SPACE FOUNDATION

THE STATE OF THE

GLOBAL SPACE ECONOMY

2026 Analysis of Commercial and Government Space | 2026 Midyear Launch Report

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GLOBAL SPACE ECONOMY

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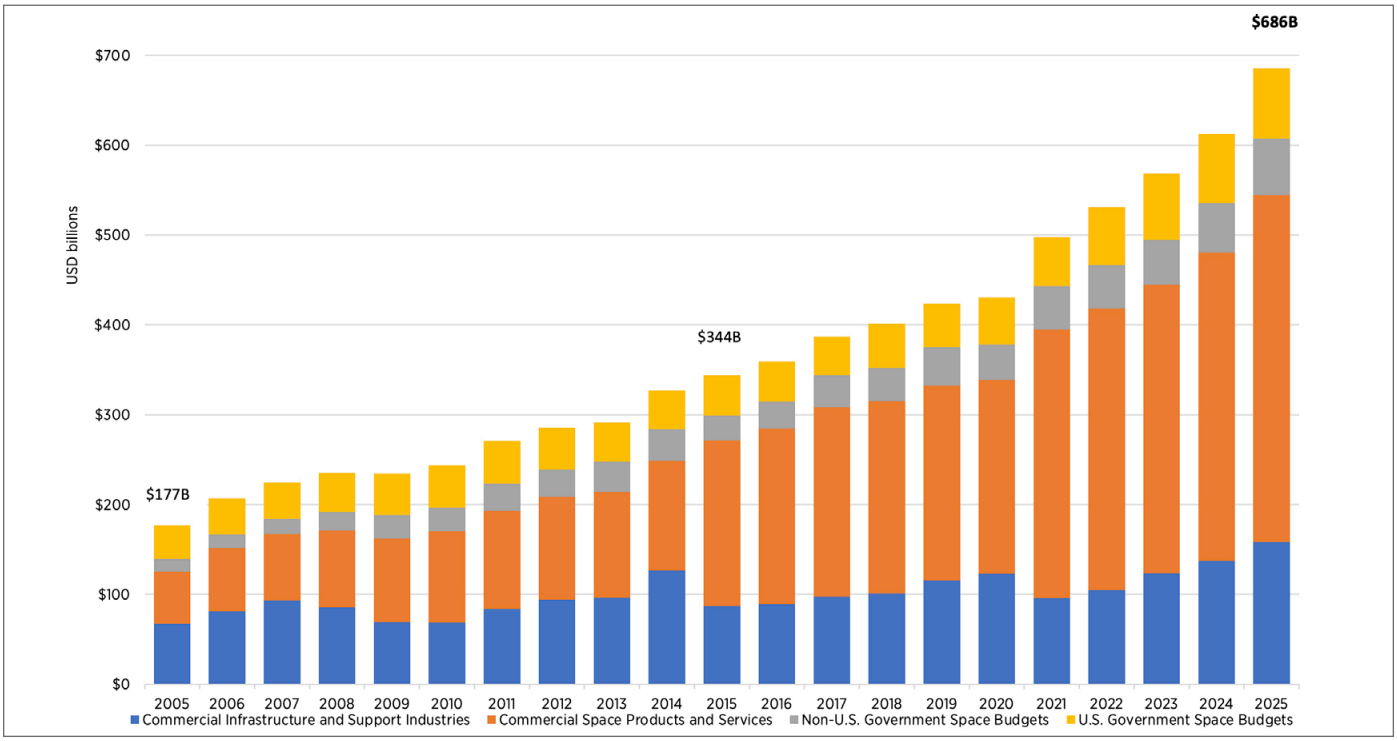
Space Economy Hits Double-Digit Gain For the Second Time This Decade

The global space economy climbed 12% year-over-year to reach $686 billion in 2025, driven by robust commercial growth, expanding space-enabled consumer services and deeper international government spending for civil programs and national defense.

The annual gain is the second double-digit jump in the past decade, trailing 2021 when strong investment during the post-pandemic recovery resulted in a 15.5% annual gain. The 2025 growth rate is the fourth-highest since 2006, when Space Foundation first released its annual global economic analysis. The compound annual growth rate (CAGR), which gauges annualized rate of business growth and investment, grew more than 2% from the prior five-year CAGR on the strength of 2025 performance, reaching 9.8%.

Global Space Activity, 2005-2025



Source: Space Foundation database

U.S. government funding, at $78.3 billion, was 57% of overall government spending last year. Historically, U.S. funding for entrepreneurs, in concert with private capital, created a synergy that brought new capabilities forward faster, said Kevin O'Connell, CEO and founder of Space Economy Rising and a former dirctor of the Office of Space Commerce. That funding framework, combined with lower launch costs allowing faster access to space, is benefitting from a growing realization that space can be about more than exploration, said O'Connell, who is also a Space Foundation board member.

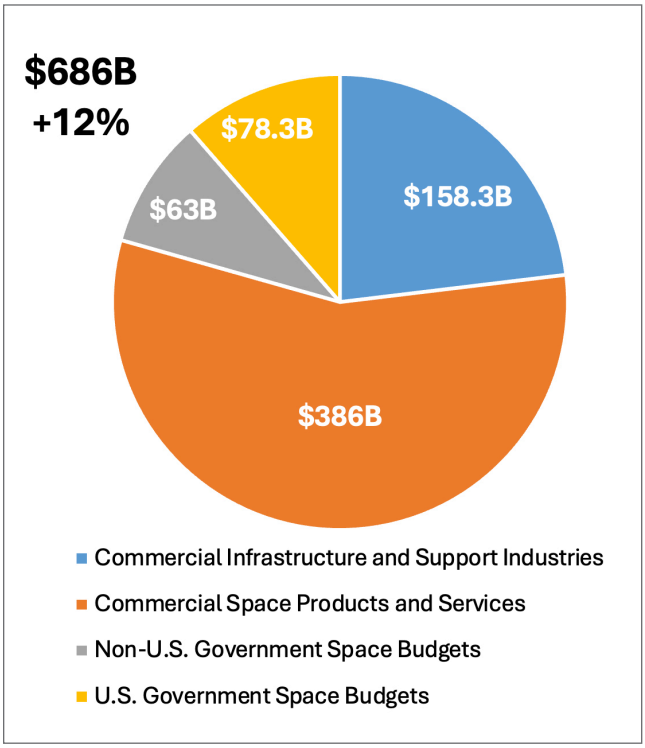
Kevin O'Connell

"We recognize there's enormous economic and social value that will be created by leveraging space," he said. "I think that's critical at this particular point in time, the combination of government funding and strategy and (really) private capital fueling innovation in the market."

Commercial Sectors Old and New Accelerate Growth

Commercial activity in 2025 surpassed $544.3 billion, a 13% increase from a slightly revised $481.5 billion in 2024. Commercial sectors in 2025 accounted for 79% of the global space economy. Revenue from the two top sectors—Positioning, Navigation and Timing (PNT) and Ground Stations and Equipment—generated a combined $419.8 billion. Some newer sectors, such as In-Space Servicing, Assembly and Manufacturing, and Lunar Activities, added to the analysis this year, showed promising gains of 23% and 43%. These sectors are experiencing dynamic change, says Carissa Christensen, CEO of BryceTech and Space Foundation board member.

Global Space Activity by Category, 2025



Rounded from $685.6
Source: Space Foundation database

Carissa Christensen

"We're in an extraordinary time in thinking about the cislunar economy right now," she said. "We have governments around the world spending money to develop missions and support activities on the Moon. That increase in activity and those plans with international partners are really going to reshape how we think of the cislunar economy."

A New Priority for Government Space Spending

Government funding as a driver of space innovation is showing growth into 2026 budgets. In 2025, 53 global government space budgets added almost $10 billion from 2024, growing 7.4% to nearly $141 billion. Of the 43 FY26 budgets available, spending increased 11.8% annually. National defense is a growing priority.

Peter Beshar

"Around the world, defense budgets have increased significantly. And space has become an ever larger, and prominent, component of those expanding military budgets," said Peter Beshar, former general counsel to the Air Force and Space Force and a Space Foundation board member.

Comprehensive reports on key economic sectors and emerging technologies begin on the following pages.

Commercial Space Revenue Rises 13% from 2024

The global commercial space industry generated an estimated $544.3 billion in revenue in 2025, an increase of 13% from a slightly revised $481.5 billion in 2024.

Device sales and value-added services enabled by global navigation satellite systems (GNSS), generated a combined $419.8 billion in revenue, more than three-quarters of the commercial market.

The industry's infrastructure segments experienced particularly rapid growth in 2025. Commercial satellite manufacturing revenues increased 67.2%, while commercial launch revenues grew 49.4%, reflecting the continued expansion of large satellite constellations and the record number of spacecraft deployed during the year.

And in a nod to a growing area of business, Space Foundation this year has added a new commercial sector, Lunar Activities, to capture related revenue growth. This brings the number of subsectors in the commercial analysis to 13.

Commercial Space Products and Services

Much of the economic value generated by the commercial space industry is created not by activities in space, but by the products and services on Earth that rely on satellites and other space-based infrastructure. These satellite-enabled products and services accounted for 70.9% of commercial space revenue in 2025, generating an estimated $385.9 billion, an increase of 11.7% from $345.5 billion in 2024. In many cases, consumers and businesses are unaware that space systems support the products and services they use every day. Satellite data help insurers assess disaster damage, enable precision agriculture, support global shipping and aviation, provide location and navigation services for smartphones and vehicles, and deliver television, broadband, and other communications services. As satellite capabilities continue to improve and become more deeply integrated into the global economy, downstream products and services remain the largest and fastest-growing source of commercial space revenue.

Commercial Space Products and Services, 2025

Category	2025 Revenue (US$B)	YoY Change	Source
Position, Navigation, and Timing	$279.9	18.3%	European Union Agency for the Space Programme
Direct-to-Home Television	$66.4	-8.2%	Satellite Industry Association; Public Filings
Satellite Communications	$28.4	9.5%	Satellite Industry Association; Public Filings
Satellite Radio	$6.4	-2.1%	Public Filings
Earth Observation	$4.3	17.4%	European Union Agency for the Space Programme
Lunar Activities	$0.36	23.2%	Public Filings
Total	**$385.9**	**12%**	

New Satellites Enlarge Positioning, Navigation, and Timing Market

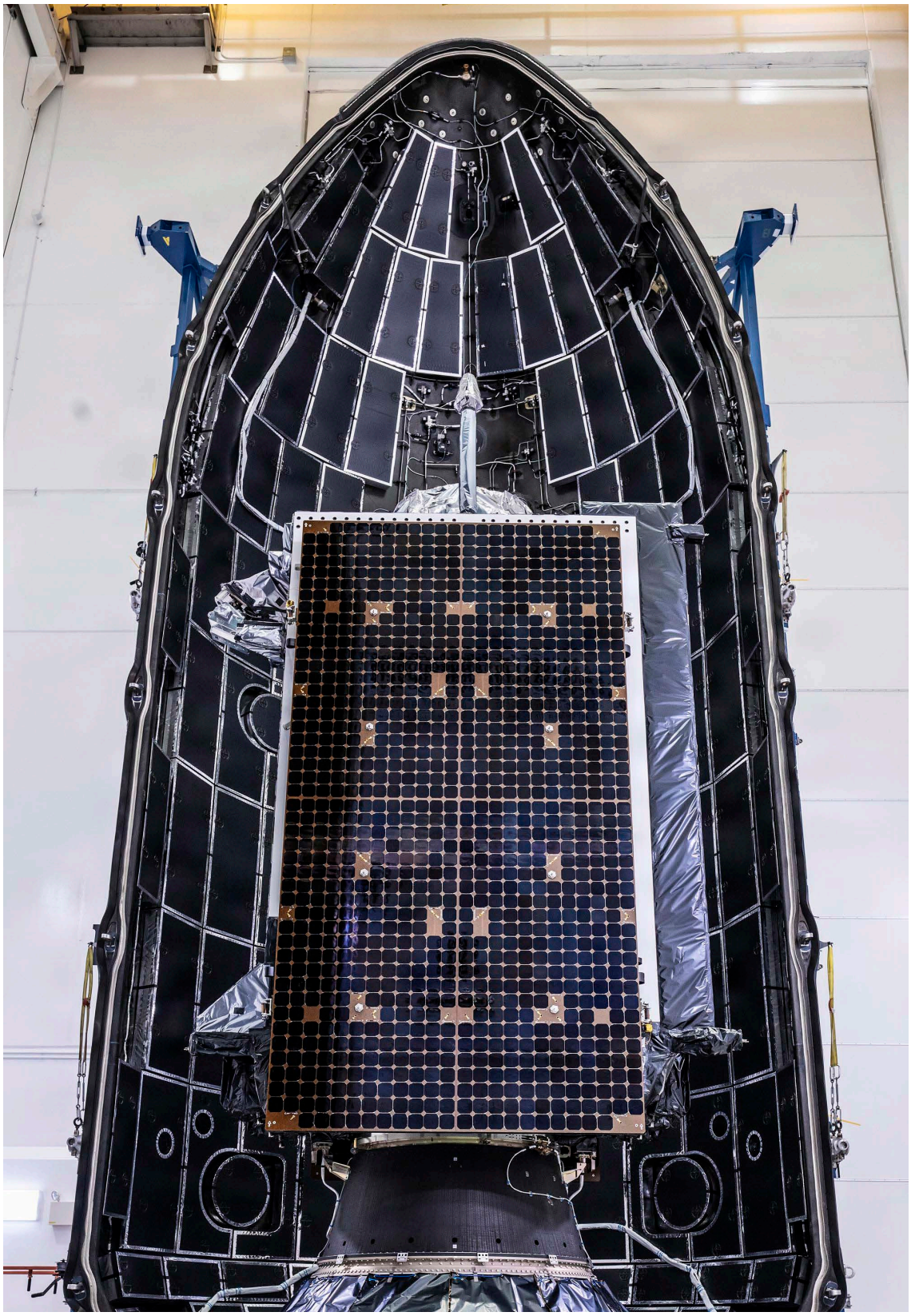
Positioning, navigation, and timing (PNT) services represent the largest source of commercial revenue in the global space economy. While revenues from GNSS receivers are included in the Ground Stations and Equipment section, the much larger economic impact comes from the software, data products, and services that rely on those receivers. These include navigation and mapping applications, fleet management systems, precision agriculture, drone operations, location-based advertising, financial timing services, and countless smartphone applications that depend on satellite positioning.[1]

According to the European Union Agency for the Space Programme (EUSPA), satellite-enabled PNT services generated an estimated $279.9 billion in revenue in 2025, an increase of 18.3% from $236.6 billion in 2024. Consumer applications — particularly smartphone-based navigation, mapping, and location-based services — remain the largest source of revenue. Automotive applications also contribute substantially through in-vehicle navigation systems, mapping software, and connected vehicle services. As vehicles become increasingly automated and connected, EUSPA expects this segment to become an even more important driver of future growth. Although they account for a smaller share of total revenue, sectors such as aviation, maritime transportation, precision agriculture, surveying, logistics, and electric power distribution also rely heavily on satellite positioning and precise timing services.[2]

Nearly all commercial revenues in this sector have been generated from value-added services built on freely available signals transmitted by government-operated navigation satellite systems, including the United States' Global Positioning System (GPS), Europe's Galileo, China's BeiDou, and Russia's GLONASS. A growing number of companies, however, are seeking to commercialize positioning and timing services by deploying their own constellations. Rather than operating in medium Earth orbit like traditional navigation systems, these companies plan to use low Earth orbit (LEO) constellations to provide stronger signals that are more resistant to interference and jamming while enabling higher positioning accuracy for certain applications.

Among the most prominent companies pursuing this approach are Xona and TrustPoint. Xona launched its first demonstration satellite in June 2025 and has approximately a dozen commercial and government partners testing its signals. The company ultimately plans to deploy a constellation of 258 satellites targeting customers in telecommunications, financial services, autonomous systems, and defense that require resilient, high-precision timing and navigation services.[3] TrustPoint has deployed three demonstration satellites and plans to develop a constellation of approximately 300 spacecraft. The company has demonstrated GPS-independent navigation for satellites operating in low Earth orbit and, in May 2026, received a $4 million contract from the U.S. Space Force to demonstrate resilient positioning, navigation, and timing services across ground and space systems.[4]

Although commercial LEO navigation constellations remain in the early stages of development, they illustrate an important evolution in the satellite navigation market. Rather than simply building applications that rely on government-provided signals, companies are beginning to develop commercial navigation infrastructure designed to augment, or in some applications provide an alternative for, traditional GNSS systems. As demand for resilient navigation and precise timing continues to grow across commercial, financial, and defense applications, these emerging constellations could create an entirely new segment of the commercial space economy over the coming decade.



The final Lockheed Martin GPS III satellite was launched by the Space Force in April. The U.S. GPS constellation has 32 active satellites in orbit.
Credit: Space Force

Direct-to-Home Television and Satellite Radio Slump

Direct-to-home (DTH) television and satellite radio were among the earliest large-scale commercial applications of satellite technology and continue to generate significant revenues. However, both markets have experienced a gradual long-term decline as consumers increasingly shift from traditional broadcast services to internet-based streaming platforms. Although satellite broadcasting remains particularly important in rural and underserved areas where terrestrial broadband infrastructure is limited, changing consumer preferences and expanding broadband availability continue to reduce demand in many mature markets.

According to the Satellite Industry Association, direct-to-home television services generated $66.4 billion in revenue in 2025, a decline of 8.2% from $72.4 billion in 2024.[5] This decrease reflects a long-term trend away from traditional subscription television. A 2025 survey conducted by the Pew Research Center found that 83% of U.S. adults use streaming services, while only 36% subscribe to cable or satellite television, although 28% reported using both.[6] While subscriber losses have been most pronounced in North America and Western Europe, satellite television continues to play an important role in many parts of Asia, Africa, Latin America, and the Middle East, where satellite distribution remains one of the most cost-effective means of delivering television programming over large geographic areas.

The changing television market has prompted satellite operators to diversify beyond traditional broadcasting. In July 2025, SES completed its acquisition of Intelsat, creating one of the world's largest multi-orbit satellite operators with an expanded focus on broadband connectivity, government communications, mobility services, and enterprise networking. The transaction reflects a broader industry trend in which satellite operators are repositioning themselves as providers of integrated connectivity services rather than primarily television broadcasters.[7] The market also continued to consolidate as Dish DBS filed for bankruptcy protection in June 2026 but announced plans to continue operations while restructuring, highlighting the financial pressures facing traditional satellite television providers as subscriber bases continue to shrink.[8]

Satellite radio remained comparatively stable despite modest revenue declines. SiriusXM generated $6.4 billion in revenue in 2025, a decrease of 2.1% from $6.6 billion in 2024.[9] Despite lower revenues, the company continued investing in its satellite infrastructure, launching the SXM-11 satellite in 2026 as part of its ongoing constellation modernization program.[10] These investments reflect the long operational lifetimes of satellite broadcasting systems and the company's expectation that satellite radio will continue serving a dedicated subscriber base for years to come.

Although broadcast satellite services no longer represent the primary engine of growth for the commercial space industry, they remain an important component of the sector. Their gradual decline also illustrates a broader transition within the satellite economy, as commercial revenues increasingly shift from one-way broadcasting services toward interactive broadband communications, satellite-enabled digital services, and other data-intensive applications.

Satellite Communications Sector Sees 9.5% Boost

While broadcast satellites primarily transmit information in one direction to large numbers of users, communications satellites enable two-way voice, data, and internet connectivity. These systems support broadband internet access for homes and businesses, enterprise networking, aviation and maritime connectivity, government communications, and an increasing range

of mobile applications. Commercial satellite communications generated an estimated $28.4 billion in revenue in 2025, an increase of 9.5% from $25.9 billion in 2024.

Satellite broadband continued to be the primary driver of growth in this market. SpaceX's Starlink and Eutelsat OneWeb remained the leading providers of low Earth orbit broadband services, although they target different customer segments. Starlink continued expanding its consumer and enterprise offerings, reporting more than 9 million customers across 155 countries by the end of 2025.[11] OneWeb focused primarily on enterprise, aviation, maritime, and government customers, where demand for secure and resilient connectivity continued to grow.[12] Competition is expected to increase as Amazon Leo begins commercial service in 2026. Like Starlink, Amazon Leo plans to serve enterprise and consumer markets.[13] Meanwhile, China's Thousand Sails and Guowang constellations continued rapid deployment during 2025, laying the foundation for future broadband services.[14]

Another important trend during 2025 was the emergence of multi-orbit communications networks. Rather than relying on satellites in a single orbital regime, operators increasingly combined geostationary (GEO), medium Earth orbit (MEO), and low Earth orbit (LEO) systems to improve coverage, resilience, and network performance. The merger of GEO operator Eutelsat with LEO operator OneWeb in 2023 was an early example of this trend. The 2025 acquisition of Intelsat by SES further accelerated this transition, reflecting growing customer demand for seamless connectivity across multiple satellite architectures.[15]

Eutelsat operates a telecommunications gateway site in Nuuk, Greenland, delivering broadband services in one of the world's most remote locations.
Credit: Eutelsat

One of the fastest-growing areas within satellite communications is direct-to-device (D2D) connectivity. Unlike traditional satellite phones, D2D technology enables ordinary smartphones and wearable devices to communicate directly with satellites, extending existing mobile networks into areas beyond the reach of terrestrial cellular towers. These services have the potential to eliminate many coverage gaps while providing resilient communications during natural disasters, emergencies, and military operations.

Rather than competing directly with terrestrial mobile providers, most D2D companies are partnering with mobile network operators to extend existing cellular coverage. SpaceX, AST SpaceMobile, and Lynk Global have all established partnerships with mobile carriers such as T-Mobile, AT&T, and Verizon, allowing subscribers to access satellite connectivity using existing mobile devices and phone numbers. Other companies, including Viasat and Globalstar, continue to provide satellite connectivity through proprietary systems that require compatible chipsets or specialized devices, which can simplify regulatory approval processes across countries. Increasingly, however, providers are adopting hybrid approaches that combine direct consumer access with partnerships across terrestrial mobile networks. For example, SpaceX's September 2025 agreement to acquire additional spectrum from EchoStar could enable the company to provide services through mobile network partners and directly to compatible consumer devices.[16]

Industry analysts expect direct-to-device services to become one of the fastest-growing segments of the satellite communications market over the coming decade. Novaspace projects that the global D2D market could approach $10 billion by 2033.[17] As satellite and terrestrial telecommunications networks become increasingly integrated, distinctions between satellite communications and traditional mobile communications are likely to become less pronounced. Together with continued expansion of broadband constellations and multi-orbit networks, these developments suggest that satellite communications will remain one of the most dynamic and strategically important sectors of the commercial space economy.

Earth Observation Market Grows

Earth observation (EO) satellites provide information about the Earth's surface that supports decision-making across a wide range of commercial, government, and scientific applications. Unlike ground-based observations, satellites can monitor virtually any location on Earth regardless of national boundaries, terrain, or accessibility. Advances in satellite constellations have also made it possible to observe many locations multiple times per day, allowing users to monitor change over time rather than relying on isolated images.

Commercial Earth observation systems employ a variety of sensing technologies. High-resolution optical satellites capture detailed imagery capable of identifying individual buildings, vehicles, and other objects. Synthetic aperture radar (SAR) satellites actively transmit radar signals, enabling observations through clouds and at night and providing particularly strong capabilities for change detection. Hyperspectral sensors collect information across hundreds of wavelengths of the electromagnetic spectrum, allowing users to identify materials and assess chemical composition. Together, these complementary technologies have greatly expanded the range of commercial applications for satellite remote sensing.

Finland's Iceye offers commercial radar imagery from space, like this view of a Russian naval installation.
Credit: Iceye

Companies generate revenue through the sale of satellite imagery and the provision of value-added analytical services. According to EUSPA, commercial Earth observation data sales generated $771.7 million in revenue in 2025, an increase of 6% from $728 million in 2024. Significantly more value is created through downstream products and services, which reached an estimated $3.6 billion in revenue in 2025, up 20.2% from $3 billion in 2024. Combined, the Earth observation market generated approximately $4.3 billion in commercial revenue during the year.[18]

The commercial Earth observation market continues to be dominated by companies based in the United States and Europe, which together account for approximately 83% of global market supply. China, Canada, and Japan represent the next largest contributors. Agriculture remains the largest commercial application, where satellite data are used to monitor crop health, optimize fertilizer and irrigation use, and improve yields. Energy and natural resource companies rely on satellite imagery to monitor infrastructure, support exploration activities, and assess environmental impacts, while climate and environmental applications continue to expand as governments and businesses increase investments in sustainability and climate resilience. Other important markets include security, insurance, finance, emergency management, forestry, maritime monitoring, and urban planning.[19]

An important trend in recent years has been the shift from selling imagery to delivering information products and decision-support services. Rather than purchasing raw satellite imagery, many customers increasingly purchase analytical products that integrate satellite observations with artificial intelligence, machine learning, weather information, and other geospatial datasets. This evolution has allowed Earth observation companies to serve customers with limited remote sensing expertise while creating higher-value commercial products tailored to specific industries.

The continued deployment of large Earth observation constellations is expected to further transform the market. Higher revisit rates, increasing image resolution, and the integration of multiple sensing technologies are making satellite data timely and actionable. Advances in cloud computing and artificial intelligence enable companies to process and analyze enormous volumes of imagery in near real time. As these technologies mature, the commercial value of Earth observation is likely to be driven by the insights generated from satellite data rather than by the imagery itself.

Firefly Aerospace's Blue Ghost lunar lander captured what the company dubbed "an Earth selfie" on its way to a successful lunar landing in 2025.
Credit: Firefly Aerospace

Moon Rising as Commercial Market

Commercial activity beyond Earth orbit continued to expand during 2025 as governments increasingly relied on commercial companies to support lunar exploration. Although the market remains relatively small, commercial lunar transportation and related services generated an estimated $364 million in revenue during the year and continued to attract substantial public and private investment. Rather than developing and operating missions directly, space agencies are increasingly purchasing services from commercial providers, creating a new market for lunar logistics.

NASA's Commercial Lunar Payload Services (CLPS) program continued to drive much of this activity. On March 2, 2025, Firefly Aerospace's Blue Ghost made the first fully successful commercial landing on the Moon, delivering multiple NASA science payloads and demonstrating the growing maturity of commercial lunar transportation. Just days later, Intuitive Machines' IM-2 mission successfully reached the lunar South Pole region, although the mission was shortened after the lander came to rest on its side. Despite the anomaly, the company was able to complete portions of its scientific program. Japanese company iSpace attempted a 2025 commercial landing but failed.[20]

Commercial revenues increasingly reflect this growing activity. Intuitive Machines reported $210.1 million in revenue during 2025[21], while Firefly Aerospace generated $131.2 million with programs including Blue Ghost lunar program.[22] Japanese company iSpace reported $22.9 million in net sales for the fiscal year ending in March 2026.[23] Together, these companies generated approximately $364 million in revenue associated with commercial lunar activities.

Commercial lunar services remain heavily dependent on government demand today, but the market is expected to diversify over time. Planned activities include communications networks, navigation services, surface mobility, power generation, resource prospecting, and eventually resource extraction. As governments pursue sustained lunar exploration through programs such as Artemis and additional nations develop lunar ambitions, commercial providers will increasingly positioning themselves as long-term infrastructure and logistics partners rather than simply mission contractors.

Commercial Infrastructure and Support Industries

Space infrastructure and support industries generated $158.3 billion in commercial revenue in 2025, accounting for 29.1% of the global commercial space economy and representing an increase of 16.4% from $136 billion in 2024. These industries develop and manufacture the ground infrastructure and user equipment needed to operate satellite systems and deliver satellite-enabled services. They include the manufacture and launch of spacecraft, the production of ground stations and user equipment needed to operate satellite systems and deliver their services, and specialized support activities such as space insurance; space situational awareness; and in-space servicing, assembly, and manufacturing. Commercial human spaceflight is also included in this category. Together, these industries form the foundation upon which commercial space products and services are built.

Commercial Infrastructure and Support Industries, 2025

Category	2025 Revenue (US$B)	YoY Change	Source
Ground Stations and Equipment	$139.8	12.7%	Satellite Industry Association; European Union Agency for the Space Programme
Satellite Manufacturing (Commercial)	$10.4	67.2%	Eurospace
Satellite Launch Industry (Commercial)	$6.1	49.4%	Eurospace
Insurance Premiums	$0.68	22.4%	Triton Space LLC
Space Situational Awareness	$0.19	42.9%	Satellite Industry Association, Public Filings
In-Space Servicing, Assembly, and Manufacturing	$0.30	42.9%	Satellite Industry Association, Public Filings
Commercial Human Spaceflight	$0.65	2.8%	Public Filings, Eurospace, News Reports
Total	**$158.3**	**16.4%**	

Ground Stations and Equipment

Ground Stations and Equipment constitute the largest segment of the commercial space infrastructure market, generating an estimated $139.8 billion in revenue in 2025, an increase of 12.7% from $124.1 billion in 2024. This category includes the terrestrial infrastructure used to operate spacecraft, such as ground control stations, and the user equipment that enables individuals and organizations to access satellite-enabled services, including satellite dishes, communications terminals, and GNSS-enabled devices.

The largest contributor to this market is the sale of devices equipped with GNSS receivers. These devices receive positioning and timing signals from satellite constellations such as the U.S. Global Positioning System (GPS), Europe's Galileo, China's BeiDou, and Russia's GLONASS. GNSS chipsets are integrated into an enormous range of consumer and industrial products, including smartphones, wearable devices, automobiles, precision agriculture equipment, and logistics systems. According to the European Union Agency for the Space Programme (EUSPA), global GNSS device sales reached $103.6 billion in 2025, an increase of approximately 18% from $87.8 billion in 2024.[24]

EUSPA attributes this growth primarily to expanding demand in the Asia-Pacific region, driven by rapid urbanization and continued adoption of location-based mobile applications. Consumer electronics, including smartphones and wearable devices, account for approximately 85% of annual GNSS device sales, while automotive applications represent most of the remaining market. Although aviation, maritime, agriculture, and other specialized sectors account for a much smaller share of device sales, they often generate significantly higher downstream service revenues.

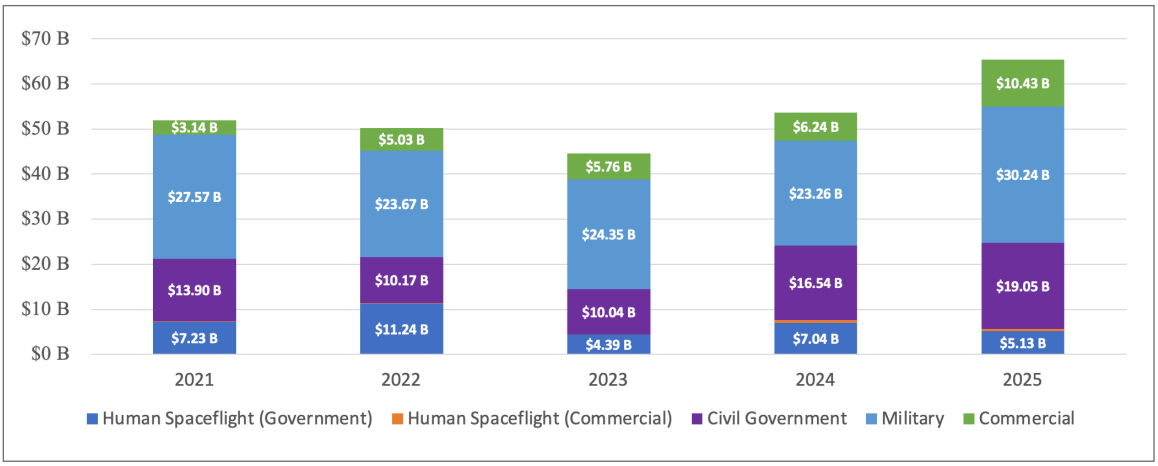
Satellite Manufacturing Boom

While ground equipment remained the largest commercial infrastructure market by revenue in 2025, satellite manufacturing experienced the fastest growth, reflecting the continued expansion of large low Earth orbit (LEO) satellite constellations. According to Eurospace, the value of all spacecraft entering service reached $65.39 billion in 2025, an increase of 21.9% from $53.62 billion in 2024. Uncrewed commercial spacecraft accounted for $10.43 billion, or 16% of the total market, representing a 67.2% increase from $6.24 billion in 2024.[25] The increase reflects higher spacecraft production volumes and the continued deployment of large commercial communications constellations. Because Eurospace estimates spacecraft value based on satellites entering service rather than factory output, annual revenues can fluctuate depending on deployment schedules.

Boeing in April announced mass production of the mid-sized Resolute satellite bus, designed to fill a gap in the commercial satellite market.
Credit: Boeing

The rapid increase in manufacturing activity was reflected in record satellite deployment. In 2025, 4,492 spacecraft were launched, an increase of 62% over the 2,802 spacecraft launched in 2024. Commercial satellites accounted for 4,040 spacecraft, or nearly 90% of all spacecraft launched during the year. Civil government organizations launched 230 spacecraft (5.1%), while military organizations launched 222 spacecraft (4.4%).[26] These figures underscore the extent to which commercial demand has become the primary driver of global spacecraft production.

Spacecraft Value by Market, 2021-2025



Source: Eurospace

Although SpaceX dominated commercial deployments, satellite manufacturing has become increasingly global. SpaceX launched 3,174 Starlink satellites, accounting for 78.6% of all commercial spacecraft launched during 2025. The remaining 866 commercial satellites were launched by more than 120 organizations across 37 countries, demonstrating the continued diversification of the commercial manufacturing sector. Excluding SpaceX, more than 40 U.S. companies launched commercial spacecraft during the year. Amazon Leo deployed 180 satellites, Planet launched 74, and Spire launched 30, while most other organizations launched between one and four spacecraft.[27]

A Long March launch vehicle lifted Qianfan satellites to polar orbit July 4. The low Earth orbit constellation is China's answer to Starlink.
Credit: CNSA

China continued expanding its commercial manufacturing capacity. More than 15 Chinese organizations collectively launched 302 commercial satellites, led by China SatNet, which deployed 129 Guowang satellites; Shanghai Spacecom Satellite Technology (SSST), which added 59 satellites to its Thousand Sails constellation; and Geespace, which launched 33 satellites for its emerging Internet of Things constellation. Outside the United States and China, Finland, France, Japan, Russia, Spain, and Turkey each launched approximately 20 commercial spacecraft through multiple organizations, illustrating the increasingly international nature of commercial satellite manufacturing.

The expansion of large LEO constellations remains the principal driver of manufacturing growth. Starlink surpassed 10,000 operational satellites in orbit during 2025 and could expand substantially if SpaceX proceeds with plans filed with the U.S. Federal Communications Commission (FCC) in January 2026 for an orbital data center constellation of up to 1 million satellites, with initial deployments expected in 2027.[28] Meanwhile, Amazon Leo deployed more than 300 satellites by mid-2026, still short of the 1,600 required to meet the terms of its FCC license—a situation that required gaining a special waiver from the FCC. The company still expects to complete its planned constellation of more than 3,000 satellites by 2029.[29] OneWeb, having completed deployment of its first-generation constellation in 2023, plans to begin launching its second-generation satellites in late 2026.[30]

Constellation development is also accelerating outside the United States. China's Guowang constellation had deployed more than 150 satellites by mid-2026 toward a planned constellation of 13,000 spacecraft,[31] while Thousand Sails had launched more than 200 satellites toward a planned fleet exceeding 10,000 spacecraft.[32] China has also filed plans with the International Telecommunication Union for additional constellations totaling more than 200,000 satellites, suggesting continued long-term growth in manufacturing demand.[33] Elsewhere, Europe continues development of the IRIS^2 secure communications constellation of approximately 300 satellites,[34] while India's Jio has announced plans for a 1,600-satellite constellation.[35]

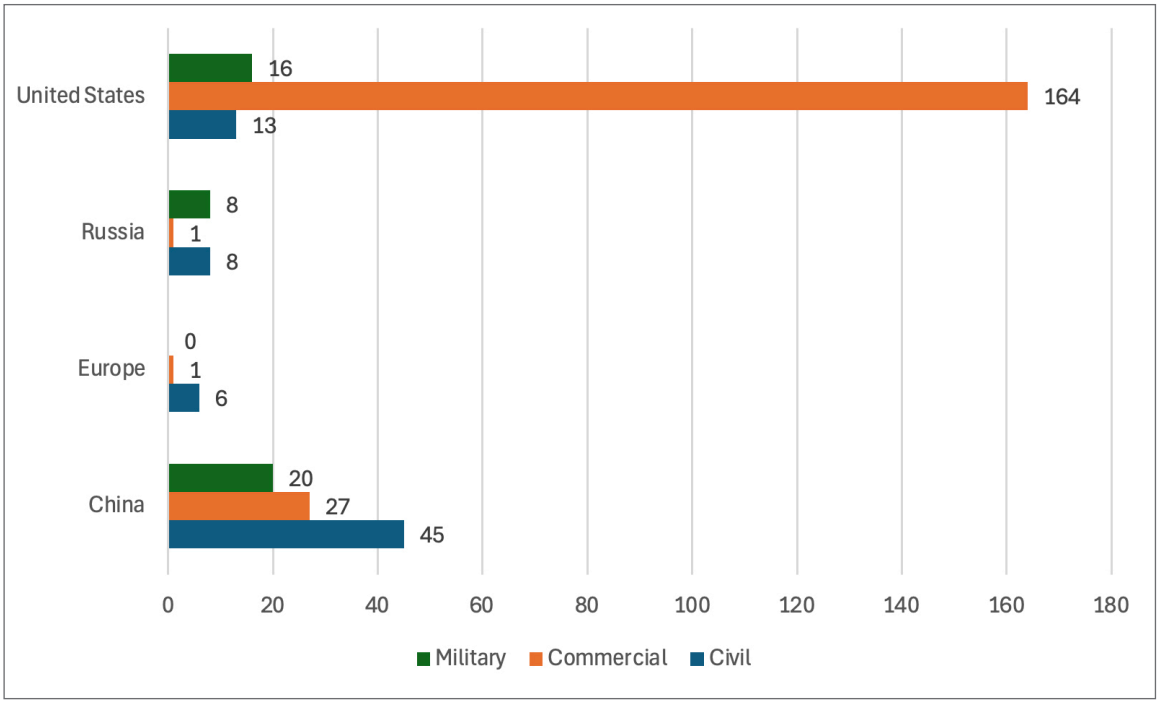
A Rocket Lab Electron fired from New Zealand on April 23 lifts satellites for the Japan Aerospace Exploration Agency.
Credit: Rocket Lab

The continued expansion of these large constellations reflects a broader transformation in satellite manufacturing. Unlike traditional geostationary communications satellites, which were typically produced in relatively small numbers as highly customized spacecraft, modern LEO constellations increasingly rely on standardized satellite designs, vertically integrated production, and high-volume manufacturing techniques. This shift has substantially increased production throughput while reducing average manufacturing costs, enabling operators to deploy thousands of satellites within a few years. As communications, Earth observation, positioning, navigation and timing, and emerging orbital data center constellations continue to expand, satellite manufacturing is increasingly evolving toward industrial-scale manufacturing.

Launch Revenue Spikes

Commercial launch providers continued to benefit from strong demand generated by satellite manufacturers as deployment of large satellite constellations accelerated. According to Eurospace, the value of all orbital launches reached $19.17 billion in 2025, an increase of 33.5% from $14.36 billion in 2024. Commercial uncrewed launches accounted for an estimated $6.17 billion, or 32.2% of the market, representing a 49.4% increase over the $4.13 billion recorded in 2024. Revenue associated with commercial crewed launches is included in the following section on commercial human spaceflight.[36]

Orbital Launch Attempts by Top Nations, 2025

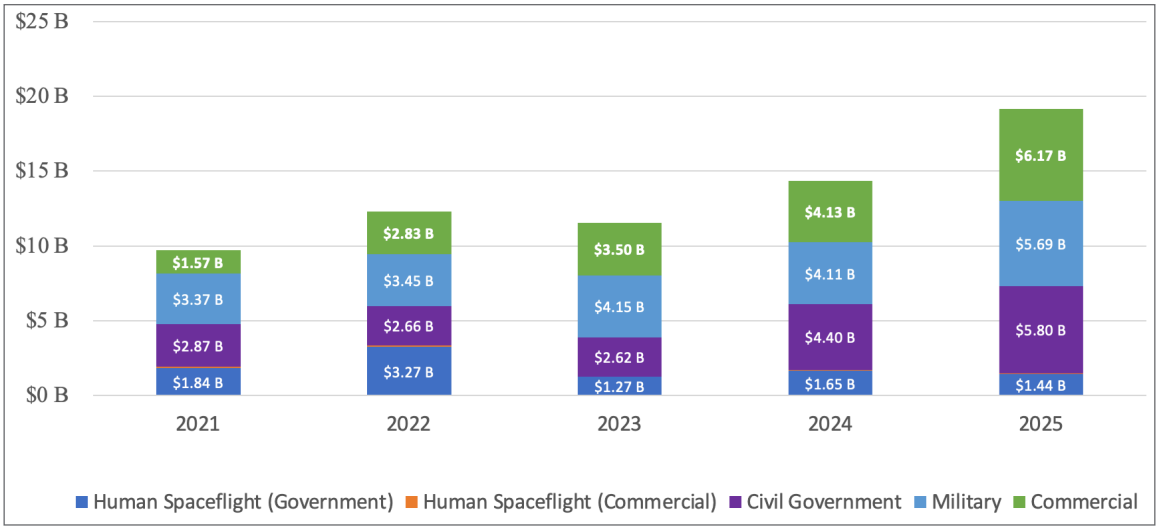


Source: Space Foundation database

The increase in launch revenues reflected another record year for global launch activity. Orbital launch attempts grew to 324 orbital launch attempts in 2025, of which 315 were fully or partially successful, an increase of 28% over the 259 launch attempts in 2024. The United States remained the world's leading launch nation, carrying out 193 orbital launch attempts, an increase of 25% from 155 launches in 2024, according to Space Foundation data. Of these, 192 were successful. This count does not include Starship suborbital flights. China also continued its rapid expansion, conducting 92 launch attempts, all but two of which were successful, representing a 35.3% increase over the 68 launches conducted in 2024. Russia completed 17 successful launches, while Australia, Europe, Germany, India, Iran, Israel, Japan, and South Korea also attempted commercial launches.[37]

Commercial missions accounted for the majority of global launch activity in 2025. Of the 324 launches conducted, 195 (60%) were carried out by commercial launch providers or on behalf of commercial customers. The United States accounted for 85% of commercial missions, conducting 164 commercial launches. SpaceX alone carried out 141 commercial launches during the year, while Blue Origin, Firefly Aerospace, Northrop Grumman, Rocket Lab, and United Launch Alliance conducted the remaining U.S. commercial launches. China

Launch Services Value by Market, 2021-2025



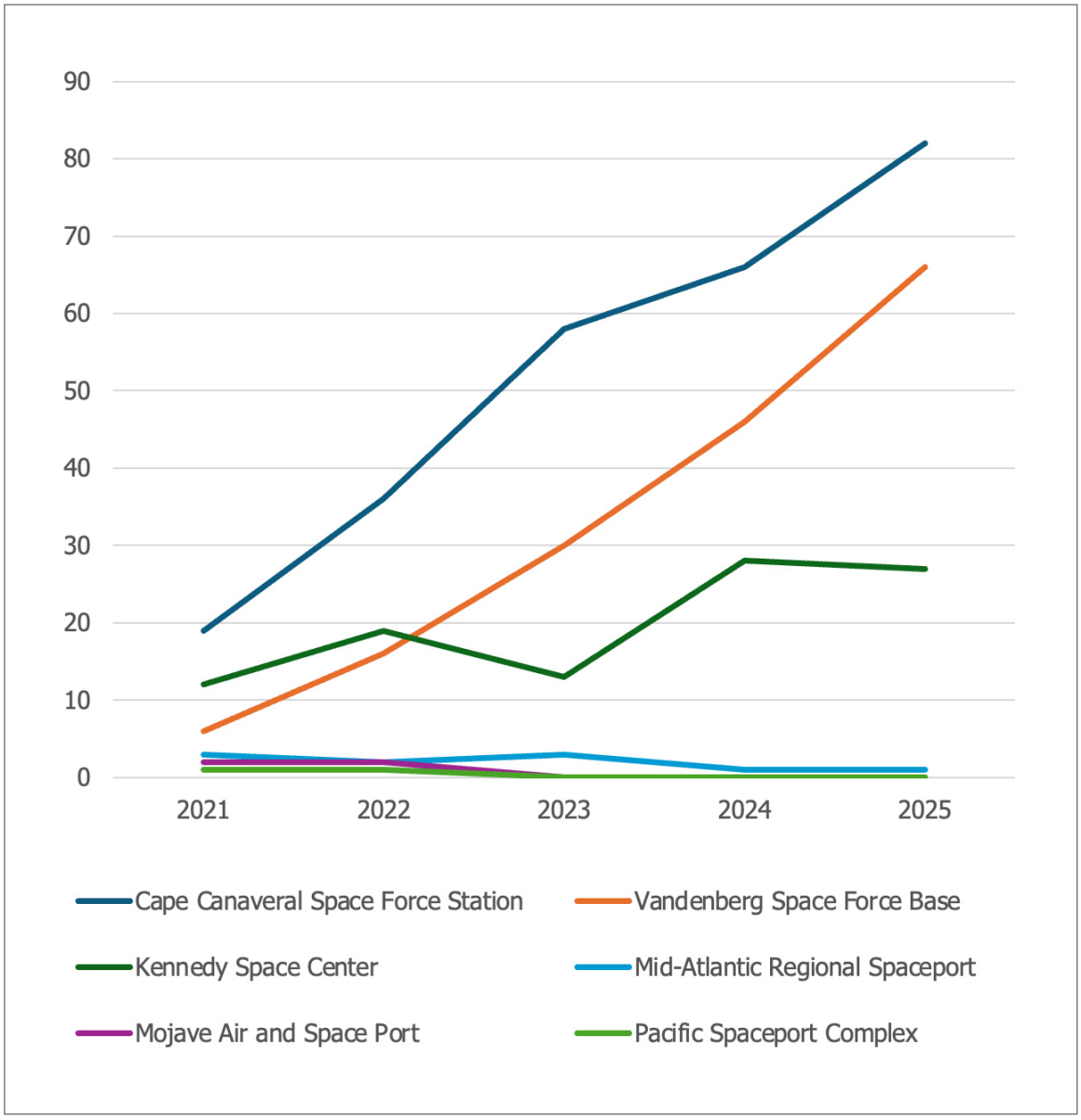
Source: Eurospace

completed 27 commercial launches involving at least seven organizations, while Australia, Germany, India, and Russia each conducted one commercial launch.[38]

The rapid increase in launch activity is beginning to expose constraints in launch infrastructure. In a report released in May 2026, the Commercial Spaceflight Federation concluded that, without improvements in the coordination and management of existing launch sites and continued investment in new facilities, the United States is unlikely to have sufficient launch capacity to meet projected demand over the coming decade.[39] Similar concerns were raised by the NASA Office of Inspector General in a June 2026 report examining Kennedy Space Center and the Wallops Flight Facility. The report concluded that infrastructure modernization has not kept pace with the rapid growth in launch activity, creating capacity constraints, which could delay government and commercial missions if additional investments are not made.[40]

A SpaceX Falcon 9 lifts off through fog on July 7 from California's Vandenberg Space Force Base. The launch vehicle carried 84 satellites to orbit on the rideshare mission.
Credit: Space Force

Orbital Launch Attempts by Spaceport, 2021-2025



Source: Space Foundation database

Despite these emerging infrastructure challenges, global market fundamentals remain strong. Continued deployment of broadband constellations, expanding government use of commercial launch providers, and increasing launch activity in China and other countries are expected to sustain high demand for launch services through the remainder of the decade. As additional launch providers enter the market and new launch facilities become operational, the commercial launch sector is likely to remain one of the fastest-growing segments of the global space economy.

Commercial Human Spaceflight Slows

Commercial human spaceflight continued to bring in steady revenue in 2025, generating an estimated $654 million, an increase of 2.8% from $636 million in 2024. The industry has continued to evolve as companies invest in next-generation vehicles, governments purchased commercial astronaut missions, and additional countries announced plans to enter the market.

Blue Origin New Shepard passenger Alain Fernandez celebrates after a suborbital flight to space Jan. 22.
Credit: Blue Origin

Commercial human spaceflight currently consists of two distinct markets: suborbital and orbital missions. Suborbital flights provide several minutes of weightlessness before returning passengers to Earth and are marketed primarily to tourists, researchers, and educational organizations. Orbital missions, by contrast, involve multi-day flights in Earth orbit or visits to the International Space Station (ISS) and increasingly include government-sponsored astronauts, commercial researchers, and passengers.

Virgin Galactic and Blue Origin remained the two principal providers of commercial suborbital human spaceflight. After conducting its seventh commercial mission in June 2024, Virgin Galactic suspended commercial operations to focus on developing its next-generation Delta-class spaceplane. The company expects to resume service in 2027, initially flying up to four commercial missions per month before expanding to eight monthly flights. Despite the pause in operations, Virgin Galactic reported a backlog of more than 650 customers. Early tickets were sold for approximately $250,000, while more recent sales reached $600,000, and the company announced plans to offer an additional 50 seats at $750,000 each.[41] Revenue declined sharply during the transition period, falling from $7.04 million in 2024 to $1.54 million in 2025.[42]

Blue Origin continued operating its New Shepard suborbital system throughout 2025, completing seven crewed missions and one additional mission in January 2026 before announcing a planned pause in flights of at least two years to concentrate company resources on development of its Blue Moon lunar lander for NASA's Artemis program.[43] The company's 2025 missions included the widely publicized first all-female crewed New Shepard flight, featuring musician Katy Perry, as well as the first spaceflight carrying a wheelchair user.[44] These missions highlighted the growing emphasis on expanded public participation in commercial human spaceflight while supporting broader technology development for future exploration missions.

Interest in commercial suborbital tourism also continued to expand internationally. Chinese company IntersellOr announced plans to begin commercial suborbital flights in 2028 and unveiled a full-scale prototype of its crew vehicle in January 2026. The company began accepting reservations with tickets priced at approximately $430,000 per seat. Other Chinese firms, including CAS Aerospace and Deep Blue Aerospace, also announced plans to develop commercial suborbital transportation systems, suggesting that competition within this market is likely to increase during the coming decade.[45]

Commercial orbital spaceflight also continued to diversify. Two privately operated orbital missions flew during 2025. SpaceX's Fram-2 mission carried four private astronauts on the first human spaceflight to orbit over Earth's poles during a 3 ½-day mission.[46] Although it is not included in commercial revenue estimates, Axiom Space's Ax-4 mission demonstrated another important trend in the commercial market: increasing government use of commercial spaceflight services. The mission included government-sponsored astronauts from India, Poland, and Hungary, who spent 14 days aboard the ISS conducting scientific research and educational outreach activities.[47] Together with the two commercial crew missions that SpaceX flew for NASA in 2025, these missions demonstrate that commercial providers are becoming an integral part of government human spaceflight programs.[48]

The next major evolution of the commercial human spaceflight market may be the development of commercial space stations. Through its Commercial LEO Destinations (CLD) program, NASA is supporting multiple companies developing commercial orbital platforms intended to replace the ISS following its planned retirement around 2030. Vast's Haven-1 station module was set to launch in the first quarter of 2027, opening the first commercial destination in orbit.[49] If successful, these stations could expand opportunities for commercial research, tourism, manufacturing, and government astronaut missions while creating a sustained market for commercial transportation services in low Earth orbit.[50]

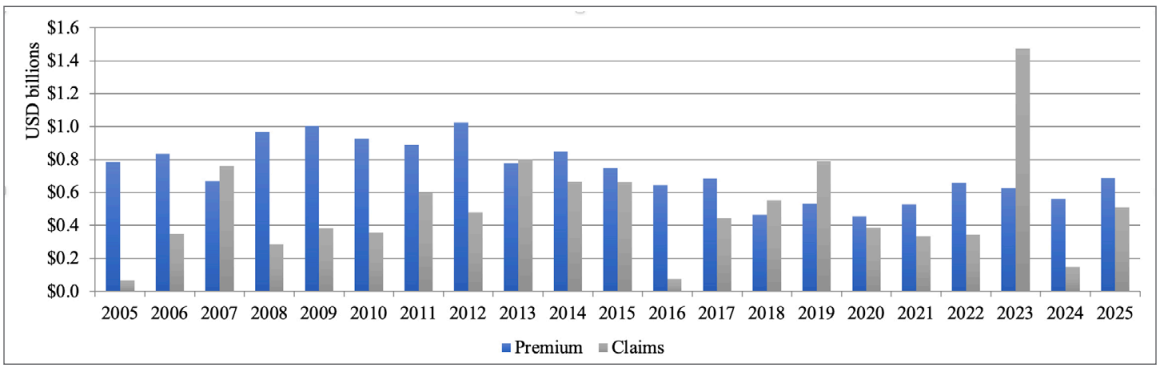
Although commercial human spaceflight remains a relatively small segment of the overall commercial space economy, its strategic importance continues to grow. Commercial providers are increasingly serving not only tourists, but also governments, research institutions, and international partners, while simultaneously investing in next-generation spacecraft and commercial orbital infrastructure. As reusable vehicles mature, commercial space stations become operational, and additional providers enter the market, commercial human spaceflight is likely to become a more significant contributor to the broader commercial space economy.

Insurance Premiums up 22% from 2024

Space activities require significant capital investment and involve substantial technical and operational risks, making insurance an important component of the commercial space economy. According to Triton Space LLC, global space insurance premiums totaled an estimated $686 million in 2025, an increase of 22.4% from $560.3 million in 2024. Claims also increased significantly, reaching $508.2 million, compared with $149.1 million the previous year, reflecting a more active year for insured losses.[51]

Insurance coverage varies considerably by mission type and orbital regime. Traditionally, operators of high-value geostationary (GEO) satellites have been the primary purchasers of space insurance, with approximately half of all commercial GEO satellites insured at launch and many also carrying in-orbit coverage. In contrast, relatively few low Earth orbit (LEO) satellites are insured. Even excluding SpaceX, which self-insures its Starlink constellation by replacing failed satellites rather than purchasing commercial insurance, only an estimated 5–7% of LEO satellites were insured. The relatively low value of individual LEO satellites, combined with the ability of large constellations to tolerate occasional spacecraft failures, has reduced demand for traditional insurance products.[52]

Space Insurance Industry Estimates, 2005-2025



Source: Triton Space, LLC

As commercial satellite constellations continue to expand, the space insurance market is evolving alongside them. While premiums remain concentrated in the GEO market, insurers increasingly are adapting products to address risk profiles associated with large LEO constellations, reusable launch vehicles, and emerging activities such as in-space servicing.[53] Rising launch activity and increasing congestion in Earth orbit, however, are expected to place continued pressure on insurers' risk models and pricing strategies over the coming decade.

In-Space Servicing, Assembly, Manufacturing and Logistics (ISAM) Emerges

In-space servicing, assembly, manufacturing and logistics (ISAM) represents one of the fastest-growing segments of the commercial space economy, although it remains at an early stage of commercial development. Companies in this sector provide services designed to extend spacecraft lifetimes, improve spacecraft performance, assemble structures in orbit, and support the long-term sustainability of the space environment. These capabilities include satellite life extension, on-orbit inspection and repair, refueling, in-space assembly, and end-of-life disposal services. Commercial revenue for the sector was estimated at $304 million in 2025, an increase of 42.9% from $213 million in 2024.

The most mature commercial application remains satellite life extension. SpaceLogistics, a subsidiary of Northrop Grumman, has demonstrated this capability through multiple servicing missions in geostationary orbit (GEO), where extending the operational life of high-value communications satellites can generate significant economic returns. Building on these missions, the company plans to deploy its Mission Robotic Vehicle (MRV) in 2026. The spacecraft will use robotic arms to attach propulsion modules, known as Mission Extension Pods, to client satellites, providing additional maneuvering capability and extending operational lifetimes. SES has ordered two Mission Extension Pods, while Optus has contracted for one.[54]

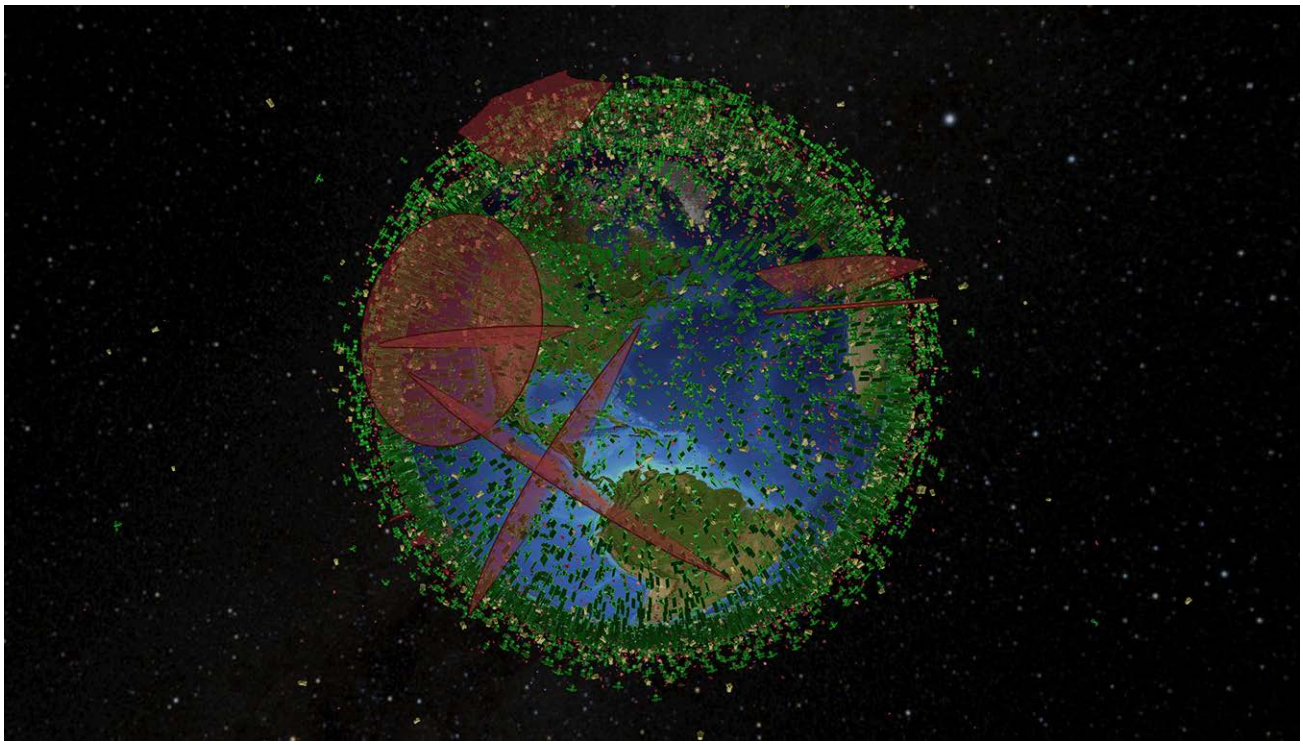
Competition within the life-extension market is increasing. Starfish Space plans to provide similar services using its Otter servicing vehicle, which will dock with customer spacecraft to provide propulsion and maneuvering capability. SES has contracted for the company's first commercial mission. French startup Infinite Orbits has likewise signed an agreement to provide life-extension services for SES through a mission scheduled for 2027.[55]

Beyond life extension, companies are expanding into additional ISAM applications. Astroscale, ClearSpace, OrbitFab, and D-Orbit continue developing technologies for on-orbit inspection, active debris removal, satellite refueling, orbital transportation, and other servicing capabilities. While many of these systems remain in the demonstration phase, they illustrate the broadening scope of commercial ISAM beyond servicing individual satellites toward a more comprehensive in-space logistics and infrastructure market.

Space Situational Awareness Spikes 42%

As the number of satellites in Earth orbit continues to increase, demand for space situational awareness (SSA) services has grown rapidly. SSA encompasses the detection, tracking, and characterization of objects in space, as well as the prediction of potential close approaches between these objects. These capabilities enable spacecraft operators to assess collision risks, coordinate with other operators, and undertake collision avoidance maneuvers when necessary. Commercial revenue for SSA services was estimated at $196 million in 2025, a 42.9% increase from $137 million in 2024.

Government organizations continue to provide the foundation for global SSA. The United States, through the Department of Commerce's Traffic Coordination System for Space (TraCSS) program, and the European Union, through EU SST, provide civil conjunction assessment and warning services to spacecraft operators, while several other national governments provide similar services to their domestic operators or selected international partners. As satellite activity has expanded, however, commercial companies have increasingly complemented these government capabilities by offering specialized data products, higher-precision tracking, independent conjunction assessments, and operational support tailored to individual customer requirements.



Space domain awareness vendor LeoLabs uses a network of radar sites and other sources to build a comprehensive picture of satellites in orbit.
Credit: LeoLabs

Commercial SSA companies employ a variety of business models. Some operate proprietary networks of optical telescopes, radar systems, or space-based sensors to generate independent observations and maintain company catalogs of objects in orbit. Others combine observations from multiple public and commercial sources to provide advanced analytics and decision-support tools. Customers include satellite operators, government agencies, insurers, launch providers, and civil space organizations. Beyond conjunction assessment, commercial SSA providers increasingly support launch and reentry monitoring, spacecraft characterization, maneuver planning, and long-term analyses of orbital congestion and debris evolution. [56]

As the commercial space economy expands, SSA services are becoming increasingly important to other sectors of the industry. They support launch planning, insurance underwriting, in-space servicing missions, and compliance with emerging debris mitigation

and space traffic coordination requirements. Continued growth in satellite deployments, particularly large low Earth orbit constellations, is expected to increase demand for timely, accurate, and independent SSA information, making this one of the fastest-growing segments of the commercial space infrastructure market.

2026 Promises More Growth

The commercial space industry continued its strong expansion in 2025, reaching an estimated $544.3 billion in global revenues and further establishing itself as a critical component of the global economy. While satellite-enabled positioning, navigation, and timing services remained the largest contributor to commercial revenues, rapid growth in satellite manufacturing, launch services, Earth observation, and emerging markets such as in-space servicing and lunar activities demonstrated the increasing diversification of the sector. The continued deployment of large low Earth orbit constellations, advances in artificial intelligence and satellite communications, and growing commercial participation in lunar exploration and other government-supported initiatives are reshaping the structure of the industry and the services it provides.

Challenges including orbital congestion, launch infrastructure capacity, and the need for effective space traffic coordination underscore the importance of continued investment in the supporting infrastructure and governance needed to sustain future growth. Taken together, these trends suggest that commercial space activities will play an increasingly central role in enabling economic development, scientific advancement, and national security in the years ahead.

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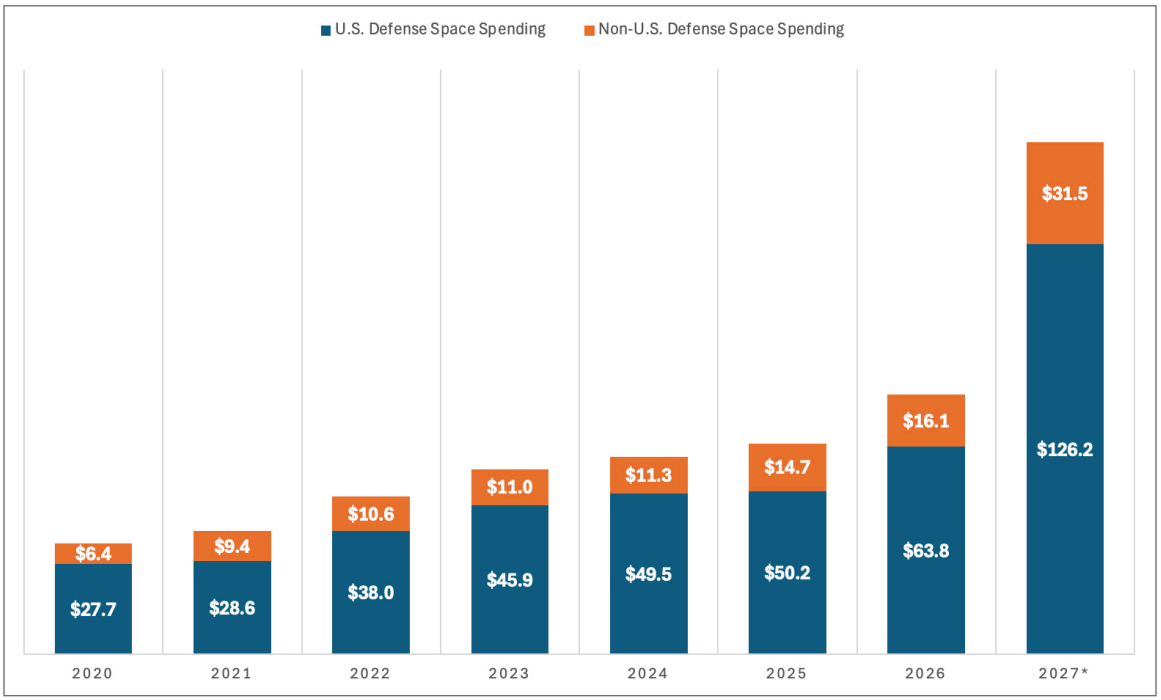
As Nations Arm, Space Defense Budgets Could Top $150B Worldwide in FY27

Global military space spending is projected to top $150 billion in 2027 as the Pentagon presses Congress to double its space budget, a request that is spurring other countries to keep pace.[1]

The Pentagon's fiscal year 2026 budget boosted national security space defense spending to an unprecedented $63 billion, up $13 billion from 2025—more than double U.S. national security space spending in 2020. The 2027 spending plan before Congress provides more than $126 billion for national security space. Through the end of the decade, global militaries apart from the superpowers have pledged to spend more than $140 billion for space programs.[2] In 2027 alone, nations aside from the United States are projected to boost annual military space spending to $31.5 billion.

The bigger budgets in 2027 are driven, in part, by wars in Europe and the Middle East, where space has changed the battlefield by allowing innovations such as missile defense and drones along with improved navigation, communication and targeting.

Military Space Spending in USD Billions, 2020-2027 (Proposed)



*Projected 2027 spending
Note: Global military space spending estimates are derived from public budgets and estimates using established formulas to calculate spending. The nations with public budgets for 2027 included Nigeria, Brazil, Japan, France, Germany, Russia and Spain.
Source: Space Foundation database

From 2025 to 2026, when the United States increased military space spending 27%, other nations increased military space spending 9.5% from 2025-26. For 2027, other nations show a 96% year-over-year increase in planned space defense spending, slightly trailing the U.S. 2027 year-over-year increase of 98%.

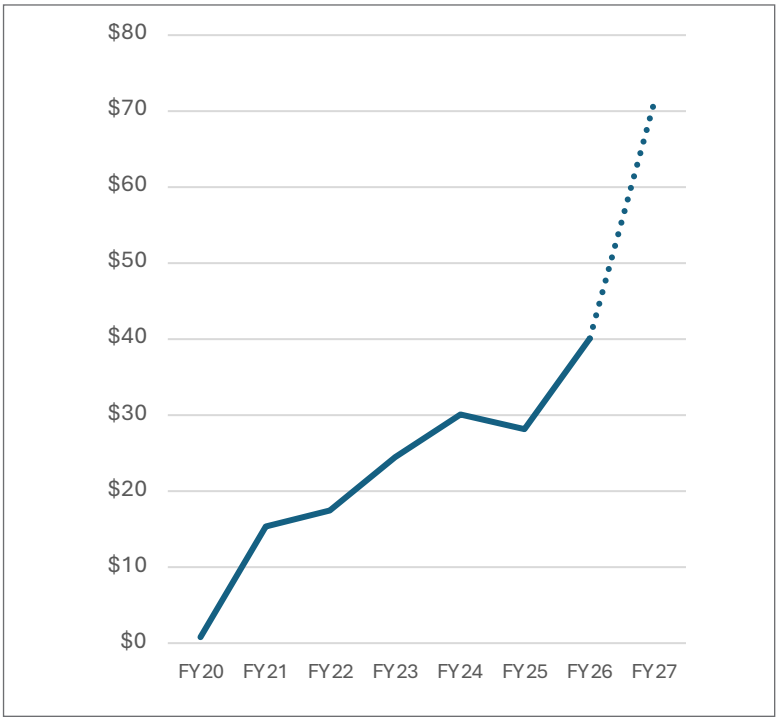
The greater FY27 U.S. allocation comes as Space Force leaders plan for combat in future decades. The service released its "Objective Force 2040" plan at Space Foundation's 41st Space Symposium in April 2026.[3] Chief of Space Operations B. Chance Saltzman explained even a 6-year-old service needs to change. "Throughout history, militaries that questioned their own assumptions, faced the realities of the changing character of war, and relentlessly sharpened their swords were victorious. Those that were complacent paid a heavy price," Saltzman said during his Symposium keynote address.[4]

Global growth comes as nations demand enhanced military space systems, especially sovereign space systems that can be built, launched and controlled without reliance on a superpower.[5]

Calm Before the Storm of Spending

The flat U.S. military space spending in 2025 came after Congress failed to pass an annual spending plan, settling instead for a continuing resolution that maintained the budget at 2024 levels. It curbed years of steady growth but also drove lawmakers toward large space investments for 2026, with the bigger Space Force spending plan on the table for 2027. Total estimated national security space spending in the United States, including intelligence agencies, rose slightly in 2025 to $50.2 billion, up $800 million over 2024.[6]

Space Force Budget in Billions, FY20-27 (Proposed)



Source: Space Foundation database

With executive orders, President Donald Trump has raised the profile of the Space Force, a service he founded during his first term. In December he signed an executive order "Ensuring American Space Superiority," which assigned the Pentagon responsibility for security in cislunar space—from the edge of Earth's atmosphere to the surface of the Moon. The order previewed priorities made clear months later when the Pentagon's 2027 spending plan was released, allotting the Space Force $71 billion.[7]

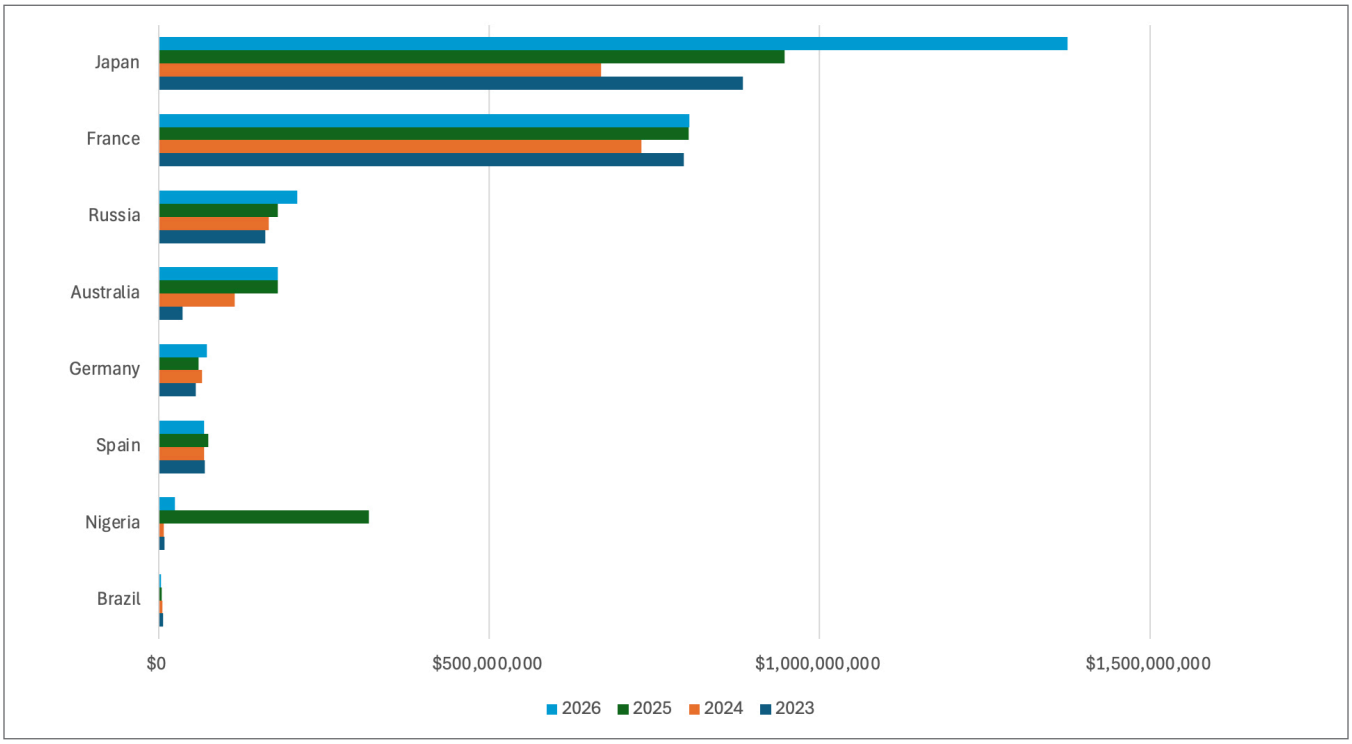
Warfare in Ukraine and the Middle East this year showed the rising value of intelligence, communications and targeting on orbit. It also follows a new U.S. philosophy on military space systems that focuses on placing swarms of smaller satellites in lower orbits to augment single massive legacy satellites in geostationary orbit. Going with an array of cheap satellites also signals increasing U.S. concern that its military satellites would be the first targets of any major conflict.

"China and Russia are fielding advanced counter-space capabilities designed to hold U.S. and allied space systems at risk," U.S. Space Command's Gen. Stephen Whiting said during a keynote address at Space Symposium. "Our competitors are fielding reversible jammers, offensive cyber weapons, directed-energy capabilities, on-orbit inspection systems, and antisatellite weapons capable of reaching every orbital regime. China is advancing capabilities not only in Earth orbit but with a clear ambition in the cislunar domain as well — pursuing infrastructure and presence that signal the strategic importance they place on that high frontier."

Space as a National Security Instrument

Governments around the globe have decided space programs bring safety and sovereignty, two items threatened amid open conflicts and simmering hostilities.

Military Space Spending, 2023-2026



Source: Space Foundation database

- An American ally with big space plans, the United Kingdom integrated space into its landmark 2025 Strategic Defense Review as a military need and an economic opportunity.[8] "Defense has an important role to play in shaping the U.K. space market and supporting exports to Europe, Asia, and the Middle East," the U.K. Ministry of Defense found. In 2026, the United Kingdom announced an extra $700 million in government investments across its space industry. The Ministry of Defense plans to spend $4.3 billion on space programs through 2030.
- France issued a 2025 Space Strategy that found space was key to national defense and national sovereignty. "Driven by technological breakthroughs, international competition and the climate emergency, a new era is dawning, one of extraordinary opportunities and unprecedented risks," President Macron stated.[9] "The reuse of launchers, the miniaturization of satellites, constellations, in-orbit services and the proliferation of players are disrupting the balance of the sector. For our fellow citizens, for the nation, from the mobile phone in their pocket to the missiles in the sky, space is the new frontier of our independence."
- Australia also is pushing ahead with military space ambitions, pledging as much as $26 billion over the next decade to develop sovereign space capabilities. Space delivers something even distance and oceans can't promise as technology advances: Time and warning. "Timely, impactful and insightful defense intelligence is crucial to delivering strategic, operational and tactical decision advantage," Australia's Defense Ministry stated in a 2025 national defense strategy document.[10] "Intelligence is also a critical enabler of ... operations and capability development."
- Japan issued a new Space Security strategy that creates the nation's Air and Space Self Defense Force with a focus on space domain awareness. The Defense Ministry also plans $5.3 billion to build and launch new communications satellites.[11]
- In May, a year after signing a contract with the Finnish satellite builder Iceye, Poland took control of its first military spy satellites. Three radar satellites now monitor its borders. "A satellite in orbit becomes a military capability only when data is properly acquired, processed, analyzed, secured and delivered to commanders at the right time," the Defense Ministry stated.[12]
- Saudi Arabia and the United Arab Emirates operate space-based intelligence, surveillance and reconnaissance (ISR) assets, including Saudi Arabia's SaudiSat5A/B Earth-observation satellites, the UAE's Foresight constellation of five radar satellites, and Falcon Eye II reconnaissance satellite. Saudi Arabia in 2025 announced a $640 million launch contract with California startup iRocket to deliver a low Earth orbit broadband constellation to space, designed to give Gulf nations secure encrypted communications for commercial and military customers.[13]
- On the other side of the Gulf, Iran announced it was pushing ahead with a constellation of Earth observation and communications satellites days after signing an extended ceasefire agreement with the United States. Iranian Space

Despite repeated attacks on its space infrastructure this year, Iran has pledged to return to flight within months.
Credit: IRGC

Agency director Sattar Hashemi told the state-run PressTV outlet that he expected to launch a Pars-2 imaging satellite within months and put up communications satellites by the end of the year, despite attacks that leveled much of the nation's launch vehicle industrial base.[14]

- India also has plans to rapidly build military space infrastructure, though its program had a setback in January when a launch meant to deliver an Earth observation satellite to orbit suffered a third-stage anomaly.[15]

Multiyear Spending Plans Boost Growth

Hundreds of undisclosed programs around the planet to enhance military space capabilities in future years could quietly push military space spending ever higher, easily topping the $150 billion estimate for 2027. While the space spending plans have been announced, many of the programs are funded over a number of years, making the annual economic impact difficult to judge. It's a trend that's accelerating as European countries push for more space capabilities.

- France announced plans to nearly double its military space spending through 2030, adding nearly $5 billion to the five-year plan for a total spend of $11 billion.[16] The goal is French independence in orbit. "Depending on a major third-party power or any space magnate is out of the question," Macron stated.[17]
- Germany plans to spend $41 billion on space programs through 2030, developing launch vehicles and military satellites for reconnaissance and communications, along with other spacecraft to snoop on enemy satellites or jam them if a war starts.[18] The program, announced last fall, shows Germany wants full-spectrum capabilities now only possessed by superpowers like China and the United States.[19] "When satellites fall silent, nations go blind — and Germany intends to keep its vision," Defense Minister Boris Pistorius stated.
- An orbital laser to eliminate enemy satellites is part of a long-term 10-year and $111 billion Israeli Defense Forces plan to re-arm its military.[20] The Israelis have proven the capability of a laser system named Iron Beam in missile defense; the next step is launching one to orbit.[21]

Israel's Iron Beam Laster system passed a series of tests in 2025 and is now being fielded.
Credit: IDF

- Chile is investing in new Earth observation and communication satellites as part of a plan that would give the country launch capabilities in the coming years.

Countries in the Nordic Region have big plans to boost national security space spending with multiyear investment programs.

- Sweden announced a $130 million investment in communications and reconnaissance satellites, as part of a multiyear $2.5 billion program to upgrade military hardware.[22]
- Norway sees its space industry as key to its future military operations, with plans to invest as much as $57 billion through 2036 to advance space capabilities.[23] That includes more development of its new Andøya Spaceport aimed at drawing European customers.
- Finland envisions doubling its defense spending to more than $14 billion by 2032, with a heavy, but unspecified, measure set aside for space.[24] The Finns have established a sovereign system of reconnaissance satellites, led by the Iceye constellation of radar spacecraft.[25] With 30 satellites on orbit, Finland is one of the world's per-capita leaders in space, with one active satellite for every 187,000 residents.[26] By comparison, China has one active satellite for every 1.1 million residents.[27,28]

The push for sovereign military space goes beyond Europe. Canada announced plans in March to build space launch and develop military satellite capabilities, with a down payment of $140 million for an East Coast spaceport. That money adds to the $587 million budget for the Canadian Space Agency. "This effort positions the country to launch satellites and payloads from Canadian soil, on Canadian-built rockets, at Canadian-run facilities," the government announced.

Golden Dome Program Drives U.S. Spending

The Trump administration gave the Space Force a big new mission in 2025: Building the Golden Dome, a global missile shield on the scale of the "Star Wars" defense scheme of the 1980s.

The Golden Dome effort has largely been funded with one-time money under a supplemental spending plan called "The Big Beautiful Bill Act."[29] The measure included two new satellite programs. One, worth $2 billion in 2025, would use satellites in low Earth orbit to track moving targets such as cruise missiles, giving American commanders unprecedented battlefield awareness. The second, priced at $5.6 billion, would deliver space-based missile interception satellites, a concept considered and abandoned in the 1980s amid the Strategic Defense Initiative.[30]

Trump announced the missile defense initiative in 2025 as the centerpiece of his national defense strategy. The Golden Dome effort has been priced at $175 billion or more, making it the costliest planned military space program to date.[31]

The supplemental budget also set aside $500 million to rebuild military launch capabilities at Vandenberg Space Force Base in California and Cape Canaveral Space Force Station in Florida so the facilities can keep pace with ever-rising launch demand.

Other 2025 initiatives grew the Starshield constellation, with as many as 500 low Earth orbit communications satellites to augment the Pentagon's communications infrastructure. Space Force also rolled out a new communications terminal for partner nations, allowing

Marines set up a satellite broadband dish during a 2026 training exercise. The Pentagon has prioritized the Starshield constellation of LEO communications satellites.
Credit: USMC

easy information sharing over broadband links. The U.S. terminals use commercial satellite products to replace or augment information from classified systems and sources, part of a growing initiative to use commercial products and systems wherever possible.

Speaking at April's Space Symposium, Bill Adkins, principal deputy director of the National Reconnaissance Office, said the intelligence community is also accelerating change to its constellations. The agency spent decades launching small numbers of bus-sized spy satellites to peer at Earth from geosynchronous orbit. Now, the agency is buying data from a growing cohort of commercial Earth observation firms and firing swarms of small satellites into orbit, with 200 launched in the past two years.

The change was needed to counter growing capabilities that thwart spy satellites with jamming, and a new array of antisatellite weapons. "Simply put, we are making it harder for adversaries to hide," he said. "And harder for them to disrupt our capabilities."

Chief of Space Operations Gen. B. Chance Saltzman said rivals have made space a challenging potential battlefield, where the United States is not guaranteed a victory. "Our battlefield is filled with hazards like ground-based microwave and laser weapons, all capable of damaging satellites overhead; jammers that can disrupt GPS and communications satellites; and even threats of nuclear-capable antisatellite weapons on orbit," he said. "And that's just what we face today."

Two powers, Russia and China, came up time and again as Saltzman and other military leaders spoke at April's Space Symposium. The Space Force has named China as a "pacing threat" with growing capabilities in orbit to track, target and disrupt U.S. space operations. Russia is seen as a still-potent legacy threat.

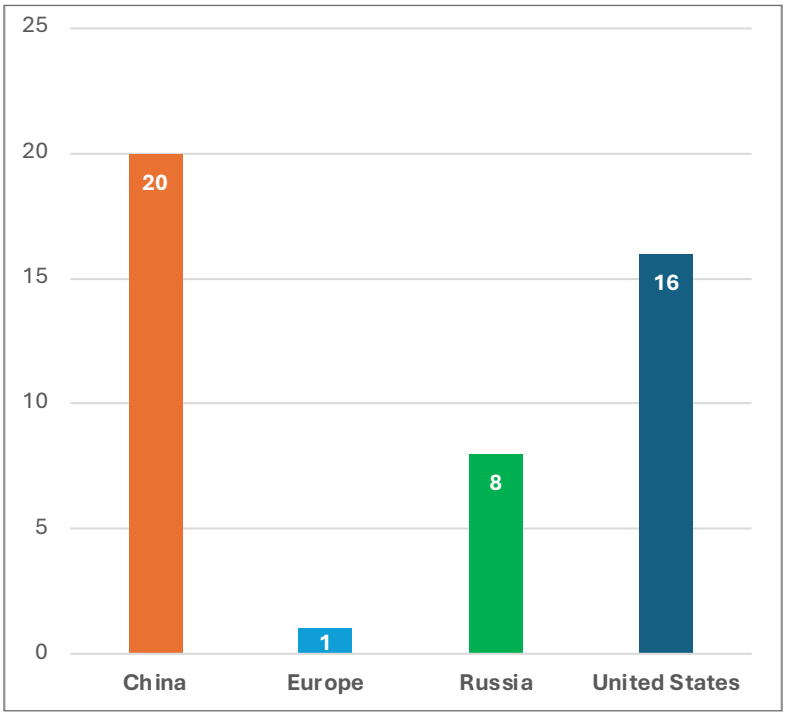
From reusable space planes to a fleet of more than 510 Earth observation satellites, China's People's Liberation Army has spent two decades of determined effort to pull closer to the United States in orbit. According to the Space Force, China "sees counterspace operations

as means to deter and counter U.S. military intervention in a regional conflict. It is actively developing and fielding a wide range of counterspace capabilities."[32]

China has been less strident in recent years about decrying Pentagon space plans, instead citing its advancements amid what Beijing calls "Space Race 2.0."

"Space is not an arena for major country contest," China's Ministry of Foreign Affairs spokesman, Guo Jiakun, said in April, marking his nation's annual Space Day.[33] "China will continue to work with various countries for open space cooperation and advance the common endeavor of humanity in exploring outer space." Even with the largest space budget on Earth, the Space Force was surpassed by rival China for military launches in 2025 as the Asian superpower looked to extend its reach with new communications and imagery satellites and what U.S. officials say is a growing set of antisatellite tools on orbit.[34]

Military Space Launch by Select Nation, 2025

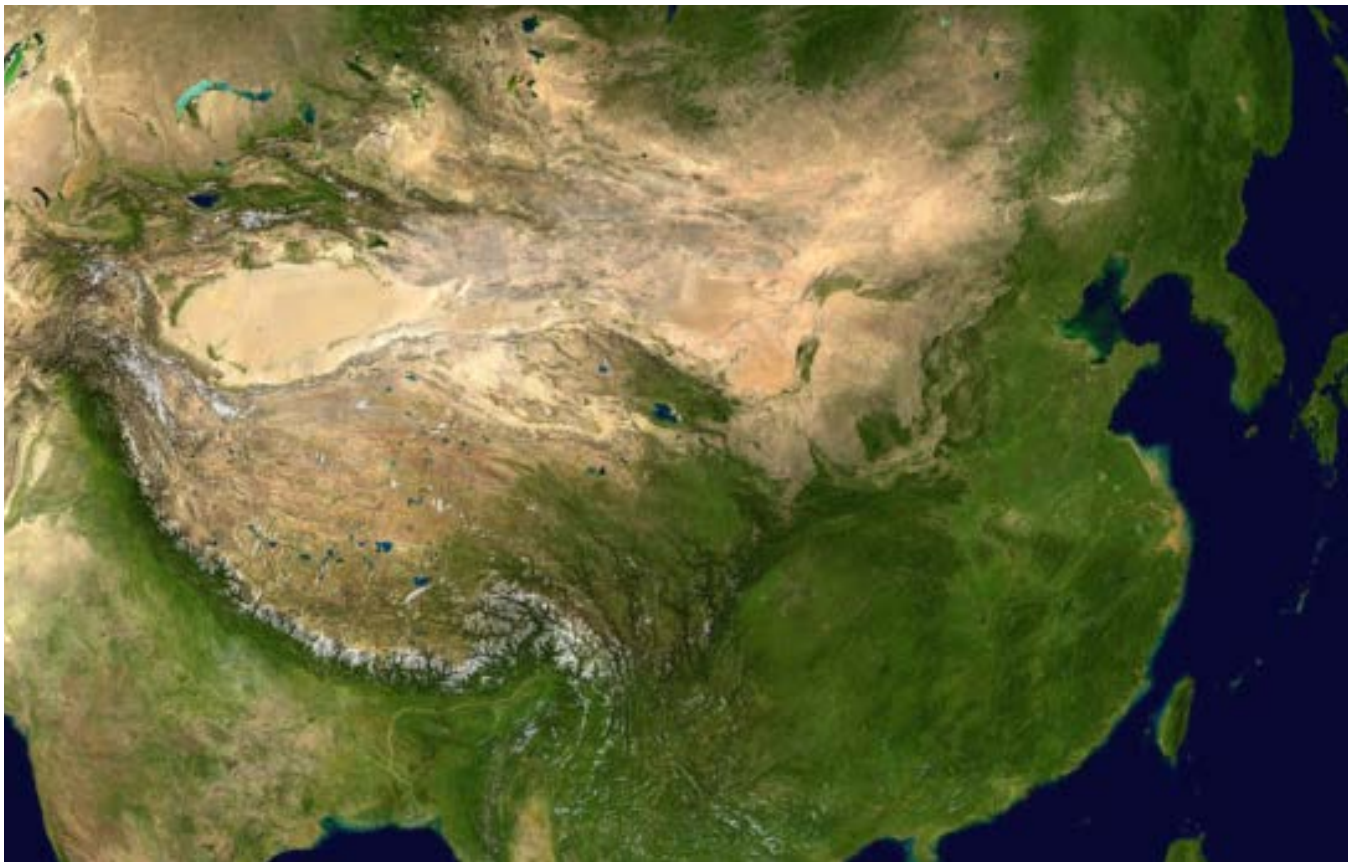


Source: Space Foundation database

China scholar Dean Cheng, a senior fellow at the Potomac Institute for Policy Studies, said China's lead over Europe and Russia can be deceiving. "It is a combination of them (Russia) slowing down and the Chinese ramping up. Europe is the big loser in this ongoing space race."[35]

China's total space outlay for 2025 is estimated at $19 billion, or about 0.25% of its gross domestic product.[36] The close ties between China's military and civil space efforts and the lack of transparent budget numbers makes estimating exact program costs difficult. China's total military budget for 2026 has been estimated at $386 billion.[37]

China's military space program is driven by competition with the United States, Cheng said. That has led to booming growth in China's quasi-commercial space sector, which includes a constellation aimed at competing with SpaceX's Starlink. Competition with the United States also led to Chinese military leaders viewing space dominance as tantamount to air dominance over a battlefield, he said, adding that "their doctrinal related writings for the People's Liberation Army have made it very clear that space is an absolute battleground."[38]



The China-Brazil Earth Resources Satellite began transmitting imagery in 2015. Satellite imagery from China drove a 2025 diplomatic flap after Washington accused the Beijing government of aiding groups including the Houthi rebels of Yemen.
Credit: United Nations

China continues to remain strategically vague about its military space program, despite evidence of ties between space launch, satellites and the People's Liberation Army. In 2025, the government-run People's Daily newspaper announced a crackdown on those who would spy on or sabotage its space efforts.

"China's Ministry of State Security warned ... that as great-power rivalry rapidly extends into outer space—with nations racing to develop and exploit space assets and some openly advocating space hegemony and an arms race—it will, in accordance with the law, severely punish any infiltration, espionage or sabotage targeting China's key space technologies and data, forging a robust security shield for the country's ambition to become a leading spacefaring nation," the news outlet warned.[39]

China and the United States traded diplomatic blows in 2025 over space policy. U.S. officials alleged that China was selling data acquired by spy satellites to Iran for use by Houthi rebels to target civilian shipping. "China consistently attempts, as you know, to frame itself as a global peacemaker," U.S. State Department Spokeswoman Tammy Bruce told reporters. "It is clear that Beijing and China-based companies provide key economic and technical support to regimes like Russia, North Korea, and Iran and its proxies."[40]

China's Foreign Ministry in November released an arms control paper that accused the United States of triggering an orbital arms race with its plans for the Golden Dome missile shield. "In

pursuit of absolute security, this certain country has advanced the Golden Dome global missile defense system without restraint and sought to deploy weapons in outer space, severely threatening outer space security," China's foreign ministry fumed.[41]

Tokyo, Taipei, Seoul Push Military Space Efforts

Other Asian countries are modernizing space systems and increasing capabilities. Japan's Defense Ministry in 2025 created the Japanese Air and Space Self Defense Force while adding sovereign satellites and launch capability. These space plans have the nation's most influential patron in Prime Minister Sanae Takaichi.[42] "Investment in space is an important investment in next generation national infrastructure that supports our security, economic activities, and the daily lives of our people," Takaichi stated. "From the perspective of national security, we will strengthen our space domain awareness capabilities and make greater use of satellite constellations, thereby fundamentally enhancing our defense capabilities through the utilization of space."

Japan's H3 launch vehicle, shown during a June launch, is key to the nation's plans for self-reliance in space.
Credit: JAXA

Off China's coast, Taiwan is implementing its "porcupine strategy," for defense with a new twist. Lawmakers in Taipei in late 2025 issued a supplemental defense budget of $1.8 billion called the "Special Statute on Strengthening the Resilience of the Economy, Society, and National Security in Response to International Developments."[43] The top goal for the new strategy is improving communications for Taiwan's military, moving away from ground-based systems to satellites in low Earth orbit. Taiwan

decided against renting services from commercial satellite broadband firms such as SpaceX, opting for indigenous satellites that could be fired to space on a Taiwanese launch vehicle. To support that initiative, Taiwanese officials expect to open a national spaceport by 2030.

"We are increasing investment in defense because we are alert to threats that are greater than ever before—this is not to provoke, but to prevent war," Taiwan's President Lai Ching-te stated in a May.[44] "We are enhancing our self-sufficiency in national defense not to escalate conflict, but to protect our people."

South Korea has committed to growing its national space efforts, investing more in its Nuri launch vehicle and satellites for Earth observation and communication. The Korean Aerospace Administration (KASA), which oversees all of the nation's space efforts, wants sovereign access to space to augment its security agreements with the United States.[45] "We will strengthen investments to secure game-changing technologies, such as reusable launch vehicles, by leveraging private sector innovation, and foster the space and aerospace industry as a key national sector," pledged KASA administrator Yoon Youngbin.

In Japan and South Korea, government efforts come with an economic twist: Both nations want to grow satellite technology to compete with western firms including SpaceX in the direct-to-device market for tech-hungry Asia. Japan's satellite plans are backed by a $7 billion "Space Strategy Fund."[46]

U.S. Generals Eye Russian Tactics for Clues to Future Fights

Russia's public defense spending has been estimated at 13.5 trillion rubles in 2025.[47] Russian space launches have slowed to a trickle in recent years, with sanctions blocking commercial deals and wartime budgets forcing agencies including Roscosmos to tighten its belt. In 2025, Roscosmos sent 17 launch vehicles skyward, showing ongoing atrophy for a space program that led the world in launches two decades ago.[48]

The U.S. Center for Strategic and International Studies examined Russia's economy in 2025, finding "Russia's space industry, which was once a global leader, has fallen to historically low levels."[49] The Kremlin has taken a strong stance against U.S. military plans in orbit, issuing a March statement on Pentagon space policies.[50]

"One can see Washington's determination to promptly implement dangerous doctrinal principle," stated Russian Foreign Ministry Spokeswoman Maria Zakharova. "Space supremacy is regarded by the U.S. as a guarantee of achieving advantage in any conflict against any potential enemy."

- Space Force spending would top $71 billion under the 2027 Pentagon plan, including $40 billion for research, development, and testing.
- The procurement budget for space would grow from $4.2 billion in 2026 to more than $19.2 billion in 2027. Classified space would get $17 billion, up from $7 billion.
- Hybrid architecture, relying on commercial vendors such as SpaceX's Starshield, would get a boost, including another $1.5 billion for communications satellites in 2027.
- Space Force is developing satellites to track moving targets on Earth, giving the U.S. military unmatched battlefield awareness.
- 31 national security space launches are planned for 2027, up from 22 planned for 2026 and 16 in 2025.

Yet, in its war with Ukraine, Russia has demonstrated the future of space warfare. Russia and Ukraine have attacked with space-enabled activities, with drone swarms, front-line communications, and combined arms attacks that require close coordination and satellite signals. Russia and Ukraine have worked to evade traditional defenses, including space-based missile warning with challenging weapons such as hypersonic missiles. The Ukraine war has also shown how widespread employment of counter-space capabilities, including jamming, hacking and attacks on ground stations—all the measures short of orbital warfare—change the battlefield.

U.S. Space Spending Focuses on Expanding Research, Communications Systems

Space Force generals Whiting and Saltzman are pushing upgrades for U.S. space systems to overpower jamming, block hackers and create distributed systems with proliferated constellations and distributed ground stations. Their goal is creating a space system tough enough that taking out an antenna, or even a satellite, doesn't freeze modern maneuver warfare into the trench fighting last seen in World War I.[51] The biggest portion of the planned 2027 Space Force budget would underwrite its future ambitions, with $40 billion going to research and development. Nearly half that money would go to classified research programs. Key objectives include upgraded missile warning, tactical communications and automation of satellite control.[52] The U.S. shopping list includes the Ground Moving Target Indicator, a new class of spy satellites that track objects traversing ground, sea or sky. It is seen as key to protecting troops in drone-infested battle zones and for tracking hypersonic weaponry, which travel at ballistic missile speeds but offer the maneuverability of cruise missiles.

The Space Force would also invest another $1.5 billion for low Earth orbit communications satellites, essentially giving troops a secure version of systems like SpaceX's Starlink and Amazon's Leo.

The Space Force also gets money to begin replacing the Global Positioning System, which has given U.S. troops a battlefield advantage since the 1991 Persian Gulf War by delivering precision over-the-horizon targeting, navigation, and command and control. Banks, delivery drivers, stock and commodity exchanges and other signals that control the flow of information across the internet could shut down if the GPS system is lost.

Each launch brings the service closer to Saltzman's vision for 2040.[53] "Because this approach is visionary and predicting the future is tough, it will certainly get some things wrong," he said. "But on the new battlefield it describes, one reality becomes clear: The Space Force we have today is not the Space Force we need to secure the future domain."

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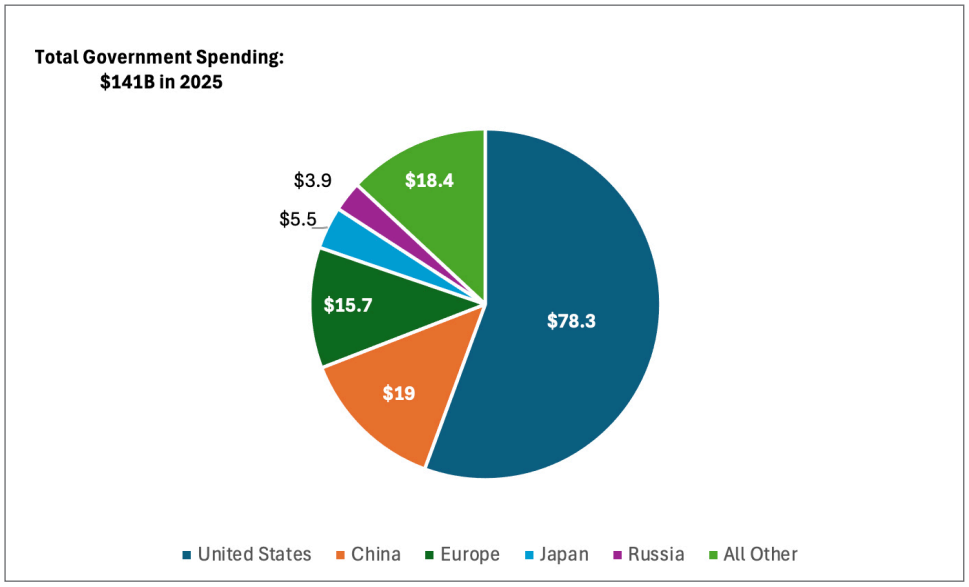
Government Space Budgets Increase to $141 Billion

In 2025, global government space spending grew to $141 billion, a 7.4% increase from $131 billion the previous year. This is an acceleration from the 6.7% spending increase from 2023-2024.

As in previous years, the United States accounted for the majority of all government space spending, with $78.3 billion, a 1.4% increase from the previous year. The U.S. increase was among the smallest of the leading nations and among those nations, was higher only than budgets from the European Union (EU) and the European Space Agency (ESA), which in Euros, posted decreases by both.

Government Space Spending, 2025 (In USD Billions)



Source: Space Foundation

Other nations showed significant gains, with Canada more than doubling its 2025 budget to $612 million. France, the United Kingdom and South Korea funded increases between 62% and 42.1%.

In total funding, China was second with an estimated $19 billion spent on space, up 10.3% from 2024. Europe followed in third with $15.7 billion spent on space. The European budget is an accumulation of space spending from the EU, ESA, and the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT). Space budgets from national European space programs are also included.

The top five government space budgets add up to $122.4 billion, accounting for 87% of all government space spending. Smaller national budgets amounted to $18.4 billion.

Government Space Budgets, 2025

Nation/Agency	Spending (USD)		YoY Change	Source
United States	$	78,343,695,218	1.4%	U.S. government public records
China	$	19,003,684,306	10.3%	Space Foundation estimate based on GDP
ESA	$	7,022,457,319	8.2%	ESA, Eurospace
Japan	$	5,548,186,004	13.5%	Japan's Cabinet Office
Russia	$	3,947,245,401	24.0%	Ministry of Finance of the Russian Federation
European Union	$	2,623,178,978	-0.1%	The European Commission, Eurospace
France	$	2,129,533,209	44.8%	Centre National d'Études Spatiales (CNES)
Italy	$	1,975,288,984	28.1%	Agenzia Spaziale Italiana (ASI)
India	$	1,452,092,069	10.5%	India's Ministry of Finance
Germany	$	1,306,762,203	21%	Germany's Federal Ministry of Finance
South Korea	$	857,359,915	42.1%	Korea's Ministry of Science and ICT
EUMETSAT	$	615,892,237	23%	EUMETSAT, Eurospace
Canada	$	612,397,511	102.4%	Canadian Space Agency
United Kingdom	$	482,290,841	63.5%	U.K. Space Agency
Non-U.S. Military	$	13,290,078,309	21.2%	Public records, Space Foundation estimate
Additional Countries	$	1,655,423,181	21.8%	Public budgets
Total	**$**	**140,865,565,685**	**7.4%**	

Excludes contributions from the European Union. Excludes contributions to ESA and EUMETSAT.
Source: Space Foundation database, International Monetary Fund (IMF)

Summations of space programs by nation or region, including key 2025 initiatives and future programs, are provided on the following pages and are organized from largest to smallest government spending. A chart of the additional countries is at the end of this article.

United States

The United States far and away retains the largest global space budget despite modest year-over-year growth. In 2025, the nation saw major achievements in government and commercial sectors. NASA met multiple goals for Artemis II that led to its successful launch in 2026. In February 2025, engineers at Kennedy Space Center completed stacking the twin SLS (Space Launch System) solid rocket boosters. Months later, the crew completed testing for the historic mission.[1] Just before the end of the year, private astronaut and tech entrepreneur Jared Isaacman was confirmed as the 15th Administrator of NASA.[2]

On the commercial side, U.S. companies also achieved milestones. SpaceX hit its 500th reusable launch in 2025, indicating the rapid pace and game-changing capabilities of its launches. The company was at 600 reusable launches by mid-year 2026.[3] Signaling the collaboration between the U.S. government and private companies, the Commercial Lunar Payload Services (CLPS) program completed

NASA's Space Launch System rocket in the Vehicle Assembly Building at NASA's Kennedy Space Center in Florida.
Credit: NASA

multiple Moon missions in 2025. Most notably, Firefly Aerospace's Blue Ghost Mission 1 became the first private lunar lander to successfully touch down on the Moon's surface. The following month, Intuitive Machine's IM-2 mission also landed on the Moon but tipped over during touchdown and the mission was cut short. More CLPS missions are planned for late 2026 and 2027.[4]

China and Eastern Asia

China took several strides in advancing its space program in 2025. Beyond space spending increase of 10.3%, up to an estimated US$19 billion, the nation advanced multiple high-profile ambitions. In May 2025, China launched Tianwen-2, its first asteroid sample-return mission. The spacecraft arrived at asteroid 469219 Kamoʻoalewa in July 2026 and is expected to return a sample to Earth in 2027.[5] China also achieved a national record of 92 orbital launches in 2025, with plans to top that number this year.[6]

China is increasing its presence on the global stage and in orbit through multiple space partnerships. As of 2025, Beijing had 23 bilateral space partnerships in Africa. At least five Latin American nations have partnered with China via payload rideshares or on the nation's planned lunar base.[7]

Space Spending as a Percentage of Gross Domestic Product (GDP), 2025

Country	Currency	2025 Space Spending	2025 GDP	2025 % GDP
Canada	CAD	$ 854,080,831	$ 3,179,980,000,000	0.027%
France	EUR	€ 3,703,290,845	€ 2,981,970,000,000	0.124%
Germany	EUR	€ 2,162,821,000	€ 4,405,970,000,000	0.049%
India	INR	₹ 124,486,000,000	₹ 364,626,700,000,000	0.034%
Italy	EUR	€ 2,527,728,338	€ 2,249,830,000,000	0.112%
Japan	JPY	¥ 936,500,000,000	¥ 624,492,380,000,000	0.150%
Russia	RUB	322,772,919,900 ₽	213,981,150,000,000 ₽	0.151%
South Korea	KRW	₩ 1,160,500,000,000	₩ 2,609,558,680,000,000	0.044%
United Kingdom	GBP	£ 739,486,489	£ 2,977,590,000,000	0.025%
United States	USD	$ 78,343,695,218	$ 30,507,220,000,000	0.257%
Average GDP Spent on Space				0.097%

Source: Space Foundation database, International Monetary Fund (IMF)

Japan is funding several emerging technologies and commercialization efforts through its $7 billion (¥1 trillion) Space Strategy Fund. The 10-year program, facilitated by the Japan Aerospace Exploration Agency (JAXA), distributed $1.2 billion (¥300 billion) into the nation's private companies, universities, and research institutions in 2025. The Japanese government created the fund with three goals: doubling the size of the domestic space market, solving critical issues by utilizing space, and gaining a deeper exploration of the universe with new technologies. The largest funding distributions in 2025 included approximately $150 million to optimize rocket manufacturing for high-frequency launches, $140 million for the research and development of satellite optical communications, and $100 million to develop on-orbit manufacturing technologies.[8]

The Japan Aerospace Exploration Agency's HTV-X1 cargo spacecraft approaches the International Space Station in 2025.
Credit: NASA

The Japanese government reinforced its focus on space when it approved its Basic Policy on Economic and Fiscal Management and Reform 2025, which identified priority issues for the nation's government. Key plans include developing a rover to support a lunar landing by a Japanese astronaut under the Artemis program, increasing rocket development and launch frequency, and expanding the nation's Quasi-Zenith global positioning satellite system.[9]

One year after founding its national space agency, South Korea greatly increased funding for space ambitions. The budget for the Korea Aerospace Administration (KASA) increased 27% from 2024 to 2025, landing at $630 million (₩964 billion).[10] This increase boosted funding for several national space initiatives, including launch capabilities, satellite production, and a strengthened aerospace sector. Key investment areas for KASA include $200 million to enable repeated launches of the Nuri rocket and the development of a next-generation launch vehicle, $140 million to expand national satellite production, and $75 million to develop regional aerospace infrastructure. In total, South Korea spent $857 million on space, a 42% increase.

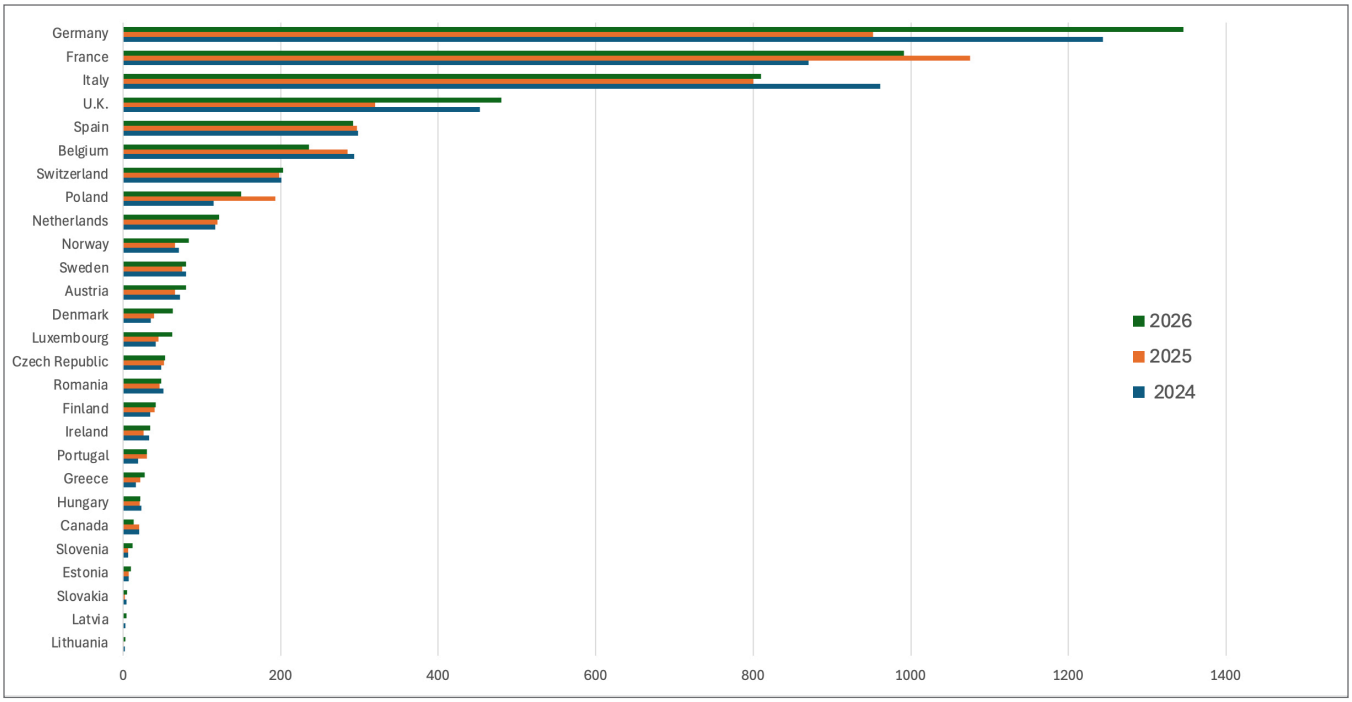
The Philippine Space Agency experienced a substantial reduction in funding, falling from $30.7 million in FY2024 to $16.4 million in FY2025, a 47% reduction. The cuts came amid a wider austerity program aimed at narrowing budget deficits.[11]

Europe

Demonstrating the growing government reliance on private industry, ESA hosted the European Launcher Challenge to build a commercial launch market similar to the United States. The challenge provides funding to select companies to evolve their launch systems and increase capacity for customers. ESA first announced the challenge in 2023 and opened it for proposals in March 2025. That summer, the agency selected five European companies: Isar Aerospace, Maiaspace, PLD Space, Rocket Factory Augsburg, and Orbital Express Launch (which has since withdrawn). ESA earmarked more than $1 billion for the European Launcher Challenge, with plans for roughly $190 million per challenger.[12] Contracts are being framed in 2026 with a goal of orbital launch demonstrations by 2027 at the latest.[13]

The Moonlight initiative is another ESA program funding a consortium of private companies. The program will create a satellite constellation orbiting the Moon to provide communications and navigation services. ESA selected Telespazio to manage the consortium to provide infrastructure for the program with a $140 million contract.[14] In 2025, Telespazio subcontracted Viasat[15] and Thales Alenia[16] to build systems for the initiative, though figures for these contracts were undisclosed. In 2025, ESA member states also committed an additional $200 million to the Moonlight program.[17]

European Space Agency Contributions, 2024-2026 (in Millions of Euros)



Source: Space Foundation database

Multiple European space agencies experienced funding boosts from FY2024 to FY2025. The French space agency, Centre National d'Etudes Spatiales, saw a 45% budget increase from $1.47 billion to $2.13 billion. The United Kingdom Space Agency budget grew nearly 64%, from $295 million to $482 million.

Smaller space programs also received substantial funding increases. Turkey saw the largest space agency funding increase of any NATO member, up 116% from $53 million to $115 million. The authority in charge of Denmark's space research, the Danish Ministry of Higher Education and Science, saw a 93.5% year-over-year increase, from $301,723 to $583,728. The Polish Space Agency also reported a sizeable funding increase, rising 67% from $11.3 million to $19 million.

Middle East

Multiple Gulf countries advanced their space presence in 2025 via infrastructure advancements, launches, and international cooperation.

The United Arab Emirates (UAE) saw several of its satellites enter orbit in 2025, boosting the nation's communications, Earth observation, and remote-sensing capabilities.

The Persian Gulf as seen from orbit, as photographed by United Arab Emirates Flight Engineer Sultan Alneyadi.
Credit: NASA

Firefly Aerospace announced an agreement in 2025 with the UAE's Mohammed Bin Rashid Space Centre to deliver the Rashid 2 Rover to the Moon as part of the Blue Ghost Mission 2, scheduled for late 2026.[18]

Like other nations, the UAE is concentrating efforts to shift the space industry from largely government-funded to a stronger commercial/investment base.

In 2021, the government announced a new National Space Fund that launched with AED$3 billion (US$816 million.) Managed by the UAE Space Agency, its mission: to attract international and national startups and spur innovation supporting the space sector. In May 2026, the UAE announced the $272 million International Space Cooperation Programme to boost space research and enhance global partnerships.[19] As those initiatives have grown, the space agency is seeing a funding reduction. From FY2024 to FY2025, funding was cut 13%, from $113.5 million to $98.6 million.

Farther up the Gulf, Bahrain saw its first domestically built satellite enter orbit aboard the SpaceX Transporter-13 mission in March 2025. The Al Munther satellite is equipped with a camera to capture images of Bahrain and its surrounding waters. An AI system provides advanced image processing.[20]

Oman is aiming to becoming the Middle East's top space hub with its Etlaq Spaceport. While the spaceport opened in 2022, it may see a major increase in traffic in the coming years. The nation's Civil Aviation Authority approved a directive in 2025 to expedite launches in just 45 days. This would be one of the fastest launch approval timelines in the world and includes no limit on the number of launches.[21]

In the largest increase of any national space agency from 2024 to 2025, the Pakistan Space & Upper Atmosphere Research Commission (SUPARCO) grew 289% from $33.1 million to $129 million.

The Israel Space Agency also more than doubled spending from FY2024 to FY2025, up 105% from $8.7 million to $17.8 million.

Africa

After nearly a decade of effort, the African Space Agency (AfSA) was officially inaugurated during the NewSpace Africa Conference in April 2025.[22] Headquartered in Cairo, AfSA represents the 55 countries in the African Union, including 21 that currently operate space programs.[23] The agency identifies four strategic pillars of space technology to benefit the continent's development: Earth observation, satellite connectivity, astronomy, and navigation and positioning. The African Union's financial oversight body approved AfSA's 2025 budget at $3 million.[24]

Representatives from ESA and AfSA at the agency's inauguration in Cairo.
Credit: ESA

The agency, along with the African Union, received major investments from foreign benefactors to boost space development. Through the Africa–EU Space Partnership Program, the European Union committed to contributing

more than $50 million to increase the uptake of space-based data and to boost private sector capacity in Sub-Saharan Africa. The funding is being distributed from 2025 through 2028.[25]

A handful of national African space agencies saw funding boosts of more than 50% from FY2024 to FY2025. The Zimbabwe National Geospatial and Space Agency topped this group, with its budget up nearly 125% from $812,000 to $ 1.8 million. The Rwanda Space Agency also saw an 88% gain from $5.2 million to $9.8 million. Nigeria's National Space Research and Development Agency increased space spending by more than 77% from $26.3 million to $46.8 million. Alternatively, the Ethiopian Space Science and Technology Institute (ESSTI) saw a decrease in funding year-over-year when translated to USD due to the Birr's falling value. Although ESSTI's budget increased 6.3% in the local currency, the budget dropped 55% in U.S. dollars.

Latin America

South American nations took key steps in 2025 to establish space capabilities. In December, Chile inaugurated its National Space Center. A joint effort between the Ministry of National Defense and the Ministry of Science, Technology, Knowledge, and Innovation, the center is the first publicly accessible space technology hub in the country. It includes laboratories and clean rooms for satellite manufacturing, data science, and technology startups.[26] The center is located at Los Cerrillos Air Base in Santiago and is administered by the Chilean Air Force.

South American nations also partnered with China as a route to space. At the 2025 BRICS Summit, Bolivia, Nicaragua, and Venezuela formally joined China's International Lunar Research Station (ILRS) initiative, planned for the 2030s.[27] Additionally, Peru secured a payload spot on China's Chang'e-8 lunar mission, planned for launch in 2028 or 2029. The radio astronomy array payload is a collaboration between the National Commission for Aerospace Research and Development of Peru and the South African Radio Astronomy Observatory.[28]

Apart from Argentina, nearly every major space agency in Central and South America experienced funding cuts from 2024 to 2025.

In local currency, Argentina's Comisión Nacional de Actividades Espaciales (CONAE), more than doubled its budget from AR$24.5 billion in FY2024 to AR$51 billion in FY2025. Due to the weakening Argentine Peso, this reduced to a 59% increase in USD.

Peru's National Commission for Aerospace Research and Development saw its budget drop 6% year-over-year, from $7.7 million in FY2024 to $7.3 million in FY2025. The Mexican Space Agency saw a slightly larger drop of 7.9%, going from $4 million to $3.7 million. Brazil saw the largest cut in space funding reduction in local currency of any Latin American country, down 20%, falling from $30 million in FY2024 to $24 million in FY2025.

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Government Space Budgets of Additional Nations, 2025

Nation	2025 Spending (USD)	2024-25 change (USD)	2024-25 change (national currency)
Argentina	$ 42,834,854	59.2%	108.2%
Australia	$ 120,545,570	31.1%	32.9%
Azerbaijan	$ 43,529,417	-1.3%	-1.3%
Bahrain	$ 1,928,191	28.8%	28.8%
Bangledesh	$ 1,884,562	23.2%	28.5%
Belarus	$ 18,929,365	-22.7%	-22.6%
Bolivia	$ 36,735,887	-8.5%	-8.7%
Brazil	$ 24,003,986	-20.8%	-23.1%
Bulgaria	$ 7,009,687	25.2%	13.8%
Denmark*	$ 583,728	93.5%	76.2%
Egypt	$ 15,872,564	2.3%	5.6%
Ethiopia	$ 5,115,717	-54.5%	6.3%
Ghana	$ 533,660	19.9%	-18.3%
Indonesia	$ 696,003	1.8%	0.4%
Israel	$ 17,824,022	104.7%	83.2%
Kenya	$ 2,418,437	24.7%	25.0%
Luxembourg*	$ 27,987,547	31.7%	19.8%
Malaysia	$ 24,267,103	41.5%	26.4%
Mexico	$ 3,713,865	-7.9%	-5.4%
Morocco	$ 888,743	10.7%	0.0%
Nigeria	$ 46,753,447	77.6%	82.6%
Norway*	$ 131,025,900	-11.9%	-16.4%
Pakistan	$ 128,964,345	289.2%	297.0%
Paraguay	$ 690,261	21.0%	27.5%
Peru	$ 7,272,097	-6.0%	-13.2%
Philippines	$ 27,033,499	-12.2%	-15.3%
Poland*	$ 18,969,862	67.2%	49.7%
Portugal*	$ 44,993,267	44.7%	31.6%
Rwanda	$ 9,761,717	88.0%	107.4%
South Africa	$ 104,979,749	2.5%	-0.1%
Spain*	$ 155,365,335	9.9%	0.0%
Sweden*	$ 33,528,402	41.2%	26.5%
Switzerland*	$ 79,084,303	9.2%	-3.7%
Taiwan	$ 180,700,777	26.1%	13.2%
Thailand	$ 47,431,747	30.3%	14.9%
Turkey*	$ 114,996,866	116.0%	160.7%
Ukraine	$ 26,134,061	-16.3%	-13.8%
U.A.E.	$ 98,608,577	-13.1%	-13.1%
Zimbabwe	$ 1,826,058	124.7%	124.7%
Total	**$ 1,655,423,181**	**21.6%**	

Source: Space Foundation database

Emerging Technologies Boost Space Capabilities, Investment

A new focus is taking shape for space: No longer is the industry almost singularly focused on launching satellites that send information to Earth. Increasingly, companies and investors are moving toward a future where technology is based in space and will benefit Earth-based and cislunar needs.

While space giants like SpaceX have the capacity to research and develop emerging technologies in-house, booming demands have seen smaller companies and startups raising growing amounts of capital from a widening cadre of investors. Private investment in the space sector topped $12 billion in 2025, with continued growth expected this year.[1] The hottest technologies can bring funding rounds that spike into hundreds of millions of dollars, putting their receptive companies' valuations into the billions.

"Industry has an incentive to continue to innovate because we know that the customer isn't just the government now," said Kathleen Curlee, a research analyst at Georgetown University's Center for Security and Emerging Technology.[2] "The customer now is other companies, or they themselves might be the customer. Technology has evolved. It has become democratized."

The top emerging technologies include:

- Reusable launch vehicles, a technology that cuts launch costs and enables speed and scale in access to orbit.
- In-space manufacturing, an emerging field that would lean on new commercial spacecraft to build goods for use on Earth, from cancer-fighting drugs to faster computer chips.
- Artificial intelligence in orbit, which would ease space traffic management, optimize networks and revolutionize Earth observation.
- Commercial lunar infrastructure, enabling humankind's first off-world settlements.
- Orbiting data centers, which would use solar power for an electricity-devouring industry and allow development at massive scale.

These emerging fields are enabling new capabilities in the space industry. In turn, these new capabilities are driving higher demand. For example, lowered launch costs allow burgeoning industries like in-space manufacturing and cislunar development smoother paths to fruition. Proliferation of commercial constellations increases demand for AI-powered space situational awareness. It is a cycle of technological growth and capital investment that accelerates itself.

Jonathan Roll

"New space fields aren't evolving in a vacuum. They're being pulled forward by various new demand signals and industry developments," said Jonathan Roll, a program manager with Arizona State University's NewSpace initiative.[3] "Companies are quietly reshaping themselves through acquisitions. Taken together

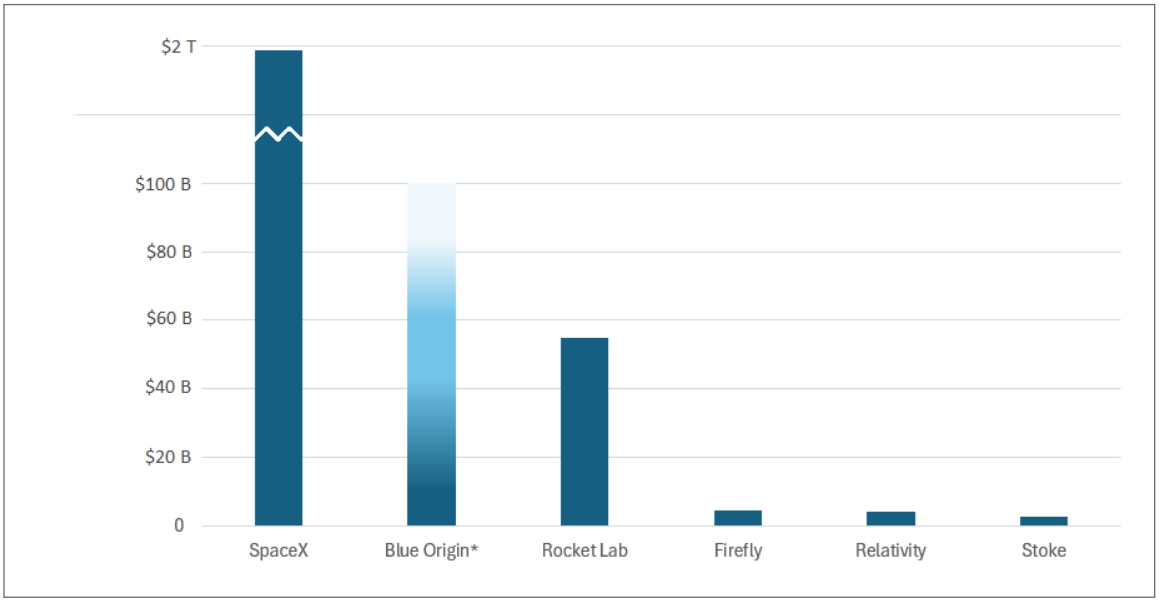
with the growing call for more spaceports from both USSF and NASA, those kinds of deals and initiatives could suggest we're moving into a phase where 'new space' is less about isolated startups with popular technologies, and more about building out integrated capabilities that serve long-term national security, exploration, and commercial gaps and needs."

Reusable Launch

Launch vehicles this year are heading to orbit at a near-daily pace.[4] Most of the flights serve commercial constellations, such as Starlink and OneWeb. With thousands of satellites waiting for delivery to space, more companies are fielding or quickly developing mass-produced reusable boosters to cut costs and cycle time between launches.

A new generation of launch vehicles is forming: Reusable commercial rockets. SpaceX's Starship, Blue Origin's New Glenn, Rocket Lab's Neutron, Firefly's Eclipse, Stoke Space's Nova, and Relativity Space's Terran R are in various stages of development for different mission profiles. All seek the same future: cheaper, more frequent access to space.

Reusable launch companies by estimated valuation



Company valuations as of June 2026. Because Blue Origin is not publicly traded, estimates on its value vary widely, generally around $100 billion.
Source: Space Foundation, Nasdaq

Reusable launch vehicles have the potential to impact nearly every industry wanting to head to orbit. The world is already reaping the benefits of reduced costs thanks to reusable launch. The SpaceX Falcon 9, the most frequently launched rocket, is a prime example, flown 75 times from Jan. 1 to June 30 this year. As use of reusable rockets has increased, the cost of launching a kilogram into low Earth orbit (LEO) dropped from $54,000/kg on NASA's Space Shuttle to less than $3,000/kg on SpaceX's Falcon 9.[5] A lower price comes with caveats for smaller companies.

Rapidly increasing launch cadences at Cape Canaveral and Vandenberg already is showing signs of space becoming bottlenecked.[6] This could be exacerbated by reliance on the Falcon 9 as the primary vehicle to access orbit. Multiple SpaceX partners reported that the company is not accepting Transporter reservations beyond late 2028 or early 2029, and manifests for the coming years are near capacity.[7]

A SpaceX Falcon 9 rocket launches the Crew-9 mission to the International Space Station.
Credit: NASA

The Falcon 9's price reflects estimates between launch cost and total payload capacity available for the company's satellites. Rideshare missions on Falcon 9 are subject to additional fees and land between $6,000 and $7,000/kg.[8,9]

This promise of easier access has driven hundreds of millions of dollars in investments to reusable launch companies and valuations in the billions, and for SpaceX, even trillions.

Following a historic IPO in June, SpaceX is valued at roughly $2 trillion as it develops the Starship, the most powerful reusable launch vehicle ever developed.[10] While the IPO shifted investments throughout the industry, every major reusable launch company is still valued in the billions, from Rocket Lab at more than $50 billion[11] to Relativity at roughly $4 billion.[12]

Stoke Space reported in October 2025 it raised $510 million in a funding round to develop its Nova reusable launch vehicle. NASA and the U.S. Space Force have also invested in the development of the Nova, which is aiming for launch in late 2026.[13]

"Stoke is building like it expects ... a future where sending cargo to orbit becomes as routine as shipping boxes through UPS or FedEx," said Michael Schulman, partner at Running Point Capital Advisors.[14]

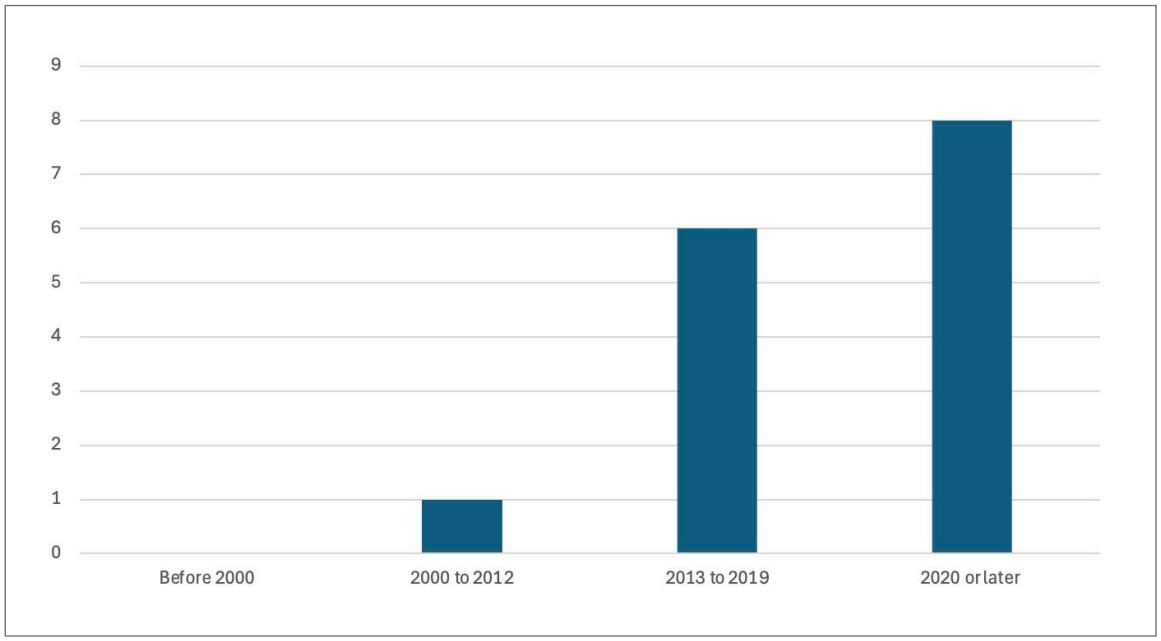
Fortune Business Insights valued the reusable launch market at $8.4 billion in 2025, with a compound annual growth rate of 13%.[15]

In-space Manufacturing

Microgravity in LEO offers myriad benefits for advanced manufacturing industries, from pharmaceuticals to microchips. Unique gravitational properties in orbit lead to higher quality crystals, more uniform alloys, and the ability to form novel materials. While the draw of in-space manufacturing is not new, like other burgeoning space markets, lowered launch costs and increased commercial focus are drawing larger investments.

In-space manufacturing took major strides in the past year, led by California startup Varda Space, which raised $187 million in its Series C funding round. The company has completed a series of missions that took pharmaceutical experiments into orbit and returned them safely to Earth. Varda developed the re-entry vehicle with Rocket Lab and launched its first mission in 2023, pushing ahead with partners seeking to use microgravity to manufacture products including pharmaceuticals and microchips. The company is backed by $329 million from investors.[16]

In-Space Manufacturing Companies Founded



Source: Center for Security and Emerging Technology at Georgetown University

"The opportunity is not simply to manufacture drugs in space for its own sake. It is to use the space environment to produce better medicines that have a direct, tangible therapeutic benefit for patients on Earth," said Marchel Holle, director of civil space at Varda.[17] "Government and venture funding help develop and validate the capability, but the industry ultimately needs recurring commercial demand to become sustainable at scale."

The International Space Station (ISS) remains a key hub for in-space manufacturing tests.[18] In April 2025, Boston-based pharmaceutical startup Eascra Biotech launched its latest round of cancer-fighting experiments to the ISS. Backed more than $2 million in federal grant money,

the firm plans to build tiny tubes that deliver medication directly into tumors, killing the cancer and saving the patient.[19] The IQVIA Institute reported global spending on cancer medicine reached more than $223 billion in 2024 and is projected to reach $409 billion by 2028.[20]

In-space manufacturing can also benefit companies manufacturing high-end computer chips. In the United Kingdom, startup Space Forge raised more than $40 million to experiment with building silicon wafers, the base material of microchips, in microgravity. Investors including the European Space Agency have bet that in microgravity wafer materials can be formed with greater precision, allowing the printing of more microscopic switches that run technology.[21] In December 2025, the company generated plasma aboard its ForgeStar-1 satellite "marking a world-first for commercial in-space manufacturing and a significant step toward producing a new class of high-performance semiconductor materials on orbit."[22]

AI Capabilities in Space

Just like on the ground, AI in space is not an end but a means. With the majority of operations and maneuvering in orbit being hands-off, AI has the potential to impact and expedite virtually every field of the space industry. And just like the zeitgeist on Earth, this attention is driving massive investments for AI companies and capabilities in space.

Kathleen Curlee

"AI is dominating everything," Curlee said. "It's almost to the point where if you don't have the AI in your name, you're not going to get the flashy attention."

Satellite constellations 10,000 units strong are being developed and deployed by governments and private corporations. AI-enabled satellites can handle several operational complexities that stem from these massive numbers. AI helps track and predict the movement of satellites and debris, managing traffic and avoiding potentially catastrophic collisions. These autonomous operations prove even more valuable on exploration missions, such as to Mars, where communications delays span several minutes.

Aside from managing the immense number of satellites themselves, AI more adeptly manages the staggering amount of data being collected by these satellites. AI technology proved its capabilities early on by processing massive data sets from Earth observation (EO) and astronomical missions, as well as by combing through findings to prioritize which information to send to ground stations.

"Increasing complexity and bandwidth of EO sensors—hyperspectral, infrared, microwave, for example—will provide significantly advanced weather, climate, agricultural, land use, and defense/security information from space, dramatically improving our ability to both monitor and forecast on rapid timescales and with higher spatial precision,"said Jim Bell, director of Arizona State University's NewSpace initiative.[23] "Speed and resolution improvements in space-based EO data will fuel significant new and enhanced market activities across a wide range of sectors, including communications, remote sensing, transportation, defense."

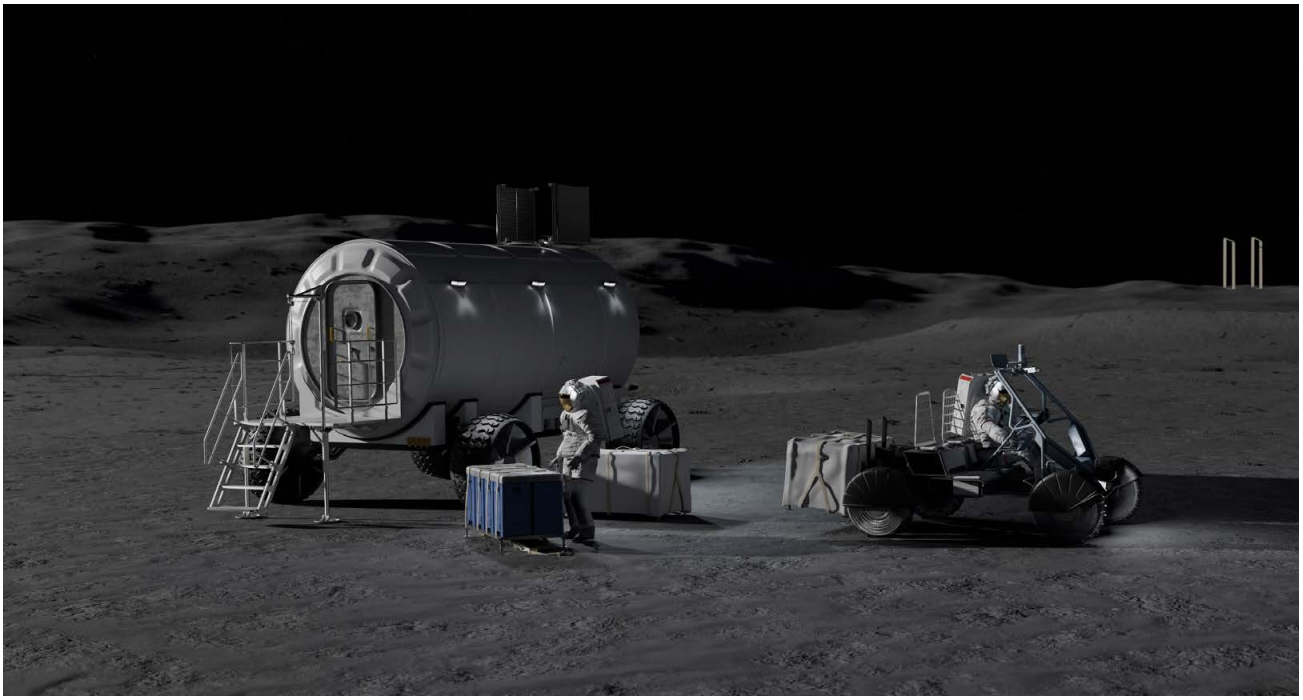
These benefits have drawn large investments into the domain. Loft Orbital, a satellite and space-infrastructure company, raised $170 million in Series C funding in January 2025.[24] The company heavily focuses on on-orbit AI for customers to build, test, and deploy software applications in space "without ever needing to navigate the complexity of developing and launching hardware."[25]

One month later, K2 Space, a satellite production company, reported a $110 million Series B round to ramp up production of its platform.[26] K2 then raised $250 million in Series C funding in December 2025. The company aims to bring large, high-powered satellites into any Earth orbit for AI computing in space.[27]

Albedo Space, an Earth observation company building satellites focused on high precision, raised roughly $100 million in an April 2025 funding round.[28] The company is also receiving government attention in the form of a U.S. Air Force Strategic Funding Increase (STRATFI) contract with a potential value of $12 million.[29]

Commercial Lunar Infrastructure

Spurred by competition with China, the potential to obtain valuable resources, and lowering costs for exploration deeper into the solar system, NASA and a class of select U.S. companies are making major investments into cislunar development. Even before NASA announced plans for a $30 billion Moon base,[30] the agency was putting billions into its Commercial Lunar Payload Services (CLPS) program. This technology development and exploration program is seeing substantial growth, with NASA aiming to increase the maximum value from $2.6 billion to $4.2 billion, according to an April 2026 filing.[31]



A rendering of logistics activities on the lunar surface. NASA is contracting more than a dozen companies to help lay the foundation for a lunar base.
Credit: NASA

"Scientific research and exploration at the frontier has always been a NASA-led activity by necessity. There are no business models that close for these kinds of deep space, fundamental exploration activities," Bell said. "If NASA steps back from leading and investing in exploring the frontier because commercial space or private investors won't invest in those activities, then others — especially China but also Europe, Japan, Korea, perhaps even Russia— will step in and eventually take over America's leadership."

Major American space exploration companies such as Intuitive Machines, Firefly Aerospace, and Astrobotic (recently acquired by Voyager), are receiving large investments through CLPS contracts and private investors.

In 2025, Firefly Aerospace secured a CLPS contract of $177 million for its Blue Ghost Mission 4. The mission, scheduled for 2029, will deliver and operate two rovers and provide a long-haul communications relay and capture continuous lunar imagery.

For an enduring presence, the $30 billion Moon base will need power systems beyond solar that are capable of surviving the frigid lunar night.

One company working on this solution is receiving investments from government and private sources. Zeno Power, which is developing nuclear batteries for extreme environments, earned $50 million in a Series B funding round.[32] While nuclear batteries to power space systems date to 1961, Zeno Power focuses on more accessible batteries, commonly known as radioisotope thermal generators, for a variety of uses. These nuclear batteries use radioactive isotopes like strontium-90 and americium-241, which emit heat as they naturally decay. That heat can be converted into electricity. Zeno is focused on isotopes that are more abundant than the plutonium that has powered traditional nuclear space batteries.[33] This advanced battery power will greatly extend the lifespan of primarily solar-powered missions that have traditionally not been designed to survive the lunar night.

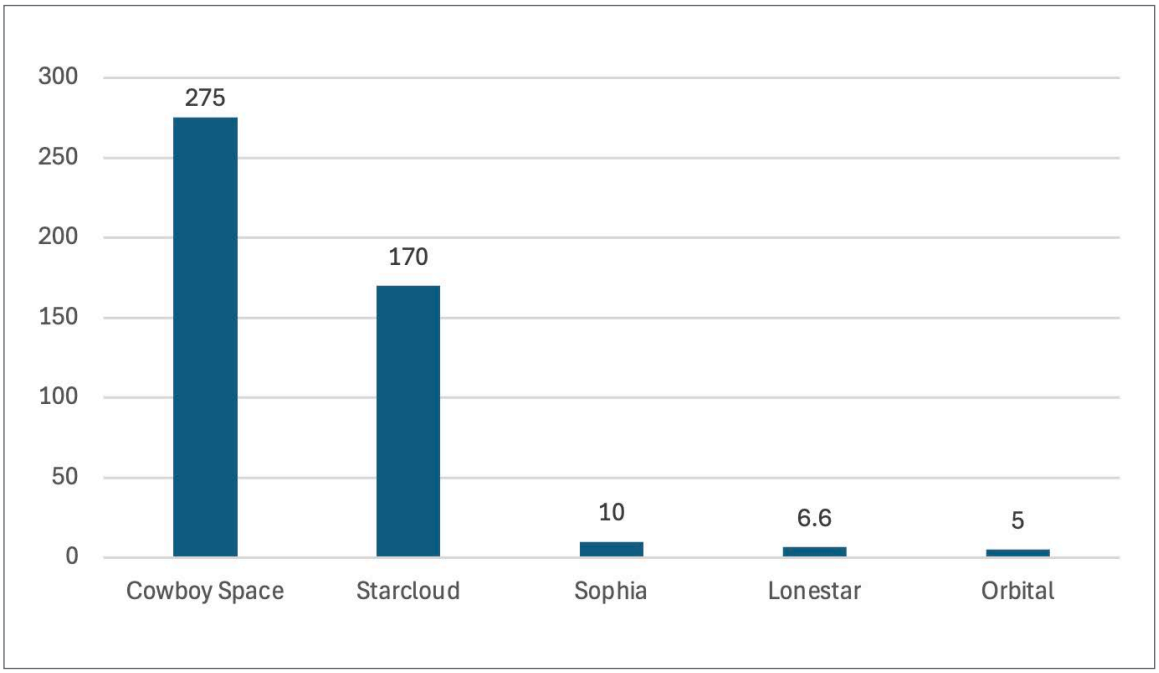
"This is what is going to enable us to broadly power the Moon base and work with NASA, work with industry to power the dozens of systems that we're now sending to the lunar surface in the coming years as a part of NASA's $30 billion Moon base so that these individual systems, the landers, the rovers, the navigation beacons, can build into a permanent presence and architecture," said Tyler Bernstein, CEO of Zeno Power.[34]

Orbital Data Centers

One space tech sector seeing massive capital inflow is also one of the most nascent. Orbital data center (ODC) and space-based computing companies have attracted nearly $500 million in investments in 2026. Much like the AI market, it's a trend that many companies are jumping on, from titans such as Google and SpaceX to a whole roster of startups. Discussions of this technology have gradually grown throughout the decade, including Google filing a provisional patent application for "Space-Based Data Centers" in 2023.[35] The sector began receiving major investments in late 2025 and early 2026, when SpaceX began signaling interest.[36]

ODCs aim to solve the main challenges with terrestrial data centers: power consumption, water usage for cooling, and land. The vastness of space, combined with its frigid temperatures and powerful solar radiation, promises to solve all three of these. Several technical hurdles to the ODC framework, such as launch costs, problems with cooling in the vacuum of space, solar radiation and orbital debris, must be overcome first.

Orbital Data Center Company Funding in 2026 (In Millions)



Source: Space Foundation

Starcloud, a U.S.-based company planning to build and deploy ODCs, raised $170 million in a funding round in March 2026.[37] By utilizing kilometers-wide solar and cooling panels in orbit, the company believes it can achieve 90% lower electricity costs compared to terrestrial data centers.

Cowboy Space (formerly Aetherflux) raised $275 million in Series B funding in May 2026, the largest single investment round for an ODC company thus far.[38] Proving investor interest in this market, in 2025 as Aetherflux, the company raised $50 million in Series A with the intent to build a SmallSat constellation to collect solar power in space. When the company rebranded and shifted to in-space computing, funding skyrocketed.

Despite the cost of launching materials into orbit at a historic low, an operational ODC would still take years before operators see a return on investment. Steve Eisele, president of Lonestar Data Holdings, estimates ODCs could take up to a decade after launch to realize profits, as the lowered cost for operations gradually overcomes the cost for launch.

A major aspect of operational expenditure, or OpEx, for ground-based data centers is the cost of power and water usage. Due to the reduced need for these in the colder and more solar-powered climate of space, Eisele sees the difference in OpEx as a primary draw for ODCs.

"For the data centers on the ground, the OpEx can almost mirror the CapEx year over year," Eisele said.[39] "But in space you're talking 95% less OpEx. That's how the economics are seen."

Eisele estimates capital expenditure for ODCs is anywhere from 4 to 10 times the cost of establishing terrestrial data centers. Therefore, one of the most critical steps to realizing this emerging market is further lowering launch costs.

Larger space companies are also joining in the race. Axiom Space launched an ODC prototype with Kepler Communications in 2025. With a successful proof of concept, the company is running the next round of workload, communications, and security tests. The applications run across many industries, but the immediate demand is from government, particularly national security. The company is funding and developing the ODCs itself.[40]

"Space is generating far more data than we can move to the ground and process. That gap is the market," said Jonathan Cirtain, CEO and president of Axiom Space.[41] "Axiom Space is building a constellation of in-space infrastructure that securely sends, receives, and orchestrates workloads in orbit — so the data gets used where it's created instead of waiting on a downlink."

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At Midyear, 2026 on Track For Record Orbital Launch Pace

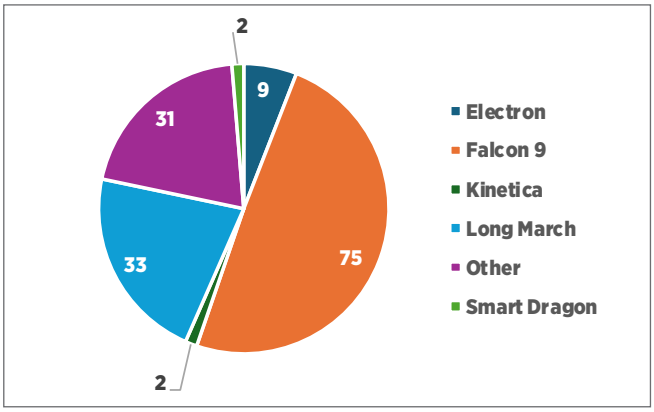
With 153 orbital space launches by the end of June, 2026 notched the busiest first half of a year on record, topping the 149 in the first half of last year. And like 2025, which finished the year with a record 329 launches, 2026 is expected to finish with its own record, tracking ever closer to one launch per day.[1]

The second half of the year's accelerated pace will accompany new launch vehicles and two new spaceports expected to come online. Andøya Spaceport in Norway and SaxaVord Spaceport in the United Kingdom expect to begin orbital spaceflight operations this year, making them the first two spaceports on European soil.[2,3] The first orbital flights from Europe are expected aboard new light launch vehicles, with two from German companies jostling for the first orbital flight, Rocket Factory Augsburg's RFA One will lift off from the U.K. while Isar Aerospace's Spectrum is set for Norway.[4,5] The U.S. Federal Aviation Administration expects a surge this year in U.S. commercial launches with as many as 225, against 82 through June 30. The federal government and private firms have joined forces to increase the number of available launch facilities at military ranges in Florida and California and commercial facilities including the Mid-Atlantic Regional Spaceport in Virginia.[6,7]

To further accommodate the launch boom, the Space Force is investing a planned $4 billion over the next decade on launch facilities.[8] Congress in 2025 allocated a separate $400 million for launch facility upgrades at military ranges.

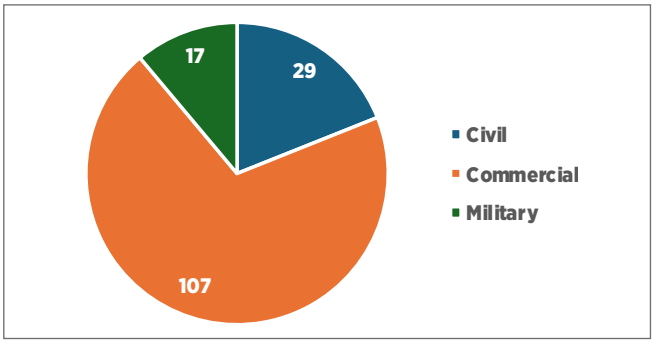
So far in 2026, two vehicles have dominated orbital launch, with 75 flights of SpaceX's Falcon 9, and 33 flights of China's all-purpose Long March family of rockets.[9] The race to orbit for commercial firms dominated the first half of 2026, accounting for 70% of flights worldwide through June 30, civil space agencies accounted for 19% of flights, while 11% served military missions.

Orbital Flights by Launch Vehicle Jan. 1–June 30, 2026



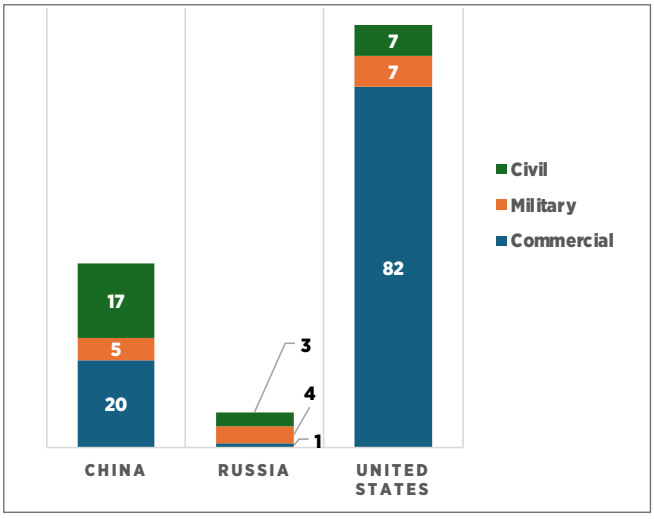
Source: Space Foundation database

Orbital Flights by Mission Type Jan. 1–June 30, 2026



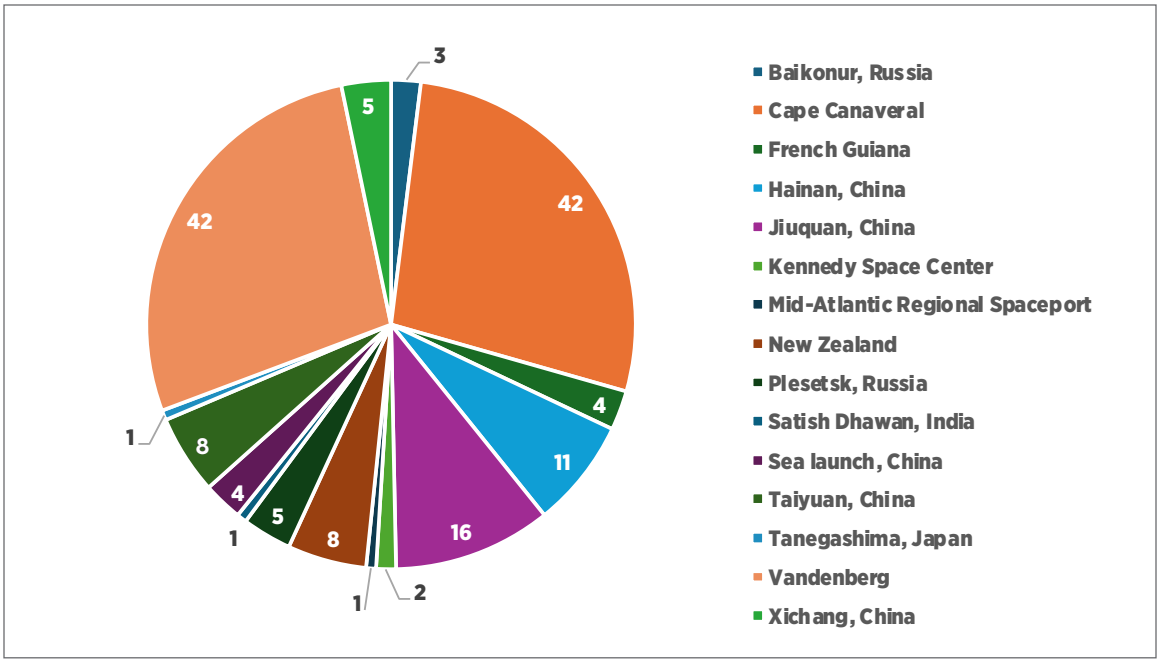
Source: Space Foundation database

Orbital Launches by Select Nation Jan. 1–June 30, 2026



Source: Space Foundation database

Orbital Launches by Spaceport Jan.1–June 30, 2026



Source: Space Foundation database

Vandenberg Space Force Base in California tied for the title of world's busiest spaceport with 42 launches in the first half of 2026. That kept pace with Florida's Cape Canaveral Space Station, which also had 42 launches through June 30. Vandenberg has traditionally been the No. 2 U.S. launch site, with Cape Canaveral's eastern expanse over the Atlantic for low Earth orbit drawing more clients. Vandenberg has seen its launches rise in recent years as SpaceX deploys Starlink satellites into polar orbits. Last year, Vandenberg hosted 66 launches.[10]

ULA, Blue Origin, and Starship Could Push Launch Pace

United Launch Alliance's Vulcan has 19 flights planned throughout 2026, including missions to launch a new generation of tracking satellites for the Space Force. It is also expected to launch the first orbital flight for Sierra Space's long-awaited Dream Chaser space plane, seen as a cargo hauler for future commercial space stations.11 Blue Origin's New Glenn, which can lift 50 tons to low Earth orbit, is also planned to return to flight this year. One of the New Glenn launch vehicles detonated during a May fueling test, wrecking a launchpad at Cape Canaveral. The company was already working on a second launch site at the Cape and announced it will be flying again in 2026.

SpaceX is expected to bring its mammoth Starship launch vehicle online this year for its first orbital flight after a dozen suborbital tests. SpaceX's 12th test flight demonstrated a variety of innovative technologies and deployed mock satellites before splashing down in the Indian Ocean in May.[12] Starship is key to the Artemis campaign and crucial for SpaceX's planned future construction of an orbital data center constellation.[13]

Rocket Lab is expected to launch its new Neutron rocket later in 2026. The company built a new pad for Neutron at the Mid-Atlantic Regional Spaceport at Wallops Island, Virginia. The Neutron is designed to carry 14 tons to low Earth orbit, a massive step up from the company's Electron, which carries less than a ton.[14] Europe's largest launch vehicle, the Ariane 6, has a series of planned launches later this year, including two missions for the European Union's meteorology arm, EUMETSAT, and planned flights to build Amazon's Leo communications constellation.[15]

The Ariane 6 is expected to launch new weather satellites for Europe later this year.
Credit: ESA

Japan has several planned flights of the Mitsubishi H3 launch vehicle this year, including a launch this fall that coincides with the closest approach between Earth and Mars. The Martian Moons Exploration Mission includes a rover and a planned sample return from the Martian moon Phobos.[16]

China has several notable flights planned for the second half of 2026, including further testing for its rival to SpaceX's Falcon. July 10, the reusable Long March 10B had its first flight and first successful booster recovery. China expects it to lift swarms of low Earth orbit satellites at rapid pace.[17] Later this year, India is expected to launch its Gaganyaan-1 crew capsule on a test flight. The mission will include an on-board robot to test systems including life support ahead of India's first crewed spaceflight.[18]

The planned launches add to a list of historic launches in 2026, including the April 1 launch of NASA's massive Space Launch System booster, which carried four astronauts on the Artemis II lunar flyby.[19]

NASA's Space Launch System takes off from Kennedy Space Center during the Artemis II mission.
Credit: NASA

Another historic flight was a rare horizontal space launch of Northrop Grumman's Pegasus vehicle on July 3, which was lifted by a specially configured aircraft from the Marshall Islands before it boosted Katalyst Space's Link spacecraft to orbit. The spacecraft was set to rendezvous with the Neil Gehrels Swift Observatory spacecraft and lift it to a safe orbit. The space telescope, launched in 2004 to study gamma ray bursts and black holes, ran out of maneuvering fuel and was on a path toward re-entry before the attempted rescue.[20]

Space Systems Command ran a June 19 mission called Victus Haze to test its rapid space launch capabilities, managing to get a satellite to space less than 17 hours after the mission was ordered, beating the service's goal of launching within 24 hours.[21] Launched aboard a Rocket Lab Electron from New Zealand, Victus Haze delivered a satellite that will be used for proximity operations tests, the Space Force announced.

Russia's space program has faded amid its war with Ukraine but claimed a notable launch in 2026 with the April 30 test of its Soyuz-5. The launch vehicle was billed by Russia as a low-cost alternative to the Falcon 9 and a replacement for its Zenit line of rockets. While not reusable, the rocket may carry 50 tons to low Earth orbit.[22] The suborbital test was deemed a success, Russian officials told the state-run Pravda news agency.

Tom Roeder is a Space Foundation senior editor. He can be reached at troeder@spacefoudation.org

ENDNOTES

Global Commercial Space Revenue Rises 13% from 2024

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