



COMMERCIAL SATELLITES & SPACE SECTOR

WHITE PAPER

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STUDY APPROACH & ACTIVITIES

The global commercial satellite and space sector has grown substantially in recent years due to technological advancements in both satellites and space-related equipment. Additionally, governments around the world are increasingly investing in space programs designed to spur innovation within their respective countries.

ResearchFDI conducted an industry research report on the commercial satellites and space sector to assist a client in identifying high-growth companies with job creation and expansion potential. This study aimed to provide a detailed overview of the commercial satellite & space industries in a major European country and identify potential business recruitment opportunities for our client.

Primary Activities:

- ▶ Overview of the Commercial Satellites & Space sector
- ▶ Analyze key segments within the industry
- ▶ Analyze the current target market size
- ▶ Describe key trends, drivers, and challenges
- ▶ Provide outlook on the industry's future development



SECTOR OVERVIEW



The Commercial Satellites and Space Sector

The global space economy was estimated to be worth US\$423.8 billion in 2019 and includes a wide range of activities relating to space research, exploration, and use.

The space sector at large is undergoing massive change and development worldwide, rising to the forefront of global innovation thanks to major technological developments, a resurgent entrepreneurial spirit, and a reinvigorated policy focus.

The space economy in Europe specifically is growing, largely owing to the public's support for successful space programs, particularly those focusing on satellite navigation and Earth observation. In fact, Europe is currently the 4th largest space manufacturing power worldwide, while various European firms also control a large portion of the accessible launch services industry as well as a steady portion of the open satellite production market.

The target market is a leading European space nation, accounting for 5.1% of the global market, with 40% of all small satellites currently in orbit having been manufactured within the target market. In 2019, there were 1,218 companies operating in the target market's space sector, accounting for 0.14% of the target markets workforce and further supporting a total of 126,300 jobs across the supply chain.

The target market government has also made their ambitious plans for the industry clear, with plans to have their income share reachw 10% of the world's space economy and their national export share increase to 60% by 2030. The government is also targeting the creation of a further 100,000 space industry jobs.

INDUSTRY SEGMENTS

Overview

The commercial satellite and space sector in the target market comprises of numerous segments that are closely intertwined with public, military and/or aerospace activities and/or even more broadly with information technologies. The commercial satellite and space sector in the target market can be separated into four broad categories;



Satellite Manufacturing

The satellite manufacturing segment includes activities such as launch vehicles and subsystems, satellites/payloads/ spacecraft and subsystems, scientific instruments, ground segment systems and equipment (control centers and telemetry), suppliers of materials and components, scientific and engineering support, fundamental and applied research. Test facilities are also subsumed in this segment.



Satellite Operations

The satellite operations segment covers the launch and operation of satellites and/or spacecrafts, this consists of a variety of activities including; launch services, operating their own satellites, operating ground segments for third parties, managing ground station networks, orbital maintenance, debris removal, space surveillance and tracking (SST), and space tourism, and space manufacturing.



Satellite Applications

The satellite applications segment includes Earth Observation, Satellite Navigation and Satellite Communications. It also includes Geospatial Technologies, which refers to the technology used to acquire, manipulate, and store geographic information. This covers a variety of technologies including; geographic information systems (GIS), global positioning systems (GPS), remote sensing, and geofencing.



Professional/Support Services

The professional/Support services segment includes technical and financial consulting, legal, advertising and marketing and regulatory arrangements, education and training. Further specialized support services include insurance, software and IT services, market research and consultancy services, company incubation and development, policymaking, and supervision.

MARKET SIZE

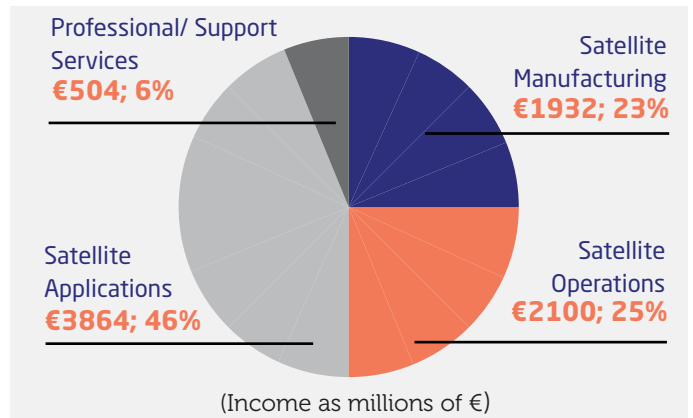
Overview

The target market's space industry is a fast-growing sector. Its income (both commercial revenues and non-commercial funding) is estimated to have tripled in size since the early 2000s, with the total target market space sector income increasing by 2.8% per year since 2016/2017. In 2020, the market size was estimated to be approximately €19.5 billion.

Market Segments

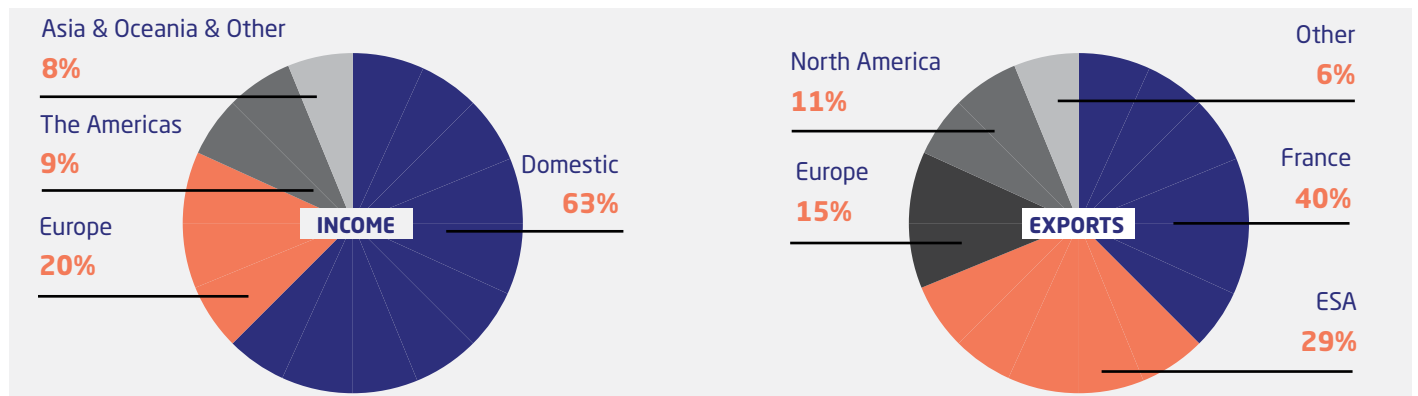
By far the largest segment of the target market's space industry income is Satellite applications, making up 71% of the total income when Direct-To-Home broadcasting (DTH) with and Supply of Uses Devices and Equipment are included.

When excluded, the target market's overall space industry income falls to €8.4 billion, however, satellite applications remains as the largest segment, making up 46% of the industry income. Space Operations (25%) is the second largest segment, followed by Space Manufacturing (23%), and Professional/ Support Services (6%).



Market Client Base

The target market's space industry has maintained its successes in exports by generating approximately 37% of income from abroad. The most important export market for the target market is Europe, which represents 20% of total income and 55% of total exports in 2016/17. The Americas, comprising Northern America and Central & South America (incl. Caribbean) represent the third largest market with a total share of 9% of income. Europe as the target market's most significant foreign market is driven by the significant level of exports to France and ESA, making up a combined share of 69% of total exports. Beyond the European market, North America is the target market's next largest export market, with the USA and Canada having shares of 8% and 3% respectively (11% combined).



KEY TRENDS, DRIVERS & CHALLENGES

Key Trends



The commercial satellite and space sector will likely see several mega-trends shape its future before the 2030s. With technological advancements shaping the sector and changes in the industry's demand, the following trends are currently driving the space sector's growth:

- Technological advancements influencing space security, science and exploration
- Shift in manufacturing towards more miniaturized space systems
- Rise of Commercial-off-the-shelf (COTS) methods as favored option for manufacturing
- Manufacturing of spaceships on assembly lines with significantly increased output

Key Drivers



The key drivers of the commercial satellite and space sector are primarily related to technical advances across the board. Many of these advances have become heavily incorporated into the space sector allowing for breakthroughs and contributing to the creation of new services and applications:

- Big Data and Data Science
- Automation / Artificial Intelligence / Machine Learning
- 5G Connectivity and Internet of Things (IoT)
- Further Technologies (blockchain, quantum computing, and cloud computing)

Key Challenges



The continued growth of the commercial satellite and space sector in the target market will be affected by several internal factors influenced by the trends as well as external factors. These challenges can be roughly categorized as follows:

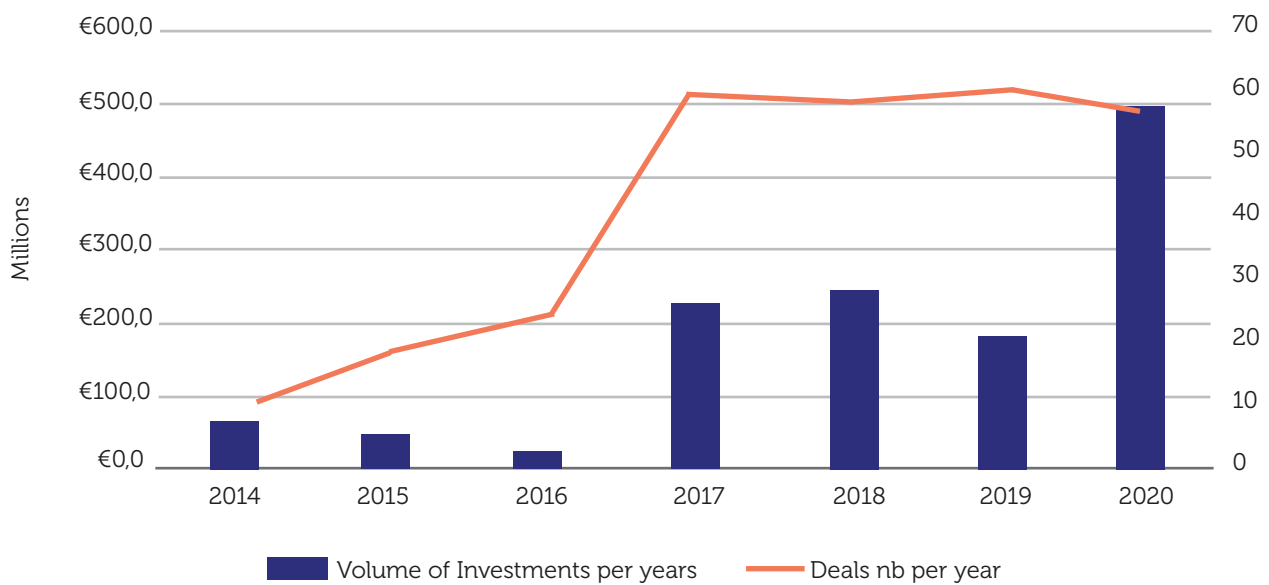
- Market evolution and a growing number of competitors
- Policy and regulations
- Cyber threats
- Debris
- Militarization of space

THE IMPACT OF THE PANDEMIC

Despite the COVID-19 pandemic bringing the rest of the world to a standstill, the European space sector accelerated. Even while conforming to the constantly changing public health regulations all around the world, the commercial space industry surged, buoyed by government contracts and rising demand in some industries while public exploration expeditions rushed to fulfil strict deadlines.

In 2020, the globe launched more satellites than any previous year. While many of the launched satellites were small or bulk satellites, the sheer number of launches shows the significant growth of the space industry in recent years – and how resilient spaceflight has become even in the face of a pandemic.

Investments and Deals for European Space Startups, 2014-2020



However, the space world was not completely immune to COVID-19. At the beginning of the pandemic, many businesses were forced to slow or stop operations in order to conform to the new health guidelines in place. Certain areas of the satellite business, particularly those that offer communications and services to the cruise and marine industries, as well as airlines, experienced slowdowns.

On the other hand, other sections of the satellite industry witnessed a significant rise in demand. Companies that supply high-resolution images of the Earth and geospatial intelligence were particularly sought after.

During the pandemic, many aerospace companies were also classed as “vital” in the United States and other countries due to their contracts with governmental authorities. This allowed many businesses within the space sector to continue to work on all their projects, both governmental and commercial.

CONCLUSION & RESULTS

ResearchFDI's strategy, market research and business development expertise combined to provide an understanding of the target markets commercial satellites & space sector and identify surrounding business recruitment opportunities.

In the first phase of ResearchFDI's industry assessment, the industry radar utilized extensive research carried out by ResearchFDI to establish a general understanding of the commercial satellites & space sector. This included research into the industry, its segments, and the trends and outlook of the sector in the target market.

In the second phase of the assessment, ResearchFDI developed a database of high-growth companies aligned with clients's target sector. In doing so, 200 promising companies from the target market were identified to be considered by the client for attracting investment.

Key results:

- ▶ Well-structured understanding of the target market's commercial satellites & space sector
- ▶ Analysis of the prior growth and future potential of surrounding business recruitment opportunities for the client in the target market
- ▶ A detailed list of 200 promising companies from the target market for the client region's investment attraction

ResearchFDI is a specialized market research firm that works with economic development organizations and regional promotion agencies to identify and capture direct investment opportunities. Whether your goal is to learn more about existing trends, promote your region's strength or secure new corporate investment, ResearchFDI has a solution for you.

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