

Space Mining Market by Phase (Spacecraft Design, Launch, and Operation), Type of Asteroid (C-Type, M-Type, S-Type), Application (Construction, Fuel, and Others), Asteroid Distance, Commodity Resources, and Geography - Global Forecast to 2025

<https://marketpublishers.com/r/SDAED8FCA66EN.html>

Date: October 2018

Pages: 114

Price: US\$ 5,650.00 (Single User License)

ID: SDAED8FCA66EN

Abstracts

The space mining market to grow at a CAGR of 23.6% from 2018 to 2025

The space mining market is expected to grow from USD 0.65 billion in 2018 to USD 2.84 billion by 2023, at a CAGR of 23.6%. Ongoing and impending space mining missions, increasing investments of private stakeholders in space mining companies, and rising number of government initiatives to frame regulations with respect to asteroid mining drive the space mining market growth. However, the high costs associated with asteroid mining may hinder the growth of the space mining market.

The market for the spacecraft design phase to grow at the fastest rate during the forecast period

The space mining market for the spacecraft design phase is expected to grow at the highest CAGR during the forecast period. A spacecraft is a vehicle machine designed to fly in outer space. It used for various purposes, such as communications, earth observation, meteorology, navigation, space colonization, planetary exploration, and transportation of humans and cargo. Depending on the mission type, the overall spacecraft is designed, consisting of various devices, such as instruments (which includes radiometers, spectrometers, thermal emission and reflection systems, cameras, magnetometers, and multispectral scanners, among others), altitude control systems, and electric power systems. The design of the spacecraft has vital importance as the spacecraft has to sustain in critical or extreme conditions in space, such as

microgravity.

Type M asteroids expected to grow at the highest CAGR in the space mining market during the forecast period

Type M asteroids are metallic asteroids and are made of rare metals, such as the platinum group metals (PGM). These asteroids dwell in the middle region of the main belt in between S-type and C-type asteroids and have albedos varying from 0.10 to 0.18. These asteroids account for nearly 8% of the known asteroids. Examples of M-type asteroids include 16 Psyche, 21 Lutetia, 22 Kalliope, and 55 Pandora, among others. Type M asteroid would grow at the highest CAGR during the forecast period. M-type asteroids can be mined, and mined materials can be used in construction activities in space. Precious metals can be mined and taken back to Earth. Hence, a few players are targeting M-type asteroids for exploration and mining.

Europe to grow at the highest CAGR in the space mining market during the forecast period

One of the pioneers in space agencies is the European Space Agency (ESA). ESA's mission is to shape the development of Europe's space capability and ensure that investments in space continue to deliver benefits to citizens across the world. Luxembourg is the first European country to have a legal framework for the extraction of space-based resources. Luxembourg, under the SpaceResources.lu initiative, provides legal, regulatory, and business environment, enabling private investors and companies to explore and use space resources. Also, the collaboration of Government of Luxembourg with various private players (such as Deep Space Industries and Planetary Resources) to explore and mine asteroids is expected to provide opportunities for the players in the space mining market. Therefore, Europe is likely to exhibit the highest CAGR in the space mining market during the forecast period.

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with people holding key positions across regions. The breakup of the profiles of primary participants has been given below.

By Company Size: Tier 1 = 55%, Tier 2 = 25%, and Tier 3 = 20%

By Designation Level: C-Level Executives = 45%, Directors = 35%, and Others = 20%

By Region: North America = 75%, Europe = 15%, and APAC = 10%

Major players and space agencies in the space mining market include Deep Space Industries (US); Planetary Resources (US); Moon Express (US); ispace (Japan); Asteroid Mining Corporation (UK); Shackleton Energy Company (SEC, US); Kleos Space (Luxembourg); TransAstra (US); OffWorld (US); SpaceFab.US (US); National Aeronautics and Space Administration (NASA, US); European Space Agency (ESA, France); Japan Aerospace Exploration Agency (JAXA, Japan); China National Space Administration (CNSA, China); and Russian Federal Space Agency (ROSCOSMOS, Russia).

Reasons to Buy the Report

Illustrative segmentation, analysis, and forecast pertaining to the space mining market based on phase, type of asteroid, and geography have been conducted to provide an overall view of the market.

The report covers qualitative information on different types of commodity resources available in space, categorization of asteroids based on their distance from earth, applications of space mining, and space and on-earth utilization of space-mined materials.

Major drivers, restraints, opportunities, and challenges pertaining to the space mining market have been detailed in this report.

A detailed competitive landscape of the key players (along with their revenues) in the market has been included in this report.

Contents

1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 DEFINITION
- 1.3 STUDY SCOPE
 - 1.3.1 MARKETS COVERED
- 1.4 YEARS CONSIDERED
- 1.5 CURRENCY
- 1.6 STAKEHOLDERS

2 RESEARCH METHODOLOGY

- 2.1 RESEARCH DATA
 - 2.1.1 SECONDARY DATA
 - 2.1.1.1 Data from secondary sources
 - 2.1.2 PRIMARY DATA
 - 2.1.2.1 Breakdown of primaries
 - 2.1.2.2 Key data from primary sources
 - 2.1.2.3 Key industry insights
- 2.2 MARKET SIZE ESTIMATION
 - 2.2.1 BOTTOM-UP APPROACH
 - 2.2.1.1 Approach for capturing market size by bottom-up analysis (demand side)
 - 2.2.2 TOP-DOWN APPROACH
 - 2.2.2.1 Approach for capturing market size by top-down analysis (supply side)
- 2.3 MARKET BREAKDOWN AND DATA TRIANGULATION
- 2.4 RESEARCH ASSUMPTIONS

3 EXECUTIVE SUMMARY

4 PREMIUM INSIGHTS

- 4.1 SPACE MINING MARKET, 2018–2025
- 4.2 SPACE MINING MARKET, BY TYPE OF ASTEROID
- 4.3 SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE, BY COMPONENT
- 4.4 SPACE MINING MARKET: GEOGRAPHIC SNAPSHOT FOR 2025

5 MARKET OVERVIEW

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

5.2.1 DRIVERS

5.2.1.1 Ongoing and impending space mining missions

5.2.1.2 Increasing investments and government initiatives to frame regulations with respect to asteroid mining

5.2.2 RESTRAINTS

5.2.2.1 High costs associated with asteroid mining and prospecting missions

5.2.3 OPPORTUNITIES

5.2.3.1 Government initiatives resulting in growing number of start-ups

5.2.3.2 Easily accessibility to NEAs

5.2.3.3 Adoption of in-situ resource utilization (ISRU) practice in space exploration

5.2.4 CHALLENGES

5.2.4.1 Landing a spacecraft on asteroids proves to be challenging

5.2.4.2 Space mining activities creating huge environmental risks that affect space and Earth

6 SPACE MINING MARKET, BY PHASE

6.1 INTRODUCTION

6.2 SPACECRAFT DESIGN

6.2.1 INSTRUMENTS

6.2.2 ALTITUDE CONTROL SYSTEM

6.2.3 ELECTRIC POWER SYSTEM

6.2.4 OTHERS

6.3 LAUNCH

6.4 OPERATION

7 SPACE MINING MARKET, BY TYPE OF ASTEROID

7.1 INTRODUCTION

7.2 TYPE C

7.3 TYPE S

7.4 TYPE M

7.5 ASTEROID MINING PROCESS FLOW

7.5.1 PROSPECTING

7.5.2 TECHNIQUES TO DETERMINE CHARACTERISTICS OF AN ASTEROID

- 7.5.2.1 Spectrophotometry
- 7.5.2.2 Radiometry
- 7.5.2.3 Spectro-polarimetry
- 7.5.2.4 Hyperspectral imaging
- 7.5.2.5 Thermal modeling
- 7.5.2.6 Ground tracking
- 7.5.3 MINING, EXTRACTION, AND PROCESSING
- 7.5.4 STORAGE

8 DIFFERENT TYPES OF COMMODITY RESOURCES AVAILABLE IN SPACE

- 8.1 INTRODUCTION
- 8.2 WATER
 - 8.2.1 LIQUID OXYGEN AND LIQUID HYDROGEN
- 8.3 PLATINUM GROUP METALS
- 8.4 STRUCTURAL ELEMENTS

9 CATEGORIZATION OF ASTEROIDS BASED ON THEIR DISTANCE FROM EARTH

- 9.1 INTRODUCTION
- 9.2 NEAR-EARTH ASTEROIDS
 - 9.2.1 AMOR ASTEROIDS
 - 9.2.2 APOLLO ASTEROIDS
 - 9.2.3 ATEN ASTEROIDS
- 9.3 ASTEROID BELT DISTANCE RANGES FROM EARTH
 - 9.3.1 0.7–0.99 AU
 - 9.3.2 1.0–1.99 AU
 - 9.3.3 2.0–2.49 AU
 - 9.3.4 2.50–2.99 AU
 - 9.3.5 GREATER THAN 3 AU

10 APPLICATIONS OF SPACE MINING

- 10.1 INTRODUCTION
- 10.2 EXTRATERRESTRIAL COMMODITY
- 10.3 CONSTRUCTION
- 10.4 HUMAN LIFE SUSTAINABILITY
- 10.5 FUEL
- 10.6 3D PRINTING

11 SPACE AND ON-EARTH UTILIZATION OF SPACE-MINED MATERIALS

11.1 INTRODUCTION

11.2 EARTH

11.3 SPACE

12 GEOGRAPHIC ANALYSIS OF SPACE MINING MARKET

12.1 INTRODUCTION

12.2 NORTH AMERICA

12.2.1 US

12.2.2 CANADA

12.3 EUROPE & MIDDLE EAST

12.3.1 LUXEMBOURG

12.3.2 RUSSIA

12.3.3 GERMANY

12.3.4 UK

12.3.5 ISRAEL

12.4 APAC

12.4.1 JAPAN

12.4.2 CHINA

12.4.3 INDIA

13 COMPETITIVE LANDSCAPE

13.1 OVERVIEW

13.2 RANKING ANALYSIS OF MARKET PLAYERS

13.2.1 FUNDING ACTIVITIES

13.2.2 PRODUCT LAUNCHES

13.2.3 AGREEMENTS, PARTNERSHIPS, AND CONTRACTS

13.2.4 EXPANSIONS

14 COMPANY PROFILES

(Business Overview, Product portfolio, Objectives, Recent Developments, and MnM View)*

14.1 KEY PLAYERS

Space Mining Market by Phase (Spacecraft Design, Launch, and Operation), Type of Asteroid (C-Type, M-Type, S-T...

- 14.1.1 DEEP SPACE INDUSTRIES (DSI)
- 14.1.2 PLANETARY RESOURCES
- 14.1.3 MOON EXPRESS
- 14.1.4 ISPACE
- 14.1.5 ASTEROID MINING CORPORATION
- 14.1.6 SHACKLETON ENERGY COMPANY (SEC)
- 14.1.7 KLEOS SPACE
- 14.1.8 TRANSASTRA
- 14.1.9 OFFWORLD
- 14.1.10 SPACEFAB.US
- 14.2 SPACE AGENCIES/OTHER KEY PLAYERS
 - 14.2.1 NASA
 - 14.2.2 ESA
 - 14.2.3 JAXA
 - 14.2.4 CHINA NATIONAL SPACE ADMINISTRATION
 - 14.2.5 RUSSIAN FEDERAL SPACE AGENCY (ROSCOSMOS)

*Details on Business Overview, Product portfolio, Objectives, Recent Developments, and MnM View might not be captured in case of unlisted companies.

15 APPENDIX

- 15.1 DISCUSSION GUIDE
 - 15.1 KNOWLEDGE STORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL
- 15.2 AVAILABLE CUSTOMIZATIONS
- 15.3 RELATED REPORTS
- 15.4 AUTHOR DETAILS

List Of Tables

LIST OF TABLES

Table 1 LIST OF ASTEROID PROSPECTING AND SAMPLE-RETURN MISSIONS

Table 2 COLLABORATIONS OF GOVERNMENT AGENCIES WITH PRIVATE PLAYERS

Table 3 SPACE MINING MARKET, BY PHASE, 2016–2025 (USD MILLION)

Table 4 SPACE MINING MARKET FOR OSIRIS-REX MISSION, BY PHASE, 2015–2021 (USD MILLION)

Table 5 SPACE MINING MARKET FOR LUCY MISSION, BY PHASE, 2018–2024 (USD MILLION)

Table 6 SPACE MINING MARKET FOR PSYCHE MISSION, BY PHASE, 2019–2024 (USD MILLION)

Table 7 SPACE MINING MARKET FOR HERA MISSION, BY PHASE, 2020–2024 (USD MILLION)

Table 8 SPACE MINING MARKET FOR DART MISSION, BY PHASE, 2017–2024 (USD MILLION)

Table 9 SPACE MINING MARKET FOR DESTINY+ MISSION, BY PHASE, 2019–2024 (USD MILLION)

Table 10 SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE, BY COMPONENT, 2016–2025 (USD MILLION)

Table 11 SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE, BY REGION, 2016–2025 (USD MILLION)

Table 12 SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE, BY TYPE OF ASTEROID, 2016–2025 (USD MILLION)

Table 13 SPACE MINING MARKET FOR LAUNCH PHASE, BY REGION, 2016–2025 (USD MILLION)

Table 14 SPACE MINING MARKET FOR LAUNCH PHASE, BY TYPE OF ASTEROID, 2016–2025 (USD MILLION)

Table 15 SPACE MINING MARKET FOR OPERATION PHASE, BY REGION, 2016–2025 (USD MILLION)

Table 16 SPACE MINING MARKET FOR OPERATION PHASE, BY TYPE OF ASTEROID, 2016–2025 (USD MILLION)

Table 17 SPACE MINING MARKET, BY TYPE OF ASTEROID, 2016–2025 (USD MILLION)

Table 18 LIST OF NEAREST COST EFFECTIVE ASTEROIDS

Table 19 LIST OF VALUABLE ASTEROIDS

Table 20 LIST OF SMALLEST ASTEROID

Table 21 DIFFERENT MISSIONS TO ASTEROIDS

Table 22 SPACE MINING MARKET, BY GEOGRAPHY, 2016–2025 (USD MILLION)

Table 23 MARKET PLAYER RANKING, 2017

Table 24 FUNDING ACTIVITIES, 2016–2018

Table 25 PRODUCT LAUNCHES, 2015–2018

Table 26 AGREEMENTS, COLLABORATIONS, PARTNERSHIPS, AND CONTRACTS,
2015–2017

Table 27 EXPANSIONS, 2016–2017

List Of Figures

LIST OF FIGURES

- Figure 1 SPACE MINING MARKET SEGMENTATION
- Figure 2 SPACE MINING MARKET: PROCESS FLOW OF MARKET SIZE ESTIMATION
- Figure 3 SPACE MINING MARKET: RESEARCH DESIGN
- Figure 4 BOTTOM-UP APPROACH TO ARRIVE AT MARKET SIZE
- Figure 5 TOP-DOWN APPROACH TO ARRIVE AT MARKET SIZE
- Figure 6 DATA TRIANGULATION
- Figure 7 ASSUMPTIONS FOR RESEARCH STUDY
- Figure 8 SPACECRAFT DESIGN PHASE TO ACCOUNT FOR LARGEST SIZE OF SPACE MINING MARKET, BASED ON PHASE, BY 2025
- Figure 9 C-TYPE ASTEROIDS TO ACCOUNT FOR LARGEST MARKET SIZE BY 2025
- Figure 10 US TO ACCOUNT FOR LARGEST SHARE OF SPACE MINING MARKET BY 2025
- Figure 11 GROWTH OPPORTUNITIES IN SPACE MINING MARKET FROM 2018 TO 2025
- Figure 12 C-TYPE ASTEROIDS TO DOMINATE SPACE MINING MARKET DURING FORECAST PERIOD
- Figure 13 MARKET FOR INSTRUMENTS EXPECTED TO DOMINATE SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE FROM 2018 TO 2025
- Figure 14 US EXPECTED TO DOMINATE SPACE MINING MARKET DURING FORECAST PERIOD
- Figure 15 ONGOING AND IMPEDING SPACE MINING MISSIONS TO DRIVE SPACE MINING MARKET GROWTH
- Figure 16 SPACECRAFT DESIGN PHASE TO DOMINATE SPACE MINING MARKET
- Figure 17 INSTRUMENTS SEGMENT TO LEAD SPACE MINING MARKET FOR SPACECRAFT DESIGN PHASE DURING FORECAST PERIOD
- Figure 18 TYPES OF ASTEROIDS
- Figure 19 C-TYPE OF ASTEROIDS TO DOMINATE SPACE MINING MARKET
- Figure 20 C-TYPE ASTEROIDS HOLD LARGEST SHARE OF KNOWN ASTEROIDS AS OF 2017
- Figure 21 PROCESSING OF ASTEROIDS FOR ISRU
- Figure 22 TYPES OF COMMODITY RESOURCES FOR SPACE MINING
- Figure 23 WATER EXTRACTION PROCESS FROM ASTEROIDS
- Figure 24 TYPES OF NEAR-EARTH ASTEROIDS
- Figure 25 ASTEROID BELTS LIE AT DISTANCE BETWEEN 2.0 AND 2.49 AU FROM

EARTH HOLD LARGEST SHARE

Figure 26 ASTEROID MINING FLOW DIAGRAM

Figure 27 TOTAL NUMBER OF NEAR-EARTH ASTEROIDS DISCOVERED AS OF 2017

Figure 28 US TO ACCOUNT FOR LARGEST SIZE OF SPACE MINING MARKET BY 2025

Figure 29 TIMELINE: CHINA SPACE MINING

Figure 30 ORGANIC AND INORGANIC STRATEGIES ADOPTED BY COMPANIES OPERATING IN SPACE MINING MARKET

Figure 31 DSI: ACTIVITY TIMELINE

Figure 32 DSI: FUNDING INSIGHTS

Figure 33 PLANETARY RESOURCES: ACTIVITY TIMELINE

Figure 34 PLANETARY RESOURCES: FUNDING INSIGHTS

Figure 35 MOON EXPRESS: ACTIVITY TIMELINE

Figure 36 MOON EXPRESS: FUNDING INSIGHTS

Figure 37 ISPACE: ACTIVITY TIMELINE

Figure 38 ISPACE: FUNDING AUTHORITIES

Figure 39 ASTEROID MINING CORPORATION: FUNDING INSIGHTS

Figure 40 SEC: ACTIVITY TIMELINE

Figure 41 SEC: FUNDING INSIGHTS

Figure 42 KLEOS SPACE: ACTIVITY TIMELINE

Figure 43 KLEOS SPACE: FUNDING INSIGHTS

Figure 44 TRANSASTRA: FUNDING INSIGHTS

Figure 45 OFFWORLD: MISSION TIMELINE

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