

Satellite-based Earth Observation - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The Satellite-based Earth Observation Market size is estimated at USD 4.04 billion in 2024, and is expected to reach USD 5.54 billion by 2029, growing at a CAGR of 6.52% during the forecast period (2024-2029).

Satellite-based earth observation is a process of collecting information related to the Earth's various issues using remote sensing. It is used in various applications that impact human life and the environment. Space technology offers vital information that helps address development challenges. Earth observation satellites have been collecting data from space, providing valuable insights into the Earth's natural and artificial environment, how its regions change over time, and what policy-makers can do to mitigate these changes. This data is used by agencies and institutions working in development, aid, and relief.

Key Highlights

The European Commission has recently introduced legislation aimed at tackling global deforestation. As a result, operators who sell deforestation-related commodities are now required to conduct mandatory due diligence. Companies must obtain geographical information about the land where their products are produced to ensure that only deforestation-free goods are sold in the EU market. This development has led to increased demand for satellite data for supply chain tracking, contributing to the market's growth.

The increasing demand for efficient monitoring of vast land areas is indeed driving the growth of the satellite-based Earth observation market. This surge is attributable to the

need to manage and observe natural resources, urban development, agricultural activities, environmental changes, and security concerns on a global scale.

Smart city initiatives are driving the demand for satellite-based Earth observation technology. These initiatives utilize satellite data for various purposes like urban planning, infrastructure management, environmental monitoring, and disaster response. As smart cities strive for efficiency and sustainability, satellite-based Earth observation provides real-time data and insights for informed decision-making and effective resource allocation. Consequently, the increasing adoption of smart city initiatives worldwide is fueling the growth of the satellite-based Earth observation market.

Open-source data is often freely available, reducing the barrier to entry for businesses and researchers compared to purchasing proprietary satellite data. The open-source data is more accessible to a wider range of users, enabling greater innovation and development of applications in areas such as agriculture, urban planning, and environmental monitoring.

During recessions, governments often tighten their budgets, leading to cuts in discretionary spending. This may impact investments in space programs and environmental monitoring initiatives, which are major consumers of Earth observation data. Recession creates economic uncertainty, causing businesses to become more cautious with their investments. Thus, companies might postpone or reduce their spending on satellite imagery and related services, especially when the perceived value proposition needs to address immediate financial concerns directly.

Satellite-based Earth Observation Market Trends

Urban Development to be the Fastest Growing Application

The government initiatives to support new startups in urban development are likely to drive market growth. For instance, in December 2023, the Indian nodal agency in the Department of Space, in collaboration with the National Remote Sensing Center, launched a seed fund scheme to support startups operating in urban development and disaster management using space technology.

With financial assistance, the startups are expected to develop applications of EO data for urban planning and development. This could lead to the creation of new services that address critical challenges in urban development. Further, the growth in the number of startups with EO-based solutions is expected to broaden the range of services

available.

The growing investment in urban development due to the rapidly growing urban population creates the need for infrastructure facilities that support market growth. According to the Population Reference Bureau, in 2023, the degree of urbanization globally was 57 percent. North America, Latin America, and the Caribbean were the regions with the highest level of urbanization, with over four-fifths of the population residing in urban areas.

In 2022, the US Department of Housing and Urban Development reported spending around USD 29.31 billion. Projections from the US Office of Management and Budget anticipate this figure will rise to approximately USD 80.26 billion by 2028.

Recently, the market vendor Satellogic, a high-resolution satellite imagery provider, collaborated with Geoterralmage to introduce a fully automated building development detection and monitoring system to the South African market. This system offers an efficient and cost-effective solution for monitoring and mapping new developments for municipalities and provincial governments in South Africa.

North America to Hold Significant Market Share

North America is experiencing a surge in demand for satellite-based Earth observation, driven by sectors like agriculture, environment, and defense seeking high-resolution data. Satellite imagery plays a crucial role in monitoring environmental issues across North America's vast and remote landscapes. For instance, the National Oceanic and Atmospheric Administration (NOAA) satellites provide weekly analysis of ozone levels, track iceberg movements, and offer data on events like bushfires and thunderstorms. Such information aids in formulating data-driven policies for sustainable resource management.

As defense forces face evolving threats, including insurgency tactics and virtual warfare, intelligence gathering becomes as vital as on-the-ground operations. Geospatial tools empower defense forces to plan, monitor, and counter potential dangers.

The North American region is witnessing increased investments in its defense sector, presenting opportunities for market players. In FY2024, the US Department of Defense (DOD) requested a budget of USD 26.1 billion, marking a USD 4.4 billion increase from

its FY2023 request. Additionally, in November 2023, India and the United States announced plans to launch a joint microwave remote sensing satellite, named NASA-ISRO Synthetic Aperture Radar (NISAR), in early 2024.

Urban development is a prominent application driving the demand for satellite imagery in North America. High-resolution satellite images enable detailed assessments of urban areas, including road networks, infrastructure, and land cover changes. In response to this demand, regional players are launching satellite imagery programs.

For instance, in March 2024, the Vexcel Data Program expanded its annual aerial imagery collection in the US, covering 4.4 million km square in the Lower 48 states. This represents a 15% increase in coverage compared to the previous year, with a focus on urban areas at a detailed 7.5 cm resolution. Major cities and urban areas will be imaged up to 3 times annually.

The satellite imagery market is witnessing a notable uptick, driven by its growing importance across sectors and increased government investments, particularly in areas like environment and defense.

Satellite-based Earth Observation Industry Overview

The market for satellite-based earth observation is significantly fragmented, featuring a mix of global corporations and small to medium-sized businesses. Some of the major players are Airbus Defence and Space (Airbus SE), Esri Inc., Imagesat International (ISI) Ltd, MDA Corporation (Maxar Technologies), and Planet Labs PBC. Market players are employing strategies like partnerships and acquisitions to improve their product lines and secure a lasting competitive advantage.

March 2024 - Ursa Space Systems Inc. partnered with MAIAR, a UK small business specializing in the Defence Intelligence arena, to augment geospatial and open-source analytics for NATO, focusing on benefitting the United Kingdom's operational users. This collaboration leverages MAIAR's deep understanding of mission intricacies and Ursa's advanced analytics platform, providing a swift and impactful approach to geospatial analytics. Together, the two companies are poised to expedite delivery times and maximize the magnitude of results, ensuring improved value for both UK and NATO customers.

January 2024 - Imagesat International (ISI) stated that it was awarded a contract worth a total sum of around USD 37.5M for the provision of satellite services to an undisclosed strategic customer during a period of 5 years. Under this contract, ISI would deliver the customer 30 cm resolution imaging services through its EROS C2 and EROS C3 satellites and maintenance and ground station services.

Additional Benefits:

The market estimate (ME) sheet in Excel format

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