap
- Prospects for mars exploration programs
- Missions roadmap
- Prospects for other deep space exploration programs
- Missions roadmap
- Prospects for astronomy, astrophysics & heliophysics programs
- Missions roadmap

## 02 \ TRANSPORTATION PROGRAMS

- Context in 2020
- Government transportation programs
- Government investment
- Commercial transportation programs

## 03 \ ORBITAL INFRASTRUCTURE PROGRAMS

- Context in 2020
- Government orbital infrastructure programs
- Government investment
- Commercial initiatives: commercial utilization of the ISS
- Commercial initiatives: space stations/modules

## 04 \ MOON EXPLORATION PROGRAMS

- Context in 2020
- Government programs
- Government investment
- Government programs: missions overview
- Commercial initiatives

## 05 \ MARS EXPLORATION PROGRAMS

- Context in 2020
- Government programs
- Government investment
- Government programs: missions overview
- Commercial initiatives – SpaceX



# TABLE OF CONTENTS - CONTINUED

## 06\ OTHER DEEP SPACE EXPLORATION PROGRAMS

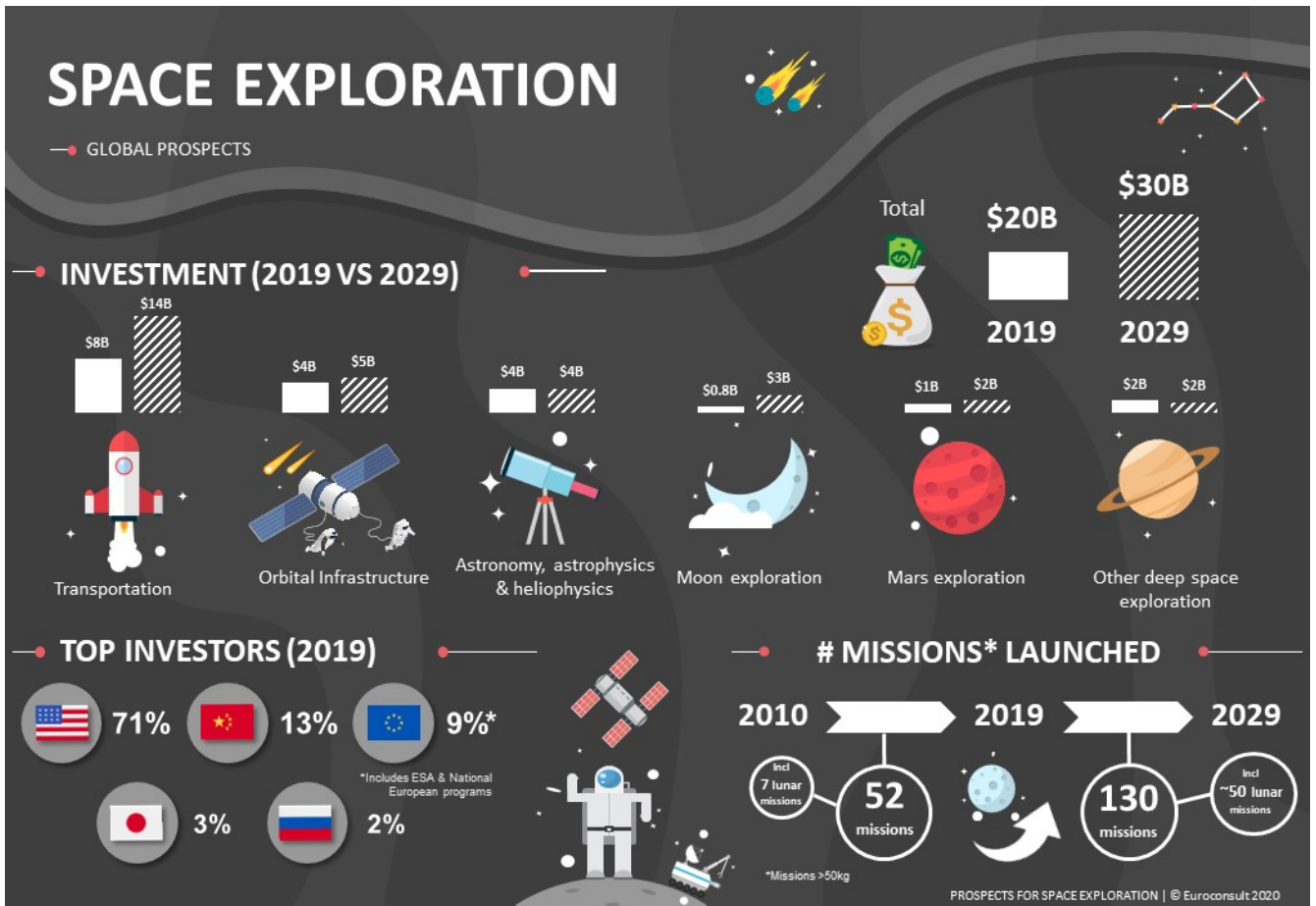
- Context in 2018
- Government programs
- Government investment
- Government programs: missions overview
- Commercial initiatives

## 07\ ASTRONOMY, ASTROPHYSICS & HELIOPHYSICS

- Context in 2020
- Government programs
- Government investment
- Government programs: missions overview

## 08\ PROFILES OF GOVERNMENT SPACE PROGRAMS

- United States
- China
- ESA
- Japan
- Russia
- European national programs
- Canada
- India
- UAE
- South Korea
- Australia



**PROSPECTS FOR SPACE EXPLORATION 2020 Edition**

Please complete this form and return by e-mail to [reports@euroconsult-ec.com](mailto:reports@euroconsult-ec.com). If you have any questions about ordering, would like to enquire about specific corporate licenses or would like to order for multiple locations and/or legal entities, please contact [reports@euroconsult-ec.com](mailto:reports@euroconsult-ec.com) or call +1 (514) 303 0304. **All prices are in Euros. All orders must be prepaid** (if not possible, please contact us). When applicable VAT taxes will be added.

Product		Price	Total
Prospects for Space Exploration (PDF & Excel)	1	€ 5,000	
Additional license	Qty.	€ 500	
Enterprise license		€12,500	
VAT if applicable 20% (French companies and EU customers with no VAT Number)			
<b>Product Total in (€)</b>			

3 Accounting Dept. E -mail: \_\_\_\_\_

4 **Invoicing Address** (Please use capital letters)

First name \_\_\_\_\_

Last name \_\_\_\_\_

Company name \_\_\_\_\_

Occupation \_\_\_\_\_

Address \_\_\_\_\_

Zip Code \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

5 **Delivery Address** (If different from invoicing address)

First name \_\_\_\_\_

Last name \_\_\_\_\_

Company name \_\_\_\_\_

Occupation \_\_\_\_\_

Address \_\_\_\_\_

Zip Code \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

2 **Payment Information**

Company VAT n° (required companies part of EU) \_\_\_\_\_

**Credit Card**  
Please check credit limit with bank prior to submitting form.

VISA     MasterCard     AMEX

Cardholder Name (as it appears on card) \_\_\_\_\_

Cardholder Number \_\_\_\_\_

Expiration Date (month/year) \_\_\_\_\_ Cryptogram(last 3 digits on back of card; 4 digits on the front AMEX) \_\_\_\_\_

Cardholder's Signature \_\_\_\_\_

**Bank Transfer**  
(All bank charges are to be paid by the sender)

to EUROCONSULT, please NOTE IMPERATIVELY:  
Swift-BIC code: CM CI FR PP  
IBAN: FR76 3006 6109 1500 0200 6760 132  
Account n° 00020067601  
CIC Nanterre Enterprises, 105 Rue des 3 Fontanot, 92022 Nanterre Cedex, France.

**Cheque or Money Order Enclosed**  
Payable to Euroconsult:  
86 Blvd. Sebastopol, 75003 Paris, France

Please complete and return the order form & copyright agreement by e-mail to [reports@euroconsult-ec.com](mailto:reports@euroconsult-ec.com)

All report users must sign a copy of the copyright agreement.

Please read this license agreement carefully.  
By using the research report files, you are agreeing  
to adhere by the terms of this license.

**SINGLE USER LICENSE**

a) This product is licensed only for a team working together on a project, working on the same site in the same company. The person signing this agreement is responsible for the use of the research files. Euroconsult must be informed of all users of the research files before use. The information may not be shared with other company sites or other work teams in the same or other companies in any form, neither photocopied nor reproduced, including for internal use.

b) No part or extract, in any format whatsoever, must be transmitted to any other organization, including cooperative entities and subsidiaries. All licenses purchased at the additional license price are for internal use only by the organization ordering (same company name, same location as indicated on original order form). Euroconsult must be informed of the users of the additional licenses purchased.

c) All data or information extracted from the research files for use in other documents must rightfully use the copyright reference: *Euroconsult, name of report, year*. Before any other use of the information contained in the research files, prior written consent by Euroconsult is required.

d) This Agreement shall in all respects be governed by the laws of the Republic of France. The user agrees that the proper jurisdiction and forum for the resolution of any claim arising under this license shall be at Euroconsult's sole option.

**Research Report User**

First name \_\_\_\_\_

Last name \_\_\_\_\_

Company \_\_\_\_\_

Occupation \_\_\_\_\_

E-mail \_\_\_\_\_

Date \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**Research Report User** (For additional user)

First name \_\_\_\_\_

Last name \_\_\_\_\_

Company \_\_\_\_\_

Occupation \_\_\_\_\_

E-mail \_\_\_\_\_

Date \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_