

# The Bridge

## Monthly SpaceTech Update

### SPACETECH TRAILBLAZERS FOR 2025: KEEP AN EYE ON THESE STOCKS

As the space exploration and technology sector continues to thrive, 2025 promises to be a pivotal year for investors. The rising demand for satellite communication, advancements in hyperspectral imaging, and the growing commercial focus on lunar and deep-space missions are driving significant momentum. We believe investors should focus on innovative players who are harnessing cutting-edge technologies and forming strategic partnerships to take the lead in satellite manufacturing, launch services, and space-based analytics. Further, we have identified four companies that we believe are poised to outperform and significantly benefit from the expanding SpaceTech landscape in 2025.

#### VIASAT INC (NASDAQ: VSAT)

ViaSat is focusing on high-growth areas such as defense and aviation, where it has seen substantial order wins and increased demand for advanced technologies. Its expanded deal with Lufthansa Group to equip 150+ aircraft with the European Aviation Network (EAN) strengthens its in-flight connectivity (IFC) leadership in Europe. Further, its partnerships with Deutsche Telekom and Inmarsat bolster high-bandwidth connectivity for passengers. In the defense sector, ViaSat secured key contracts, including the U.S. Air Force's Defense Experimentation Using Commercial Space Internet (DEUCSI) program and a \$568 million Indefinite Delivery/Indefinite Quantity IDIQ deal, leveraging its SATCOM and cybersecurity expertise. Partnerships with SpaceTech companies, such as Rocket Lab for NASA initiatives, position ViaSat at the forefront of industries like energy and transportation, supporting them with cutting-edge connectivity solutions. Additionally, its commercial offerings, including Jet ConneX and LAISR services, address evolving customer needs, while the ELEVATE partnership with Pulsar International strengthens its global L-band connectivity in challenging environments. With these developments, we believe ViaSat is poised to capture significant market share across aviation, defense, and commercial connectivity. Its global expansion, technological innovations, and diversified revenue streams provide resilience against economic fluctuations, setting the stage for robust growth in 2025.

Chart 1: ViaSat Satellite Roadmap



Source: Intro-act, Q2FY25 Earnings Results

In FY 2024, the company has demonstrated improved financial performance, narrowing its net loss significantly compared to previous years. ViaSat achieved record-breaking awards totaling \$4.2 billion, fueled by a 10-month contribution from the Inmarsat acquisition, marking a 47% YoY increase. The company also reported record revenue of \$4.3 billion, representing a remarkable 68% growth compared to \$2.6 billion in the previous year. Notably, **ViaSat has raised its fiscal year 2025 revenue forecast, anticipating flat to slightly increased YoY growth, driven by robust demand in its aviation and defense sectors.** Looking ahead, ViaSat's strong order backlogs in high-demand areas like aviation and government satellite communications, along with revised FY2025 capital expenditure guidance of \$1.3–\$1.4 billion, underscore its strategic focus on growth initiatives. Currently, ViaSat's share price is significantly below its historical highs. Its forward EV/EBITDA ratio of 4.25x is significantly below the industry average of 12.01x, indicating potential room for valuation growth. We believe the company's continued efforts to improve operational efficiency and leverage recent acquisitions will position it for future profitability and market share expansion.

### SPIRE GLOBAL INC (NYSE: SPIR)

**Spire Global's strategic initiatives and focus on core business areas position it favorably for continued growth in 2025.** Spire Global has announced the sale of its maritime business to Kpler for ~\$241 million, a strategic divestiture that allows the company to reduce debt and refocus on high-growth areas such as data analytics and geolocation solutions. The sale, expected to close by early 2025, positions Spire to invest more effectively in its core operations. In Q3FY24, the company reported record quarterly bookings of approximately \$40 million, driven by strong demand for its data services and analytics, particularly in weather forecasting and climate research. Additionally, the proceeds from the maritime business sale will strengthen Spire's cash position and enable further investments in growth without diluting shareholder value.

**Spire's focus on space-based data and analytics services positions it well within markets addressing climate change and global security challenges, with ownership of its satellite network and technology crucial for delivering valuable insights.** Its partnership with LatConnect60 will enhance sustainable agriculture in Southeast Asia and Australia by delivering daily soil moisture insights and actionable data for efficient water management and crop health monitoring. Spire Global is also advancing wildfire management through a NASA-backed partnership with OroraTech. Together, they aim to deploy the first and largest constellation of wildfire-monitoring satellites, providing real-time detection and enhanced response capabilities. Further, Spire's Artificial Intelligence (AI)-powered Persistence Mission is expected to revolutionize satellite operations by integrating cutting-edge AI for real-time Earth observation insights. This initiative highlights Spire's focus on advancing space technologies for environmental and commercial applications. Additionally, Spire's National Oceanic and Atmospheric Administration (NOAA) contract solidifies its role in improving global weather forecasting with precise atmospheric data. We believe these achievements position Spire Global as a leader in leveraging space technology for a sustainable and resilient future.

Spire Global experienced a substantial surge of over 50% in November 2024, pushing its share price to \$14.49 and reflecting an outstanding 90% growth over the past year. **With a P/S ratio of 2.95x and an EV/S ratio of 4.24x, both below the industry averages of 4.01x and 4.33x, respectively, the stock appears to have additional upside potential.**

## Chart 2: SPIR vs S&P 500 (1-Year Comparison)



Source: Intro-act, Trading View

## PLANET LABS (NYSE:PL)

**Planet Labs is well-positioned for continued growth in 2025 due to its strong revenue performance, improving profitability metrics, strategic government contracts, innovative technology developments, and favorable market valuation.** The company enjoys significant stability from its recurring annual contracts, which account for ~95% of its revenue, ensuring reliable cash flow. It has shown consistent revenue growth, reporting ~11% YoY growth in 3Q25. For 4Q25, the company projects quarterly revenue between \$61 million and \$63 million. For FY25, the company expects a revenue of around \$244 million to \$266 million higher than FY24 revenue of \$221 million. This growth trajectory is driven by the rising demand for satellite imagery and data analytics, positioning Planet Labs as a key player in the expanding space-based data market. We believe this trend reflects the company's solid foundation and its ability to meet increasing demand across diverse sectors. This trend of growth reflects increasing demand for satellite imagery and data analytics across various sectors.

**Planet Labs has seen strong growth in its Defense and Intelligence vertical, securing multiple seven-figure pilot programs with defense agencies that are expected to lead to large operational contracts.** Planet Labs has also renewed and expanded key contracts with government agencies, including a notable NASA contract valued at \$20 million annually. We believe such contracts not only provide stable revenue streams but also enhance the company's credibility and market position within the government sector, which is increasingly reliant on advanced Earth observation data. Additionally, Planet Labs is enhancing its data offerings by leveraging AI, attracting more clients interested in actionable insights from satellite imagery. The launch of the **Planet Insights Platform** has further boosted demand by enabling customers to easily access and build solutions with its data. The company is also preparing for the launch of new satellites, including Tanager-1, a hyperspectral satellite, and Pelican-2, which will utilize Nvidia's Jetson GPU for AI capabilities. We think these advancements are likely to open new revenue streams across various sectors, including defense and intelligence, civil government, and commercial applications.

Due to these attractive developments, PL has gained more than 60% over the past year. Despite its strong share price performance, the company continues to trade at a discount compared to its peers in the satellite and analytics sectors. With an EV/Sales and Price to Sales multiple significantly lower than the peer group averages, there is potential for upside as the market recognizes the company's growth trajectory and unique business model.

## Chart 3: PL vs S&P 500 (1-Year Comparison)



Source: Intro-act, Trading View

## GLOBAL STAR INC (NYSE: GSAT)

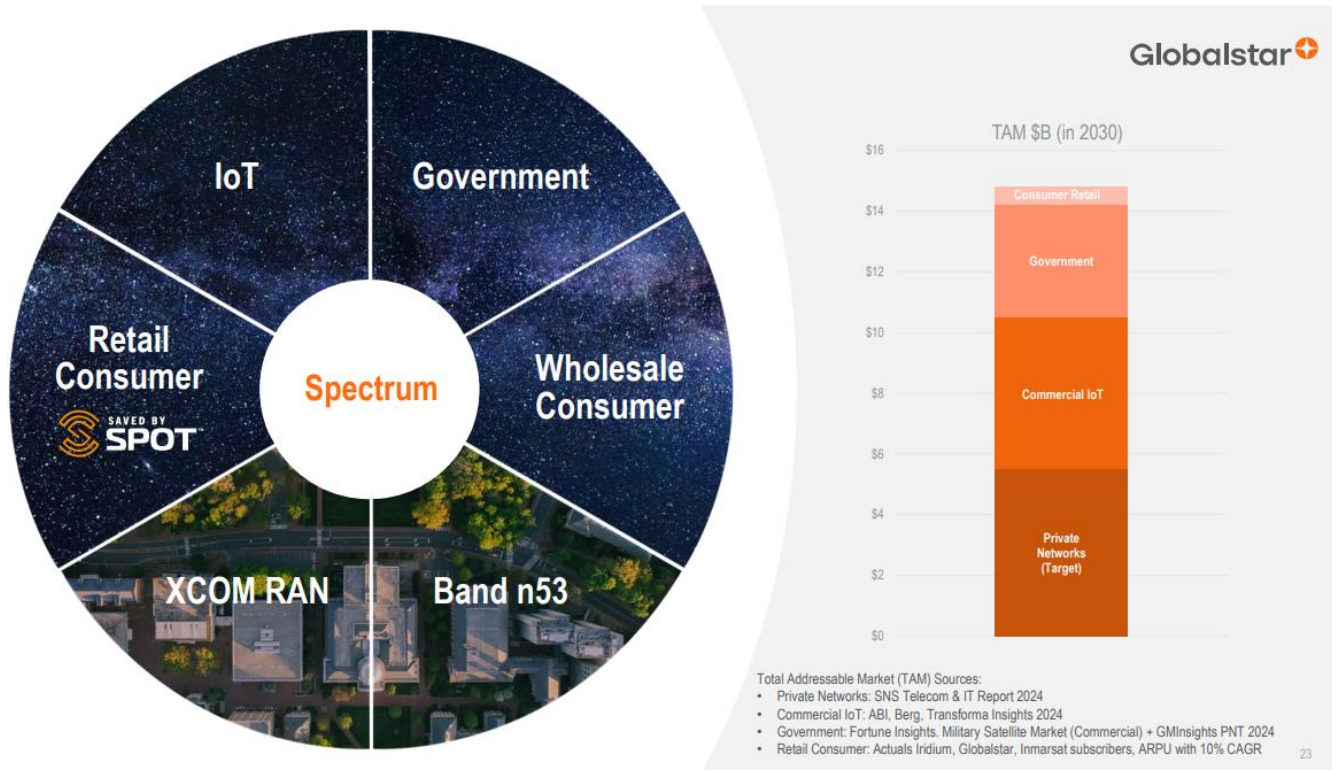
Globalstar's strong revenue growth projections, expansion into terrestrial wireless services, a growing commercial IoT segment, favorable long-term financial outlook, and strategic partnerships make it an attractive investment opportunity for 2025. In 3Q2024, the company reported a 25% YoY revenue growth, reaching \$72.3 million, driven largely by a boost in service revenue, particularly from the expansion of wholesale capacity services. In 2023, the company recorded an attractive revenue growth of 50% year-on-year. For 2025, Globalstar has provided a revenue guidance between **\$260 million and \$285 million**, reflecting an increase from its 2024 guidance of **\$245 million to \$250 million**, both higher than 2023 revenue of \$223 million. Longer term, the company expects revenue to more than double to over \$495 million, with Adjusted EBITDA margins in excess of 54% in the first full year of mobile satellite services (MSS) network service. This growth is driven by strategic investments in its terrestrial network and mobile satellite services (MSS), which we believe indicate a robust demand for its offerings.

Additionally, the company is actively deploying its **Terrestrial Wireless XCOM RAN** solutions, which offer 5G capabilities for industrial applications. We believe, this deployment, planned with a major retailer in 2025, positions Globalstar to tap into the growing market for industrial IoT and wireless communications, further enhancing its revenue potential. Globalstar has also partnered with Hawk Networks to optimize access to its **Band 53 spectrum**. This collaboration aims to enhance connectivity and streamline operations for telecom operators, which will potentially increase market efficiency and expand Globalstar's service offerings.

The company is also focusing on advancing its D2D technology, which allows smartphones to connect directly to satellites. This initiative is bolstered by a significant investment from Apple, which aims to enhance Globalstar's capabilities in providing seamless connectivity in underserved areas. In another strategic initiative, Globalstar has ordered **17 third-generation satellites** from MDA Corp., with plans to launch **eight or nine of these satellites** aboard a SpaceX Falcon 9 rocket in 2025. This expansion will increase the company's satellite constellation to **32**, enhancing capacity and coverage for its MSS solutions.

GSAT has gained ~13% in the past year and we believe Globalstar's strategic investments in expanding its satellite constellation, developing Direct to Device (D2D) communication capabilities, enhancing spectrum access through partnerships, investing in terrestrial wireless services, and improving financial positioning will contribute in the stock's favorable performance in 2025. Additionally, Globalstar is working toward a transfer of its stock listing to the Nasdaq Global Select Market in 2025, which may increase visibility and attract more institutional investors.

Chart 4: Global Star's Total Addressable Market



Source: Intro-act, Global Star Analyst and Investor Day Presentation

### INDUSTRY TRENDS

**Parker Solar Probe to make closest approach yet to the sun.** A NASA spacecraft is performing better than expected as it makes its closest approach to the sun this week. Parker Solar Probe will pass 6.1 million kilometers from the sun at 6:53 a.m. Eastern Dec. 24, the closest approach to the sun by this or any other spacecraft. At the time of closest approach, the spacecraft will be traveling 191 kilometers per second. The spacecraft launched in 2018 and used a series of gravity-assist flybys of Venus to lower its perihelion. [Read more](#) (*Space News*)

**U.S. military seeks commercial space technology for strategic edge.** The U.S. Department of Defense is stepping up efforts to partner with emerging commercial space startups, viewing their dual-use technologies as crucial for maintaining military advantages. The push comes as China makes significant investments in its own commercial space sector, prompting concerns about technological competition between the world's two largest economies. Maj. Gen. Steven Butow, director of the Defense Innovation Unit's space portfolio, emphasizes the importance of economic rather than just military competition with China. [Read more](#) (*Space News*)

#### Chart 5: GPS III SV-07 satellite made by Lockheed Martin



Source: *Intro-act*, *Space News*

**U.S. Space Force to test laser communications on a GPS satellite.** The U.S. Space Force and Lockheed Martin plan to conduct a first-ever laser communications test from a Global Positioning System (GPS) satellite. If successful, this technology could enhance the precision and efficiency of the navigation system used by billions worldwide. The satellite will carry an optical communications terminal developed by German aerospace manufacturer Tesat-Spacecom through its U.S. subsidiary, Tesat Government. [Read more](#) (*Space News*)

**Space Force plans new “Futures Command” amid pressure to speed up modernization.** Gen. Chance Saltzman, the Space Force's top officer, announced that the service will establish a new Futures Command in early 2025. The Futures Command will expand on work currently done by the Space Warfighting Analysis Center (SWAC), adding new organizations focused on threat analysis and capability planning to determine what forces and systems the Space Force needs to counter emerging challenges. [Read more](#) (*Space News*)

**New Commercial Artemis moon rovers undergo testing at NASA.** Through NASA's Artemis campaign, astronauts will land on the lunar surface and use a new generation of spacesuits and rovers as they live, work, and conduct

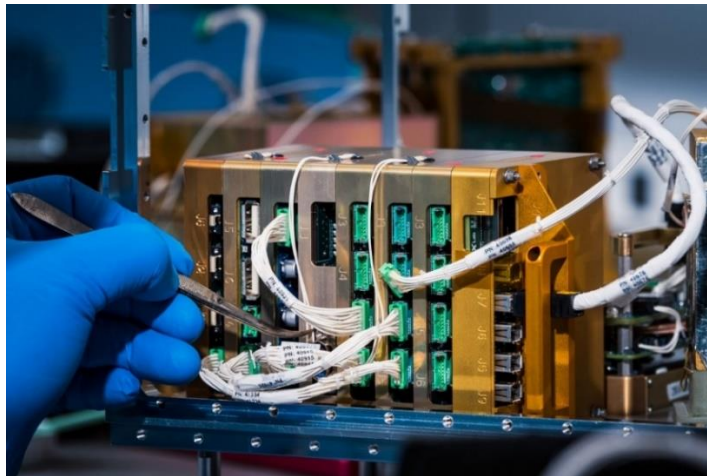
science in the Moon's South Pole region, exploring more of the lunar surface than ever before. Recently, the agency completed the first round of testing on three commercially owned and developed LTVs (Lunar Terrain Vehicle) from Intuitive Machines, Lunar Outpost, and Venturi Astrolab at NASA's Johnson Space Center in Houston. [Read more](#) (NASA)

**NASA releases long-term strategy for robotic Mars exploration.** NASA has refined its strategy for future robotic exploration of Mars, advocating for a regular cadence of smaller missions to answer key questions in advance of human missions. The plan focuses on a "science-driven robotic Mars program" separate from Mars Sample Return, which is going through a separate agency review on ways to reduce its cost and schedule, which is expected to wrap up before the end of the year. It does not include any future human missions to the planet. [Read more](#) (Space News)

**EU signs \$11B deal for sovereign satellite constellation to rival Musk's Starlink.** The European Union is forging ahead with plans for a constellation of Internet satellites to rival Elon Musk-owned Starlink, after signing a €10.6 billion (\$11.1 billion) deal to launch nearly 300 satellites into Low- and Medium-Earth Orbits by 2030. The bloc wants the spacetech to boost its digital sovereignty by providing secure comms to governments. Musk's Starlink, meanwhile, already has some 6,000 satellites in orbit, recently passed 4 million subscribers, and has major deals with the likes of Royal Caribbean and United Airlines. [Read more](#) (Tech Crunch)

### Chart 6: Engineers Assemble Payloads on Slingshot 1, an Experiment Using Modular and Autonomous Technologies

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Source: Intro-act, Space News, Aerospace Corp

**Space Force to test modular satellite technology in upcoming mission.** The U.S. Space Force plans to use a "plug and play" satellite interface developed by The Aerospace Corporation for an upcoming mission under its Tactically Responsive Space (TacRS) program. The program seeks to validate technologies and tactics to shorten the timeline for launching payloads, such as surveillance sensors, into orbit. Handle is a standardized electrical interface designed to integrate satellite payloads seamlessly into a standardized modular architecture, which simplifies the integration of payloads onto satellite platforms. [Read more](#) (Space News)

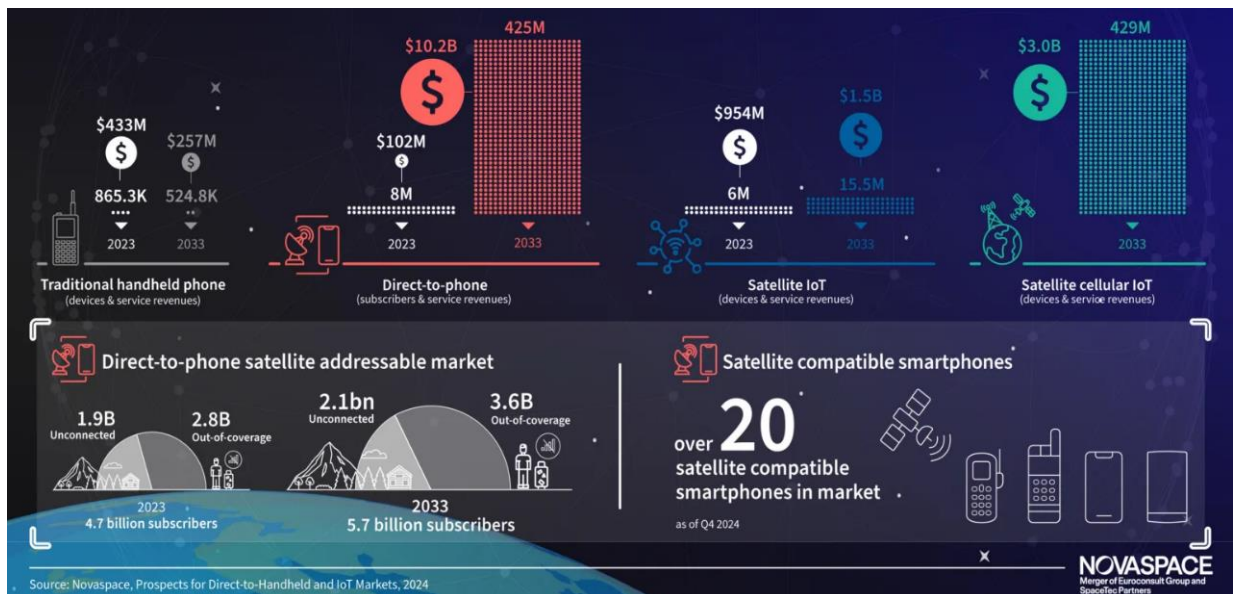
**Spacecoin deploys first satellite for decentralized space connectivity.** Spacecoin said it is successfully communicating with its recently launched debut connectivity satellite, designed to test technology for a decentralized space-based network shared by multiple investors. The venture aims to start testing its CTC-0 small satellite early next year, initially demonstrating space-enabled text messaging to a specialized handheld antenna but ultimately directly to standard smartphones. [Read more](#) (Space News)

**Expanded AI Model with global data enhances Earth science applications.** NASA, IBM, and Forschungszentrum Jülich have released an expanded version of the open-source Prithvi Geospatial artificial intelligence (AI) foundation model to support a broader range of geographical applications. Now, with the inclusion of global data, the foundation model can support tracking changes in land use, monitoring disasters, and predicting crop yields worldwide. The Prithvi Geospatial foundation model, first released in August 2023 by NASA and IBM, is pre-trained on NASA's Harmonized Landsat and Sentinel-2 (HLS) dataset and learns by filling in masked information. [Read more](#) (NASA)

**NASA outlines latest Moon to Mars plans in 2024 architecture update.** NASA has updated its Moon to Mars exploration blueprint, outlining plans for long-term lunar exploration under the Artemis campaign as a foundation for future crewed Mars missions. Released updates include a revised Architecture Definition Document detailing technical strategies, an executive overview, and 12 new white papers on critical Moon to Mars topics, following an Architecture Concept Review. [Read more](#) (NASA)

**Direct-to-Device satellite services drive the next wave of global connectivity.** Novaspace, a leader in space consulting and market intelligence, has released the 9th edition of its Prospects for Direct-to-Handheld and IoT Markets report. The study predicts the direct-to-device satellite connectivity market will grow from \$1.5 billion today to nearly \$15 billion by 2033, driven by technological advancements and expanding satellite networks. Key insights include 425 million monthly users expected by 2033, \$42 billion in cumulative direct-to-phone service revenues over the next decade, and over \$1.7 billion invested this year, supported by 20+ satellite-compatible smartphones. [Read more](#) (Nova Space)

**Chart 7: Advancements in Direct to Device Satellite Connectivity Show Growing Promise, yet the Market Remains in its Early Stages of Development**



Source: Intro-act, Novaspace

**NASA sees progress on Starlab commercial space station development.** A NASA-funded commercial space station, Starlab, recently completed four key developmental milestones, marking substantial progress in the station's design and operational readiness. The four milestones focused on reviews of the habitat structural test article preliminary design, systems integration, integrated operations, and a habitat structural test plan. The commercial space station is designed to launch on a single flight and includes a large habitation and laboratory module, with a smaller service module for power and propulsion. [Read more](#) (NASA)

**NASA finalizes strategy for sustaining human presence in LEO.** As part of the agency's efforts to enable broader use of the space environment, NASA has released its final goals and objectives for LEO, defining the long-term approach toward advancing microgravity science, technology, and exploration for the benefit of all. Developed with input from a wide range of stakeholders, NASA's Low Earth Orbit Microgravity Strategy will guide the agency toward the next generation of continuous human presence in orbit, enable greater economic growth, and maintain international partnerships. [Read more](#) (NASA)

## SPACETECH NEWS

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### GOVERNMENT POLICIES

**NASA partners with US patent and trademark office to advance technology transfer.** With a shared commitment to fostering U.S. economic growth that benefits the American public, NASA's Space Technology Mission Directorate and the Department of Commerce's U.S. Patent and Trademark Office (USPTO) have signed a memorandum of understanding to strengthen collaboration in transferring federally-developed technology into the private sector, known as tech transfer. [Read more](#) (NASA)

**Jared Isaacman makes first public remarks since nomination for NASA Administrator.** Jared Isaacman, nominated by President-Elect Donald Trump as NASA's potential 15th Administrator, delivered his first public address at the Space Force Association's Spacepower Conference in Orlando. While the focus was on his recent spaceflight, his remarks gained attention in light of his nomination. During the 50-minute discussion, Isaacman praised SpaceX for its Starship development and Crew Dragon missions while also commending other commercial launch providers. [Read more](#) (*Spaceflight Now*)

### CAPITAL MARKETS

**With new funding, FibreCoat targets space and defense markets.** German materials technology startup FibreCoat raised nearly 20 million euros (\$21 million) in a Series B funding round. NewSpace Capital and Goose Capital jointly led the round. Prior to establishing the company in 2020, FibreCoat's founders patented methods for coating fibers with metals and plastics based on research and development at RWTH Aachen University's Institute for Textile Technology, where they worked. [Read more](#) (*Space News*)

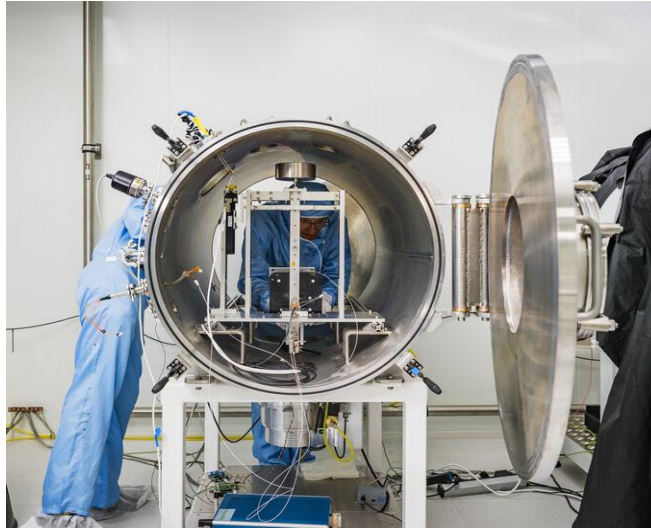
**Fleet Space raises \$100 million to advance mineral exploration on Earth and beyond.** Fleet Space Technologies has raised \$100 million to expand its satellite-based mineral exploration capabilities and take the technology to the moon. Teachers' Venture Growth, part of the Ontario Teachers' Pension Plan, led the nine-year-old company's Series D funding round. The latest investment brings Fleet's total venture funding to more than \$165 million and values the company at \$525 million, more than double its valuation from a Series C round last year. [Read more](#) (*Space News*)

**Orbite to expand luxury space training with Series A funding.** Spaceflight training startup Orbite has raised \$4 million to expand its business, which combines astronaut training with luxury vacations. After raising \$4 million in a Series A funding round, Seattle-based Orbite unveiled its Experience Train Fly Program. Orbit's early pilot projects revealed demand for elements of astronaut training as part of a luxury vacation. With the latest investment, Orbite intends to fund early development of its planned Spaceflight Gateway campus in Florida. [Read more](#) (*Space News*)

**Ion-X raises \$13.67 million to produce electro spray thrusters.** French propulsion startup Ion-X secured €13 million (\$13.67 million) in a Series A funding round. A spinoff of the French National Center for Scientific Research and startup studio Technofounders, Ion-X plans to use the investment to fast-track the development and scale-up production of its electro spray thrusters designed for small satellites and satellite constellations. [Read more](#) (*Space News*)

**Chart 8: Installation of an Ion-X Thruster for Testing in a Vacuum Chamber**

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Source: Intro-act, Space News, Cyril Fresillon C2N Ion-X CNRS Images

**Cofactr raises money to enhance supply chain and logistics platform.** New York startup Cofactr raised \$17.2 million in a series A investment round. With the new funding, Cofactr will hire engineering and customer-service personnel to support its supply chain and logistics management platform designed for high-compliance industries like aerospace. Stoke Space, one of Cofactr's early customers, helped the founders recognize the rigorous data sovereignty, traceability, and quality-management requirements space companies face. [Read more](#) (*Space News*)

**Iceye raises additional \$65 million.** Iceye has added \$65 million to a funding round it announced in April, bringing the total amount raised by the synthetic aperture radar (SAR) satellite imaging company to more than \$500 million. The company announced Dec. 18 an extension to a Series E round announced in April that raised \$93 million. Solidium Oy, the Finnish sovereign wealth fund that led the April round, participated in this extension, along with BlackRock, Seraphim, Plio Limited and Christo Georgiev, a fintech entrepreneur. [Read more](#) (*Space News*)

**SpinLaunch raises \$11M but hoped to raise much more.** Space startup SpinLaunch is back in fundraising mode, though it initially aimed for a more ambitious target earlier this year, according to a source cited by *TechCrunch*. The company has secured \$11.5 million so far from a planned \$25 million round, as revealed in a [U.S. Securities and Exchange Commission filing](#). While SpinLaunch confirmed the funding to *TechCrunch*, it declined to disclose the amount raised. The startup closed a \$71 million Series B round in 2022. [Read more](#) (*Tech Crunch*)

**Boryung invests \$10 million in Intuitive Machines.** South Korea's Boryung Corp. said on Friday it bought \$10 million in shares of US-based lunar lander company Intuitive Machines (IM) to expand its space healthcare business. The company participated in Intuitive Machines' public rights issue offering of \$65 million worth of shares. It secured 952,381 Class A common stocks of IM. Intuitive Machines supplies space products and services to support sustained robotic and human exploration of the Moon, Mars and other planets. [Read more](#) (*KED Global*)

### COMPANY NEWS AND EARNINGS

**Sierra Space partners with companies for space-based semiconductor manufacturing.** Sierra Space announced agreements with two companies to study the use of its Dream Chaser vehicle and space station technology to support microgravity manufacturing. Sierra Space said it signed memoranda of understanding with Astral Materials and Space Forge Inc., the U.S. subsidiary of U.K.-based Space Forge Ltd., to examine the use of Sierra Space's technology for semiconductor development in space. Both Astral Materials and Space Forge are early-stage companies pursuing technologies to manufacture semiconductors in microgravity. [Read more](#) (*Space News*)

**Maxar partners with Satellogic to enhance monitoring for defense agencies.** Satellite imagery provider Maxar Intelligence has struck a strategic partnership with another Earth observation firm, Satellogic—a move aimed at bolstering geospatial intelligence capabilities for national security agencies. The exclusive agreement announced allows Maxar to task, collect and distribute imagery from Satellogic's satellite constellation. This deal in the competitive Earth observation market highlights a growing trend of collaboration among satellite imaging companies to meet increasingly sophisticated government intelligence needs. [Read more](#) (*Space News*)

**Lockheed Martin to launch 5G demonstration on Firefly rocket.** Lockheed Martin announced plans to launch its Tactical Satellite (TacSat) aboard Firefly Aerospace's Alpha rocket in 2025, marking the second mission in a multi-launch agreement between the aerospace giant and the upstart rocket company. The mission, funded internally by Lockheed Martin, aims to showcase cutting-edge technologies targeting the defense market. TacSat, a compact spacecraft about the size of a mini-fridge, is built on a Terran Orbital Zuma bus—a platform Lockheed Martin also employs for the Space Development Agency's military network. [Read more](#) (*Space News*)

**AST Space Mobile locks in 10-year Vodafone commercial agreement.** AST Space Mobile's shares soared after the direct-to-smartphone satellite operator announced a 10-year commercial arrangement with Vodafone, one of Europe's largest telcos with a major presence across Africa. Vodafone ordered a gateway as part of the deal to route data AST Space Mobile satellites would get from smartphones outside terrestrial coverage into the telco's network and back to the user, enabling broadband and other services beyond the reach of cell towers. [Read more](#) (*Space News*)

**Rocket Lab launches sixth Synspective radar imaging satellite.** A Rocket Lab Electron successfully launched a radar imaging satellite for Synspective Dec. 21, days after that Japanese company lifted off on the stock market. The launch was the sixth StriX satellite for Synspective, all on Electron rockets. The company signed a contract with Rocket Lab in June for 10 additional Electron launches from 2025 through 2027. Rocket Lab said at the time that the contract, whose value was undisclosed, was the largest launch contract it had signed to date. [Read more](#) (*Space News*)

**Vast signs agreement with SpaceX for private astronaut missions to the ISS.** Commercial space station developer Vast Space has signed a deal with SpaceX for two private astronaut missions to the International Space Station, pending NASA approval. Vast announced that it completed an agreement with SpaceX to fly two Crew Dragon spacecraft to the ISS on what NASA calls private astronaut missions, or PAMs. These are short-duration missions to the station and serve as a stepping-stone to future commercial space stations. [Read more](#) (*Space News*)

**Maxar signs \$35 million satellite intelligence deals in Asia-Pacific region.** Maxar Intelligence has secured contracts worth \$35 million to provide satellite imagery and analytics services to two undisclosed Asia-Pacific governments. The deals will give these governments access to Maxar's newly deployed WorldView Legion satellites, which provide high-resolution Earth observation imagery, as well as synthetic aperture radar (SAR) data from partner company Umbra. SAR technology allows for ground imaging through cloud cover and darkness. [Read more](#) (*Space News*)

**Axiom Space revises space station assembly plans.** Axiom Space is revising the assembly sequence for its commercial space station, a move it says will allow it to get to a free-flying station sooner while addressing NASA's needs to prepare for the deorbiting of the International Space Station. The company announced a revised sequence of modules it will deploy through the end of the decade to assemble its Axiom Station, starting with a Payload Power Thermal Module (PPTM) that will be installed on the ISS. Axiom originally planned to install a habitat module on the ISS in late 2026, followed by a second habitat module and a research module. [Read more](#) (*Space News*)

**T-Mobile opens beta for Starlink smartphone connectivity.** T-Mobile has opened beta registration for Starlink's direct-to-smartphone satellite service, enabling text messaging early next year on select newer devices in most U.S. cellular dead zones with a clear sky view. The free beta program is available to all T-Mobile customers with compatible devices and postpaid voice plans, the telco announced Dec. 16, although first responders will receive priority access

due to limited initial capacity. The company declined to detail capacity and device restrictions but said the beta program would gradually expand to more devices via software updates. [Read more](#) (Space News)

**Starlink set to hit \$11.8 billion revenue in 2025, boosted by military contracts.** SpaceX's satellite Internet service, Starlink, is projected to reach \$11.8 billion in revenue next year, driven by strong consumer demand and growing U.S. military contracts, according to a new market analysis. The forecast, released by the market research firm Quilty Space, represents a substantial increase from the estimated \$7.7 billion in revenue for 2024, highlighting Starlink's rapid growth trajectory in the satellite communications market. Most notably, Quilty Space revealed a previously undisclosed \$537 million Pentagon contract to provide services for Ukraine's military forces through 2027. [Read more](#) (Space News)

**True Anomaly achieves milestone with Jackal satellite deployment.** Space technology startup True Anomaly announced a key milestone after successfully deploying and establishing communication with its Jackal satellite on its second mission. True Anomaly is seeking to carve out a niche in the defense and national security market with spacecraft designed for military orbital operations and space domain awareness. The Jackal satellite launched on December 21 on SpaceX's Bandwagon-2 rideshare mission was the company's third spacecraft sent to orbit. [Read more](#) (Space News)

### Chart 9: True Anomaly's GravityWorks Factory



Source: Intro-act, Space News, True Anomaly

**Near Space Labs launches fleet of AI-powered balloon robots to track Earth climate risks.** Near Space Labs, a New York-based startup, has deployed a network of high-altitude balloons equipped with advanced robotic cameras to capture high-resolution images of disaster-prone neighborhoods across the United States. With this enhanced imagery, the startup said it aims to accelerate the work of insurance companies that rely on aerial data to assess property risks and respond to damage caused by extreme weather events. [Read more](#) (Space.com)

**SpaceX launches first two SES O3b mPOWER satellites with upgrades to address power issues seen on earlier spacecraft.** SpaceX completed its third Falcon 9 launch in less than 24 hours with a launch for one of its oldest customers. SES began work on the O3b mPOWER satellites in partnership with the manufacturer, Boeing, in 2017 when it ordered the construction of seven initial Medium Earth Orbit (MEO) satellites. It began signing up customers for the on-orbit broadband service in 2020 with the likes of Carnival Corporation for its cruise ships and Orange, which supports Internet service in Africa. [Read more](#) (Spaceflight Now)

**Airbus awarded Eutelsat contract to build OneWeb low orbit constellation extension.** Airbus Defence and Space has been awarded a contract by Eutelsat to build the extension of its OneWeb Low Earth Orbit (LEO) constellation. Under the contract signed between the two companies, Airbus will build the first batches of the extension, totaling 100 satellites, with delivery targeted from the end of 2026, ensuring continuity and enhancement of service for current and future customers. Alain Fauré, Head of Space Systems at Airbus Defence and Space said: “Airbus manufactured all of the current OneWeb satellite fleet.” [Read more](#) (*Airbus*)

**ispace and Magna Petra agree to future resources exploration on the Moon’s surface.** ispace (TOKYO: 9348), a global lunar exploration company, and Magna Petra, the first lunar resources company engaged in the prospecting, extraction, and return to Earth of Helium-3 isotopes from the lunar surface, have agreed to collaborate on future missions to the lunar surface, the two companies announced. Under terms of the memorandum of understanding, the two companies have agreed to collaborate on the development of a lunar economy that provides terrestrial economic value via non-destructive, sustainable harvesting of lunar surface resources. [Read more](#) (*ispace*)

**Kepler formally shifts strategy for optical data relay network.** Kepler Communications, a company building Internet connectivity for outer space, today announced that it has petitioned for changes with the Federal Communications Commission (FCC) to consolidate its constellation size to better suit the updated optical data relay infrastructure. To comply with FCC regulations, a company must submit a request to the FCC if it intends to make substantive changes to a licensed system, such as changes to the constellation size or to the size and weight of the individual satellite. [Read more](#) (*Global Newswire*)

### GOVERNMENT CONTRACTS

**U.S. Air Force awards Varda \$48 million to test payloads on reentry capsules.** Varda Space Industries secured a \$48 million contract from the U.S. Air Force Research Laboratory to test military payloads on the company’s reentry capsules. Varda developed a factory-in-orbit spacecraft—a compact, 120-kilogram satellite engineered to produce high-value materials such as pharmaceuticals in zero-gravity conditions. The materials are returned to Earth in a capsule built with advanced thermal protection materials developed by NASA to withstand reentry. [Read more](#) (*Space News*)

**DLR awards multiyear contract to constellr.** German thermal data startup constellr announced a multiyear contract with the German Space Agency DLR. Under the contract, constellr will begin supplying 30-meter native resolution imagery to researchers working with the German Space Agency. The value of the contract was not disclosed. Constellr CEO Max Gulde said in a statement that the contract “represents a major step forward in our mission to provide high-quality thermal data to the scientific community”. [Read more](#) (*Space News*)

**Turion Space secures \$32.6 million military contract for in-orbit space surveillance.** Startup Turion Space has been awarded a \$32.6 million contract by the U.S. Space Force to launch three small satellites designed to monitor and track objects such as space debris. The contract is part of a Strategic Financing Initiative (STRATFI) agreement from SpaceWERX—the Space Force’s technology innovation arm—that matches government funds with private investment to accelerate the development and deployment of commercial space systems. [Read more](#) (*Space News*)

**K2 Space lands \$30 million military contract for “Mega” satellite mission.** K2 Space has secured a \$30 million contract from the U.S. Space Force to launch its first Mega Class satellite, a milestone for the startup founded just two years ago. The deal is part of the Strategic Financing Initiative (STRATFI) program, which matches government funds with private investment to bolster cutting-edge space technologies. With contributions from the Space Force’s SpaceWERX organization, the Air Force Research Laboratory, and the Pentagon’s Space Test Program, the total value of the agreement amounts to \$60 million. [Read more](#) (*Space News*)

**Muon space wins SpaceWERX contract for space-based environmental monitoring.** Muon Space has received a SpaceWERX contract to advance space-based environmental monitoring capabilities. The award, announced Dec. 5, will support Muon Space’s development of a multi-mission, multispectral electro-optical/infrared (EO/IR) instrument.

Muon Space said its FireSat constellation will be a dual-use mission that supports the U.S. Department of Defense's space-based environmental monitoring needs and also monitors wildfires. FireSat is a 50-satellite constellation in the works that will operate in LEO. [Read more](#) (*Via Satellite*)

### Chart 10: Muon Space is Developing An EO/IR Instrument will Provide Comprehensive Cloud Characterization and Theater Weather Imagery



Source: Intro-act, *Via Satellite*, Muon Space

**Firefly wins NASA contract for third lunar lander mission.** NASA selected Firefly Aerospace for a third lunar lander mission, this one including a rover, to launch in 2028. NASA announced that it awarded Firefly a task order through its Commercial Lunar Payload Services (CLPS) program for a mission to the Gruithuisen Domes region on the near side of the moon. The task order is valued at \$179.6 million. The mission, using Firefly's Blue Ghost lander, will deliver to the moon six payloads to perform imaging, spectroscopy and other observations, as well as sample lunar regolith. [Read more](#) (*Space News*)

**NASA selects four companies for commercial communications services.** NASA announced that it awarded task orders to Intuitive Machines, Kongsberg Satellite Services (KSAT), SSC Space U.S. and ViaSat to provide services to support NASA's Near Space Network (NSN), which provides communications for missions extending out to two million kilometers from the Earth. NASA did not disclose the value of the task orders but said they will cover services from February 2025 to September 2029, with an option to continue services through September 2034. [Read more](#) (*Space News*)

**NASA awards \$11.5 million to help design the aircraft of tomorrow.** NASA is looking to develop a new generation of low-emission commercial aircraft that will offer a more efficient and sustainable mode of travel. The space agency has commissioned five new design studies as part of its Advanced Aircraft Concepts for Environmental Sustainability (AACES) 2050 initiative. The organizations contributing to new airliner design concepts include Boeing's Aurora Flight Sciences, the aerospace company Electra, the Georgia Institute of Technology, the aviation startup JetZero and Pratt & Whitney, according to a statement from NASA. [Read more](#) (*Space.com*)

**NASA awards contract for NOAA's next generation space weather program.** NASA, on behalf of the National Oceanic and Atmospheric Administration (NOAA), has selected Southwest Research Institute of San Antonio to build the Next-Generation Space Weather Magnetometer for the Lagrange 1 Series project as a part of NOAA's Space Weather Next program. This cost-plus-fixed-fee contract is valued at approximately \$26.1 million and includes the development of two magnetometer instruments. The anticipated period of performance is from December 2024 through January 2034. [Read more](#) (*NASA*)

## SPACETECH FUNDING ACTIVITY

Chart 11: Recent Funding Activity in the SpaceTech Sector (December 2024)

Company	Fund Raise (\$ Mn)	Round	Use of Funds	Investors
Fleet Space	100	Series D	To expand its satellite-based mineral exploration capabilities and take the technology to the moon.	Teachers' Venture Growth, part of the Ontario Teachers' Pension Plan
Iceye	65	Extension to Series E Round	The new funding, a mix of debt and equity, will support continued expansion of Iceye's constellation of SAR satellites as well as its intelligence, surveillance, and reconnaissance (ISR) platform and related systems.	Solidium Oy, the Finnish sovereign wealth fund, BlackRock, Seraphim, Plio Limited and Christo Georgiev, a fintech entrepreneur
FibreCoat	21	Series B	With the latest round of investment, FibreCoat will apply the insights gained from terrestrial applications of our material to work with the space industry.	NewSpace Capital and Goose Capital
Cofactr	17.2	Series A	Hire engineering and customer-service personnel to support its supply chain and logistics management platform designed for high-compliance industries like aerospace.	Bain Capital, Y Combinator, Floating Point Ventures, Broom and DNX
Ion – X	13.67	Series A	Plans to accelerate development and expand production of electro-spray thrusters for small satellites and constellations	Not Disclosed
Orbite	4	Series A	Orbite intends to fund early development of its planned Spaceflight Gateway campus in Florida.	Not Disclosed

Source: Intro-act, Multiple Web Source

## SPACETECH GOVERNMENT CONTRACT AWARDS

Chart 12: Government Contracts and Grants (December 2024)

Awardee Company	Awarding Agency	Country	Contract Value (in \$ mn)	Project / Program
Varda Space	U.S. Air Force Research Laboratory	U. S	48	To test military payloads on the company's reentry capsules
Constellr	German Space Agency DLR	Germany	Not Disclosed	Constellr will begin supplying 30-meter native resolution imagery to researchers working with the German Space Agency
Turion Space	U.S. Space Force	U. S	32.6	To launch three small satellites designed to monitor and track objects such as space debris
Firefly	NASA	U. S	179.6	Commercial Lunar Payload Services (CLPS) program for a mission to the Gruithuisen Domes region on the near side of the moon
Intuitive Machines, Kongsberg Satellite Services (KSAT), SSC Space U.S., Viasat	NASA	U. S	4820	to provide services to support NASA's Near Space Network (NSN), which provides communications for missions extending out to two million kilometers from the Earth.
Boeing's Aurora Flight Sciences, the aerospace company Electra, the Georgia Institute of Technology, the aviation startup JetZero and Pratt & Whitney	NASA	U. S	11.5	NASA is looking to develop a new generation of low-emission commercial aircraft that will offer a more efficient and sustainable mode of travel.
Southwest Research Institute of San Antonio	National Oceanic and Atmospheric Administration (NOAA)	U. S	26.1	To build the Next-Generation Space Weather Magnetometer for the Lagrange 1 Series project as a part of NOAA's Space Weather Next program.
Muon Space	SpaceWERX	U. S	Not Disclosed	Muon Space said its FireSat constellation will be a dual-use mission that supports the U.S. Department of Defense's space-based environmental monitoring needs and monitors wildfires. FireSat is a 50-satellite constellation in the works that will operate in Low-Earth Orbit (LEO).

Source: Intro-act, Multiple Web Sources

## SPACETECH ETFs

### ARK Space Exploration & Innovation ETF (ARKX)

<b>Closing Price (01/07/25)</b>	<b>\$20.84</b>	<b>1-Week NAV Change</b>	<b>4.16%</b>	<b>NAV Change (YTD)</b>	<b>5.07%</b>
<b>AUM (as of 01/07/25)</b>	<b>\$286.94 Mn</b>	<b>Fund Inception</b>	<b>3/30/2021</b>	<b>Expense Ratio</b>	<b>0.75%</b>

ARKX is an actively managed Exchange Traded Fund (ETF) that seeks long-term growth of capital by investing under normal circumstances primarily (at least 80% of its assets) in domestic and foreign equity securities of companies that are engaged in the Fund’s investment theme of Space Exploration and Innovation. The advisor defines “Space Exploration” as leading, enabling, or benefitting from technologically enabled products and/or services that occur beyond the surface of the Earth, including 1) Orbital Aerospace Companies: companies that launch, make, service, or operate platforms in orbital space, including satellites and launch vehicles; 2) Suborbital Aerospace Companies: companies that launch, make, service, or operate platforms in suborbital space; 3) Enabling Technologies Companies: companies that develop technologies used by Space Exploration-related companies for successful value-add aerospace operations, including AI, robotics, 3D printing, materials, and energy storage; and 4) Aerospace Beneficiary Companies: companies whose operations stand to benefit from aerospace activities, including agriculture, Internet access, GPS, construction, imaging, drones, air taxis, and electric aviation vehicles.”

### Monthly Market Performance (Month Ending 01/07/2025)

One Month	Three Months	Six Months	YTD	One Year	Inception
2.65%	25.44%	34.93%	5.07%	42.94%	-1.91%

### Quarterly Market Performance (Quarter Ending 12/31/2024)

One Month	Three Months	Six Months	YTD	One Year	Inception
-3.22%	20.42%	30.83%	30.82%	30.82%	-20.15%

### Top 10 Holdings (Updated as of 01/07/25)

Ticker	Company	% of Funds	Market Value (\$)
RKLB	ROCKET LAB USA INC	10.08%	\$31,025,260.80
KTOS	KRATOS DEFENSE & SECURITY	9.22%	\$28,375,879.01
IRDM	IRIDIUM COMMUNICATIONS INC	8.38%	\$25,816,088.25
ACHR	ARCHER AVIATION INC-A	8.12%	\$25,004,303.90
TER	TERADYNE INC	6.95%	\$21,394,240.00
TRMB	TRIMBLE INC	5.88%	\$18,096,727.50
AVAV	AEROVIRONMENT INC	4.87%	\$15,007,655.53
PLTR	PALANTIR TECHNOLOGIES INC-A	4.16%	\$12,821,065.92
AMZN	AMAZON.COM INC	4.05%	\$12,463,923.60
BLDE	BLADE AIR MOBILITY INC	3.88%	\$11,933,612.61

For more information on ARKX visit: <https://ark-funds.com/funds/arkx/>

## SPACETECH ETFs

### Procure Space ETF (UFO)

<b>Closing Price (01/07/25)</b>	<b>\$ 24.35</b>	<b>1-Week NAV Change</b>	<b>1.28%</b>	<b>NAV Change (YTD)</b>	<b>1.28%</b>
<b>AUM (as of 01/07/25)</b>	<b>\$ 49.67 Mn</b>	<b>Fund Inception</b>	<b>4/10/2019</b>	<b>Expense Ratio</b>	<b>0.75%</b>

The Procure Space ETF (UFO) is comprised of a portfolio of companies involved in space-related industries. UFO is an exchange traded fund (ETF) seeking investment results that correspond generally to the performance, before fund fees and expenses, of the S-Network Space Index (SPACE) developed by S-Network Global Indexes. Although there is no legal definition of “space,” a commonly accepted definition is that the edge of space begins at the Kármán Line, which is 100 kilometers (62 miles) above the Earth’s surface.

### Monthly Market Performance (Month Ending 01/07/25)

One Month	Three Months	Six Months	YTD	One Year	Inception
1.48%	25.42%	43.97%	2.2%	33.84%	-6.9%

### Quarterly Market Performance (Quarter Ending 12/31/2024)

One Month	Three Months	Six Months	YTD	One Year	Inception
-3.93%	20.87%	45.03%	27.92%	27.92%	-6.36%

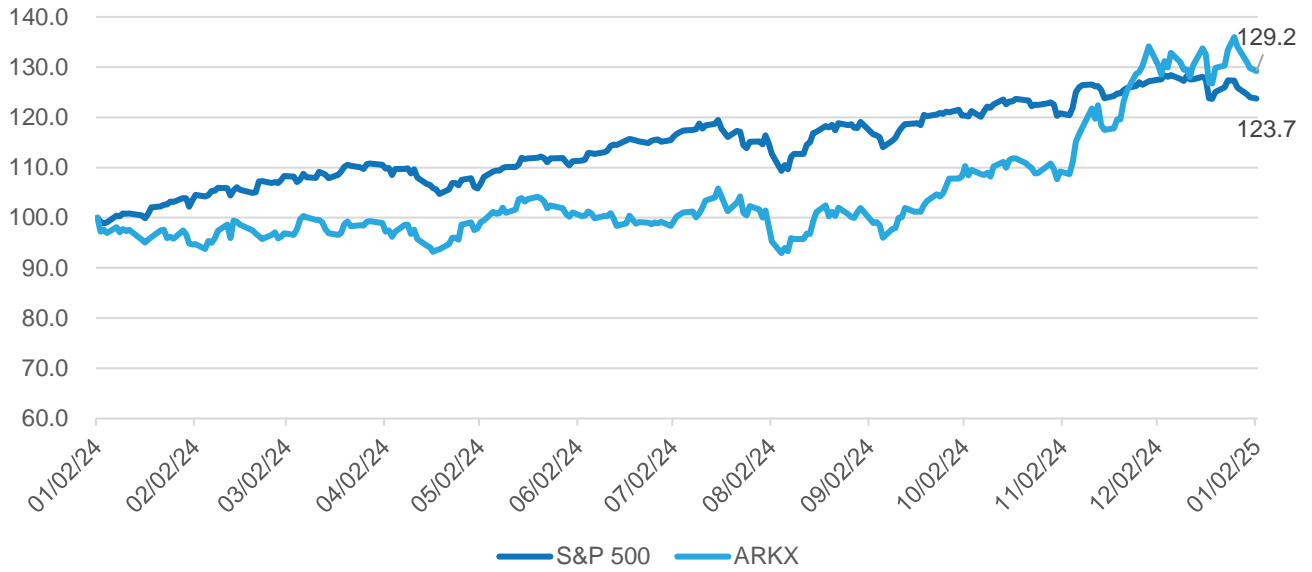
### Top 10 Holdings (Updated as of 01/07/24)

Ticker	Company	% of Funds	Market Value (\$ billion)
GRMN	Garmin Ltd.	4.41%	40.047
RKLB	Rocket Lab USA, Inc.	5.15%	13.973
SATS	EchoStar Corporation Class A	4.52%	6.503
GSAT	Globalstar, Inc.	4.93%	4.054
MDA	MDA Space Ltd	4.59%	3.396
IRDM	Iridium Communications Inc.	4.52%	3.388
LUNR	Intuitive Machines, Inc. Class A	7.70%	1.84
9412	SKY Perfect JSAT Holdings Inc.	4.55%	1.568
VSAT	ViaSat, Inc.	4.84%	1.24
PL	Planet Labs PBC Class A	4.75%	1.219

For more information on UFO visit: [etf.com](https://www.ETF.com), Yahoo Finance

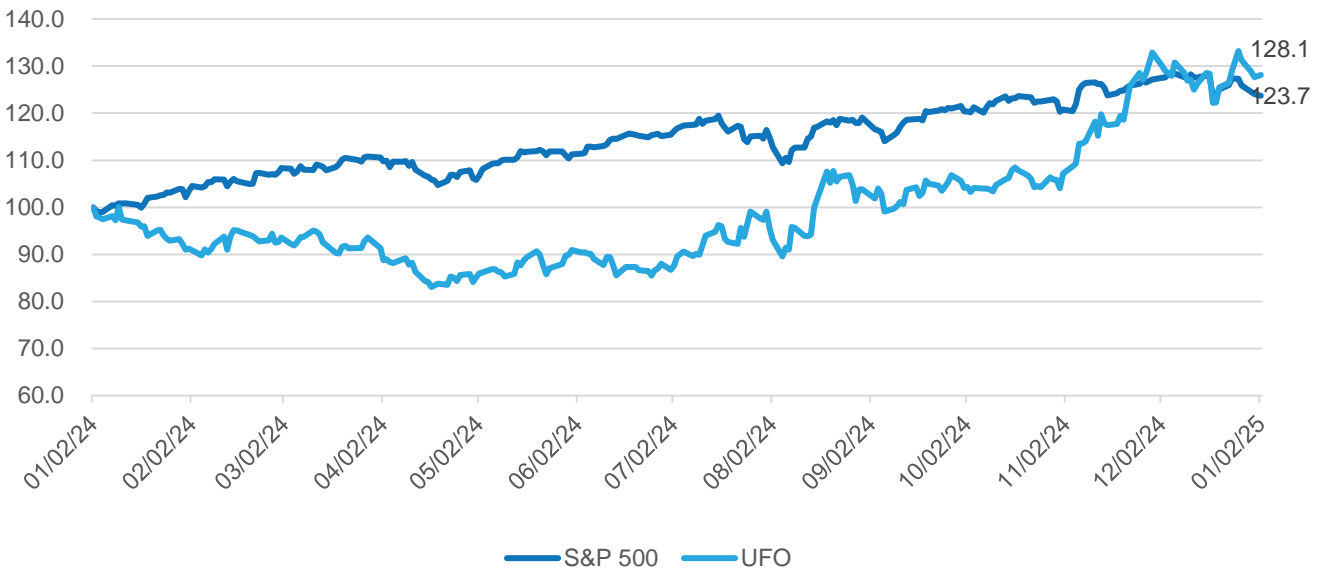
## SPACETECH ETFs

Chart 13: ARKX vs. S&P 500



Source: Intro-act, MarketWatch

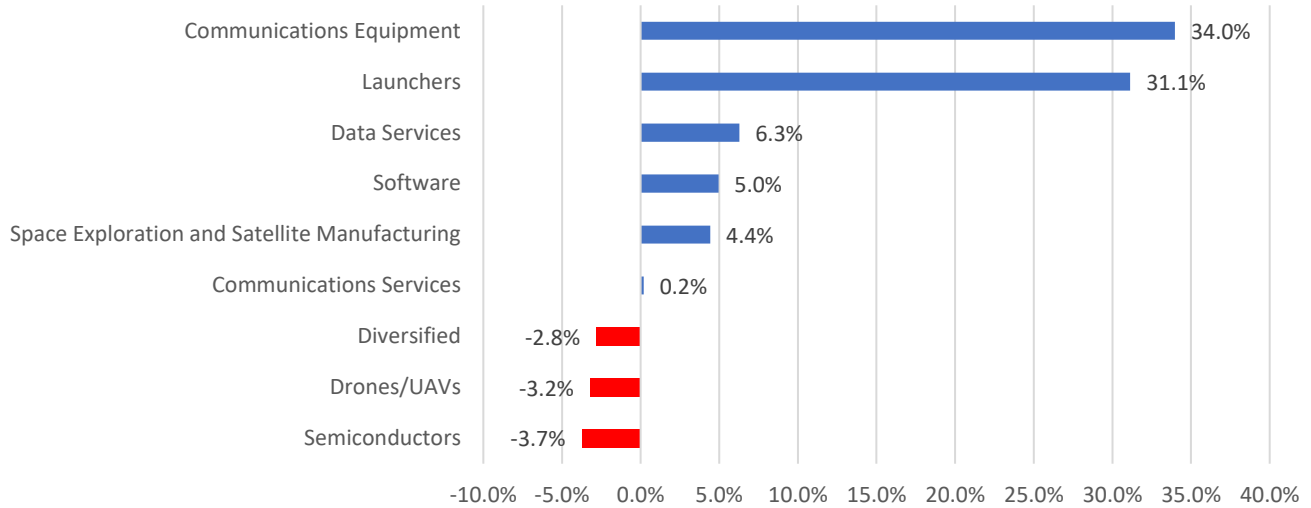
Chart 14: UFO vs. S&P 500



Source: Intro-act, MarketWatch

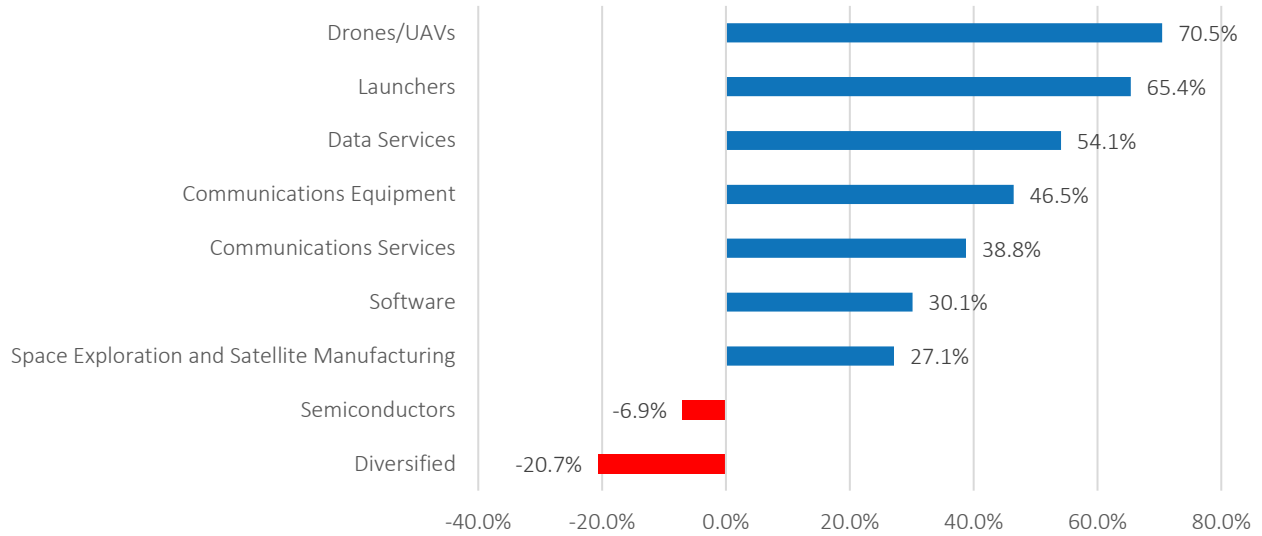
## LEADERS AND LAGGARDS – SPACETECH SEGMENTS

Chart 15: M/M Returns by SpaceTech Segments



Source: Intro-act, FactSet. Data as of January 07, 2025

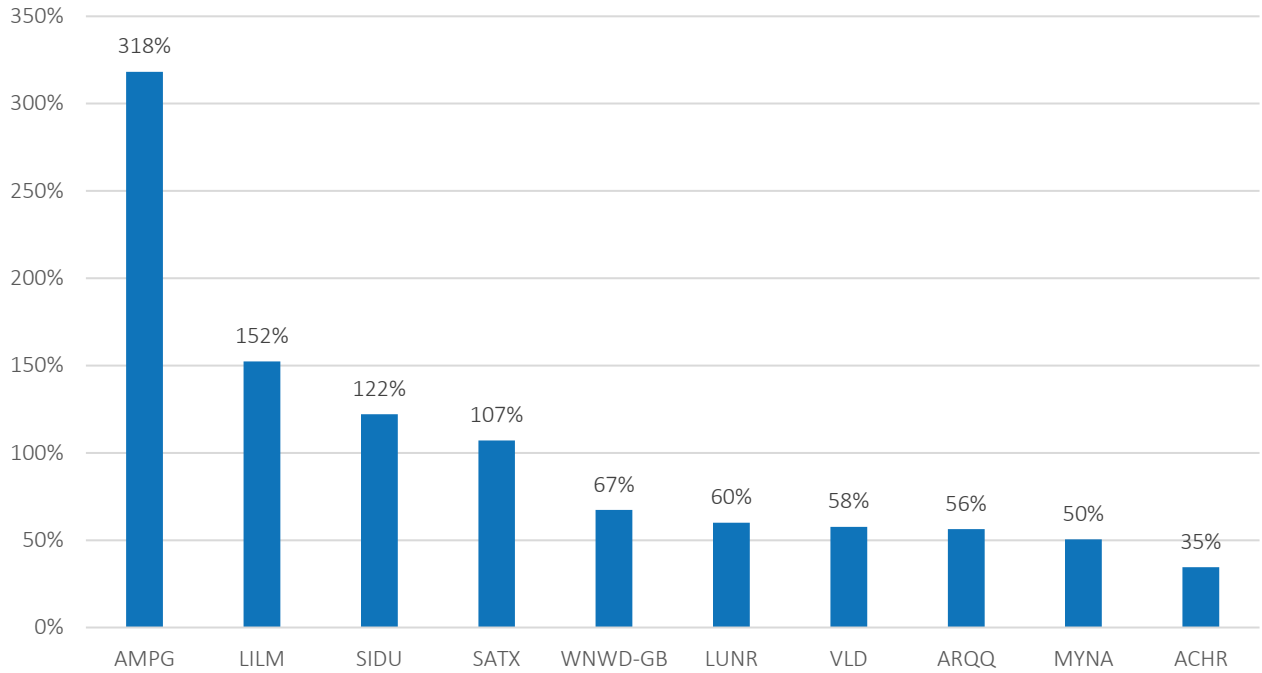
Chart 16: YTD Returns by SpaceTech Segments



Source: Intro-act, FactSet. Data as of January 07, 2025

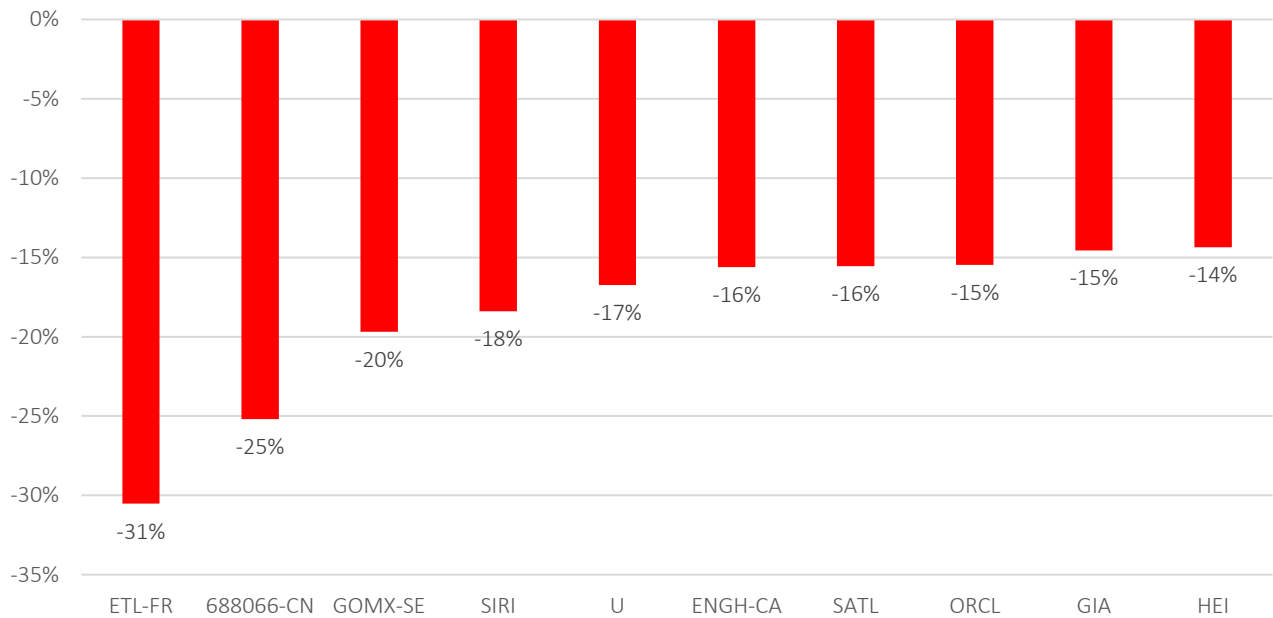
## LEADERS AND LAGGARDS – SPACETECH STOCKS

Chart 17: M/M Top 10 SpaceTech Gainers



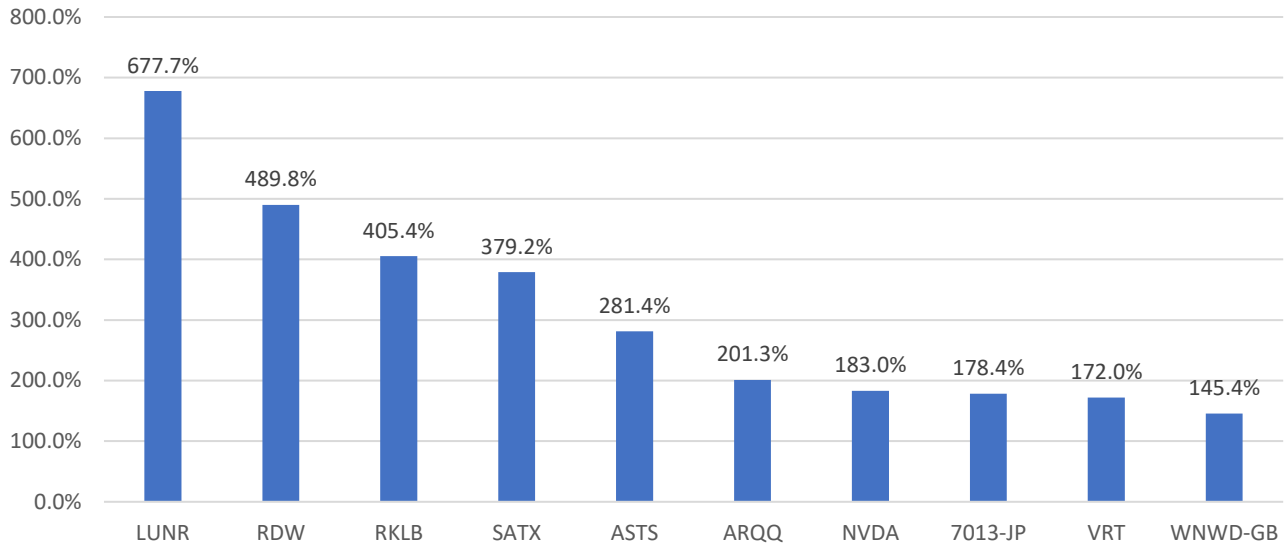
Source: Intro-act, FactSet. Data as of January 07, 2025

Chart 18: M/M Top 10 SpaceTech Losers



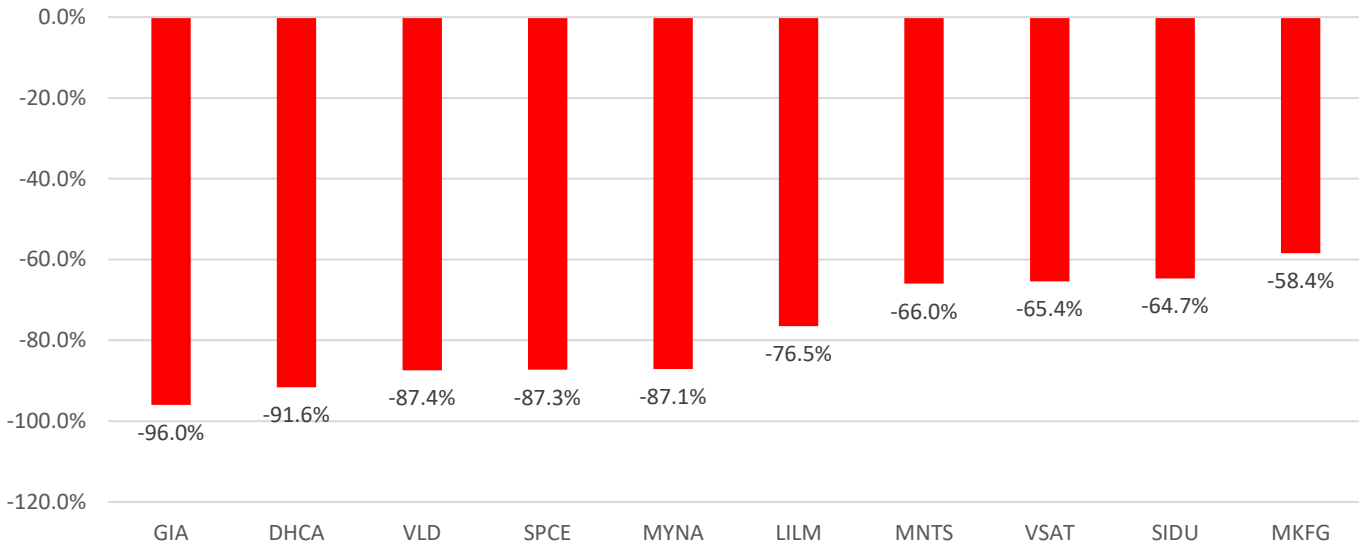
Source: Intro-act, FactSet. Data as of January 07, 2025

Chart 19: YTD Top 10 SpaceTech Gainers



Source: Intro-act, FactSet. Data as of January 07, 2025

Chart 20: YTD Top 10 SpaceTech Losers



Source: Intro-act, FactSet. Data as of January 07, 2025

## SPACETECH EVENTS CALENDAR

Chart 21: SpaceTech Industry Events Calendar

Sr No.	Event	Place	Date
1	SmallSat Symposium 2025	Computer History Museum, Mountain View, CA	February 04, 2025
2	Small Satellites and Services International Forum	Málaga, Spain	February 18, 2025

Source: Intro-act, Multiple Web Sources

## SPACETECH LAUNCH CALENDAR – UPCOMING MONTH

Chart 22: Space Launches Across the Globe (as of January 03, 2025)

Date	Company	Rocket	Mission	Launch Site
January 10	SpaceX	Starship	Flight 7	OLP-A, Starbase, Boca Chica Beach, Texas
Spring 2025	Blue Origin	New Glenn	EscaPADE	Launch Complex 36, Cape Canaveral Space Force Station

Source: Intro-act, Spaceflight Now

## SPACETECH SPACs

Chart 23: SpaceTech – Active SPACs

SPAC Name (Ticker)	Trust Size (\$ Mn)	Status	Target (If announced)	EV (\$ Mn)	Announced Date	Estimated Closing Date
Broad Capital Acquisition Corp. (BRAC)	102	Definitive Agreement	Openmarkets Group	90	-	8/13/2024
Aurvandil Acquisition Corp. (AURV)	250	S-1 Filed	-	-	-	-
Deep Space Acquisition Corp. I (DPAC)	210	S-1 Filed	-	-	-	-
Mission Control Acquisition Corp.	100	S-1 Filed	-	-	-	-
Slam Corp	< 99	Definitive Agreement	Lynk Global	800	-	12/25/2024
Mission Space Acquisition Corp	100	S-1 Filed	-	-	-	-

Source: Intro-act, Boardroom Alpha. Status as of 01/02/25.

## The Bridge – Monthly SpaceTech Update

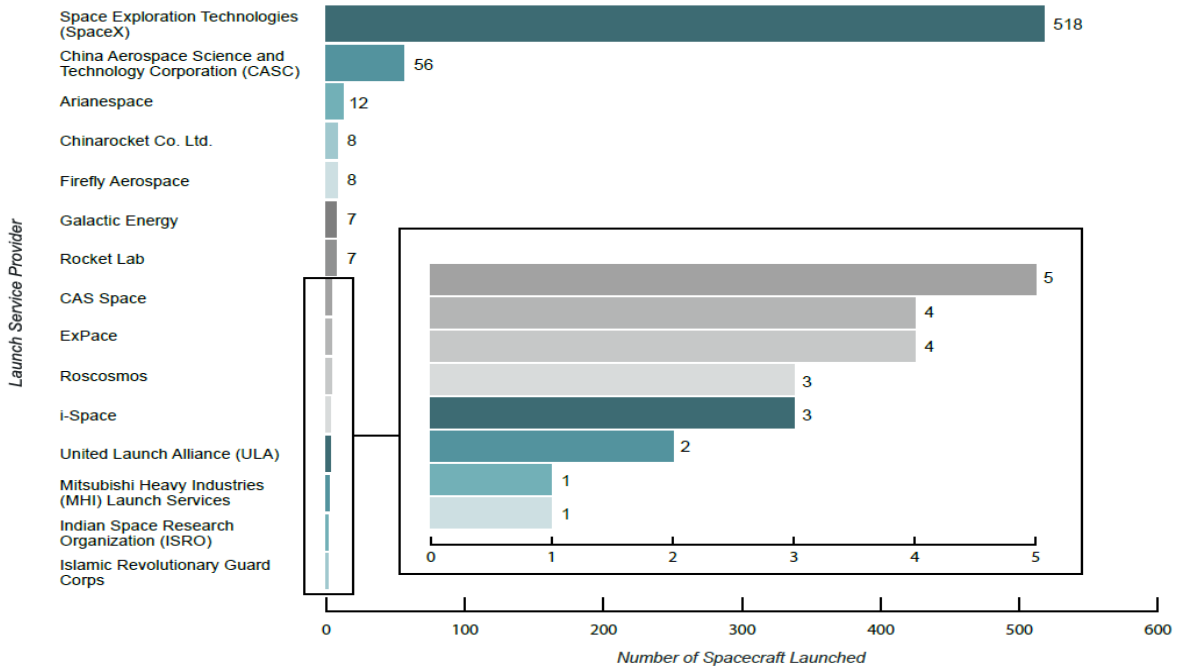
### SpaceTech SPACs – Completed Transactions

DE-SPAC (Ticker)	SPAC	Segment	Announced Date	Closing Date	EV (\$ Mn)	Current EV (\$ Mn)
Virgin Galactic (NYSE: SPCE)	Social Capital Hedosophia	Space Exploration	9-Jul-19	25-Oct-1	1,50:	103
Momentum (NSDQ: MNTS)	Stable Road Acquisition Corp.	Satellite & Components	7-Oct-20	12-Aug-2	1,20:	(2)
AST SpaceMobile (NSDQ: ASTS)	New Providence Acquisition Corp.	Communication Services	16-Dec-20	6-Apr-2	1,39:	356
Astra Space (NSDQ: ASTR)	Holcity, Inc.	Satellite Launch Services	2-Feb-21	30-Jun-2	2,12:	18
BlackSky (NYSE: BKSJ)	Osprey Technology Acquisition Corp.	Satellite & Components	18-Feb-21	9-Sep-2	1,10:	185
Rocket Lab (NSDQ: RKLB)	Vector Acquisition Corp.	Satellite Launch Services	1-Mar-21	25-Aug-2	4,08:	1,936
Spire Global (NYSE: SPIR)	NavSight Holdings, Inc.	Data Services	1-Mar-21	16-Aug-2	1,23:	172
Redwire Space (NYSE: RDW)	Genesis Park Acquisition Corp.	Satellite & Components	25-Mar-21	2-Sep-2	615	355
Arqit Quantum (NSDQ: ARQQ)	Centricus Acquisition Corp.	Data Services	12-May-21	3-Sep-2	1,02:	40
Planet Labs (NYSE: PL)	dMY Technology Group, Inc. IV	Data Services	7-Jul-21	7-Dec-2	2,25:	370
Satelloic (NSDQ: SATL)	CF Acquisition Corp. V	Data Services	6-Jul-21	25-Jan-2	850	73
Terran Orbital (NYSE: LLAP)	Tailwind Two Acquisition Corp.	Satellite & Components	28-Oct-21	28-Mar-2	1,57:	278
Eve Holding, Inc. (NYSE: EVEX)	Zanite Acquisition Corp.	Data Services	21-Dec-21	9-May-2	2,37:	2,047
SatixFy (NYSEAMERICAN: SATX)	Endurance Acquisition Corp.	Communication Services	8-Mar-22	27-Oct-2	632	94
Intuitive Machines (Nasdaq: LUNR)	Inflection Point Acquisition Corp	Space Exploration	16-Sep-22	14-Feb-2	416	674

Source: Intro-act, Hogan Lovells. EV = Pro-forma enterprise value when the transaction agreement was announced

## SPACETECH LAUNCH TRENDS – Q32024

Chart 24: In Q3, SpaceX Launched 518 Spacecraft, the Most of any Launch Provider



Source: Intro-Act, ByrceTech

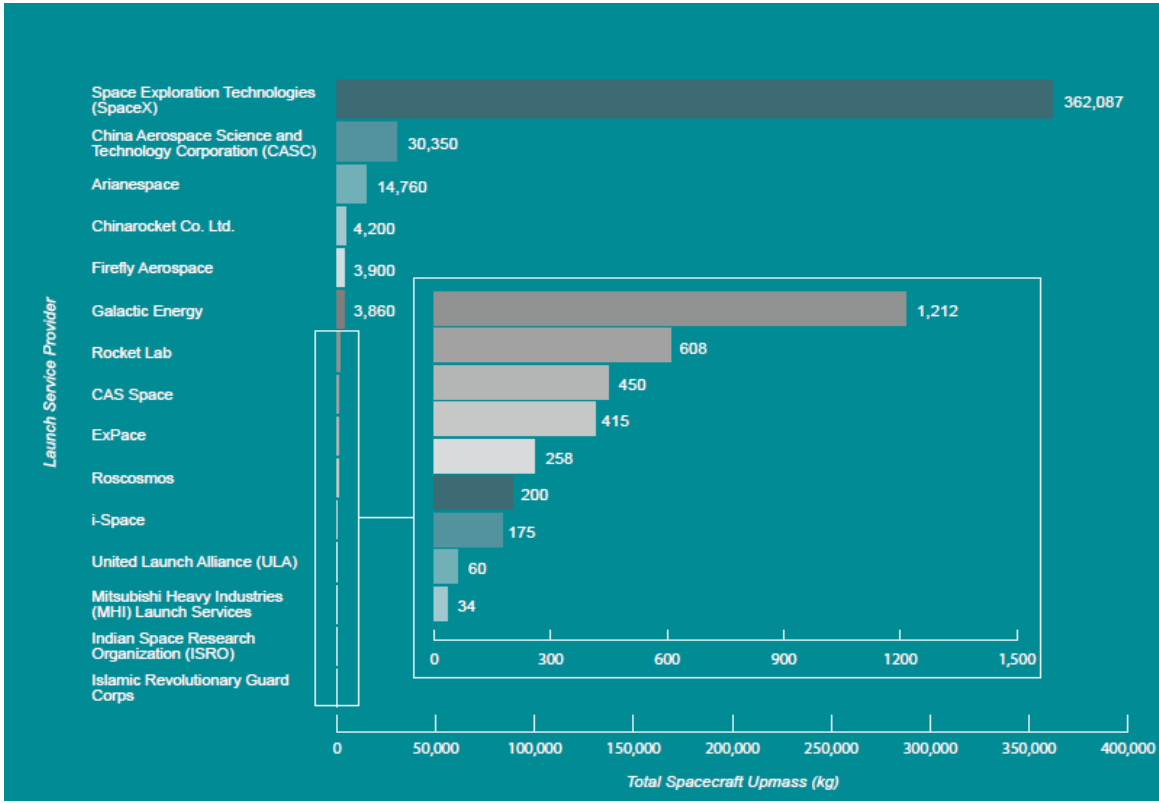
Chart 25: U.S. Providers Conducted 32 Launches, While Chinese Providers Conducted 16 Launches



\*Rocket Lab is headquartered in the U.S. with a subsidiary in New Zealand. It is counted here as a U.S. company

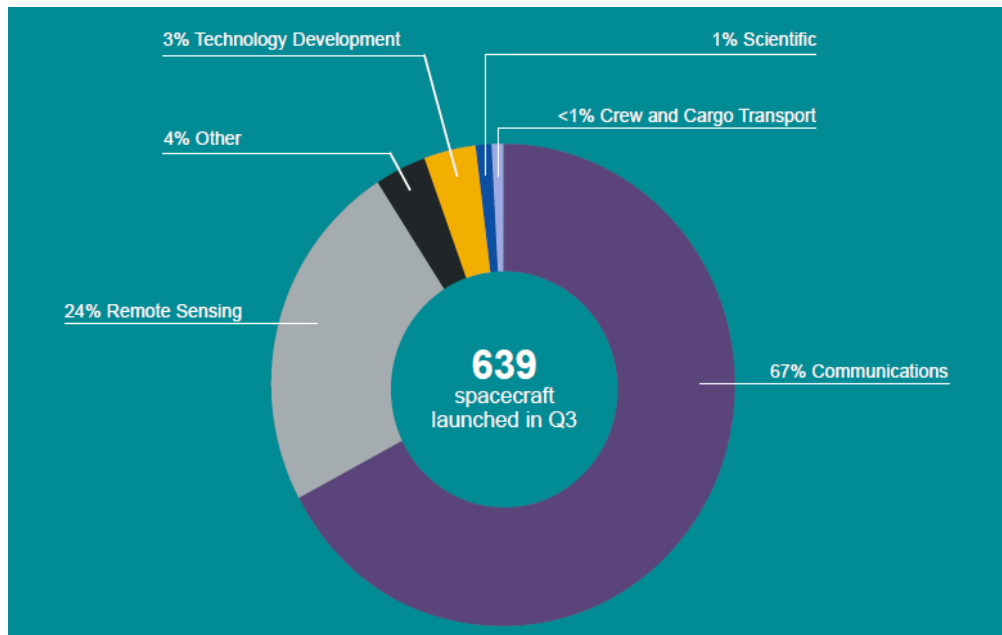
Source: Intro-Act, ByrceTech

Chart 26: Spacecraft Upmass Carried by Launch Provider



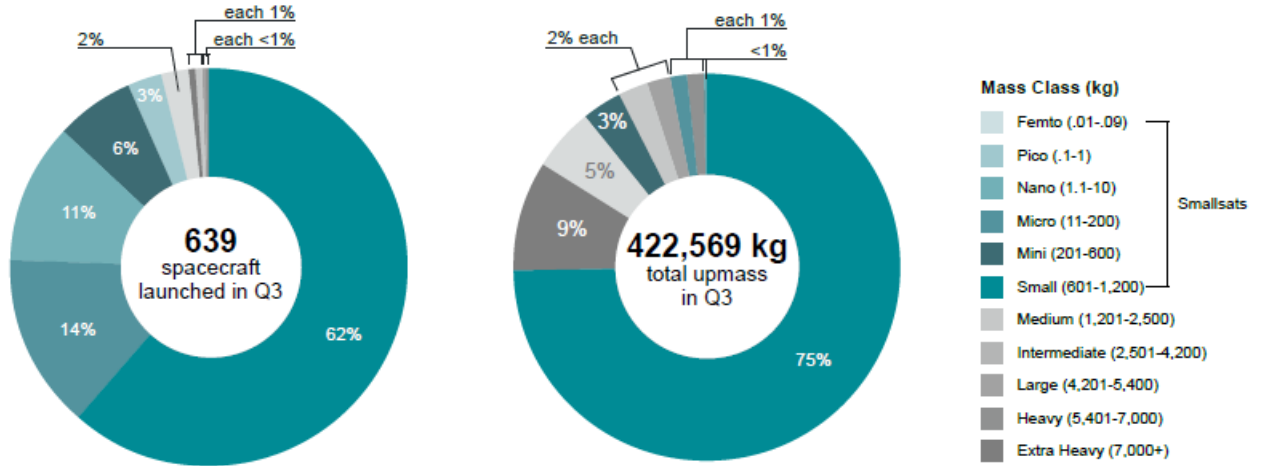
Source: Intro-Act, BryceTech

Chart 27: Driven by Continued Deployment of The Starlink Constellation, Most Spacecraft Launched in Q3 Were Communications Satellites



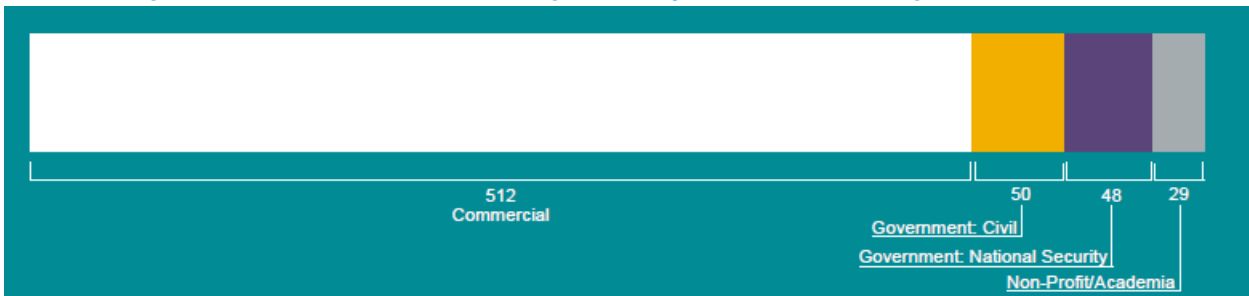
Source: Intro-act, BryceTech

Chart 28: Smaller Satellites (<1,200 kg) Represented 96% of Spacecraft Launched in Q3, 79% of Total Upmass



Source: Intro-act, BryceTech

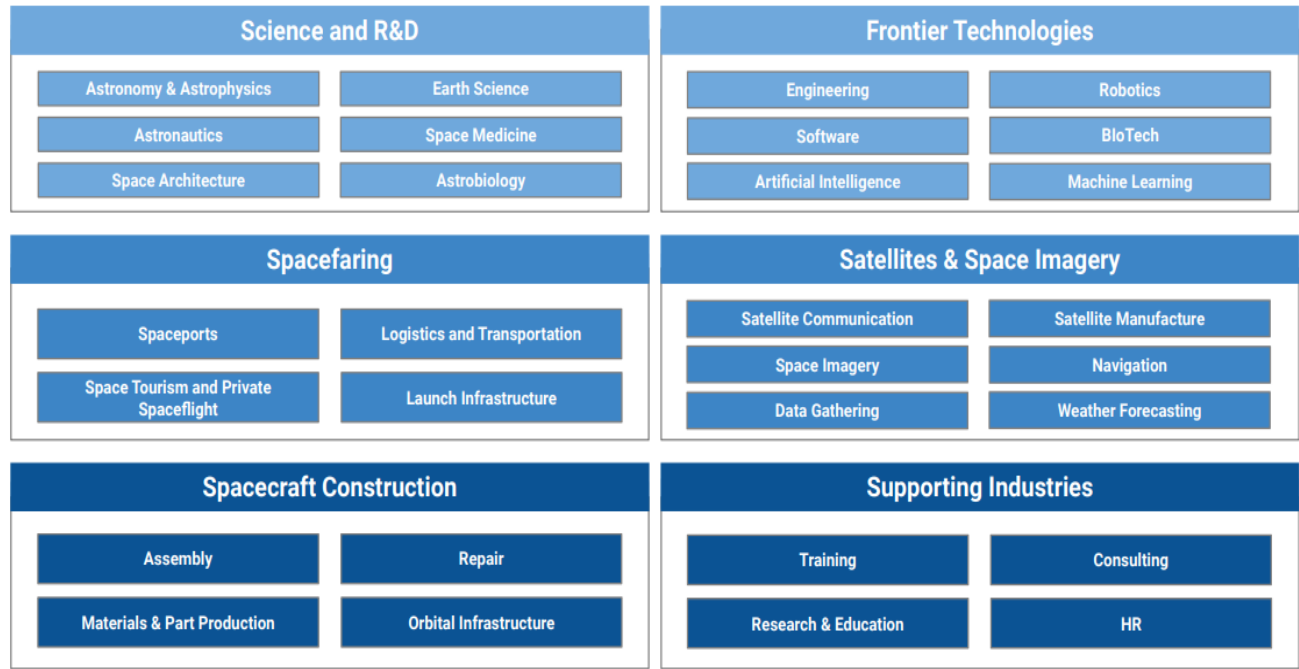
Chart 29: Most Spacecraft Launched in Q3 are Operated by Commercial Companies



Source: Intro-act, BryceTech

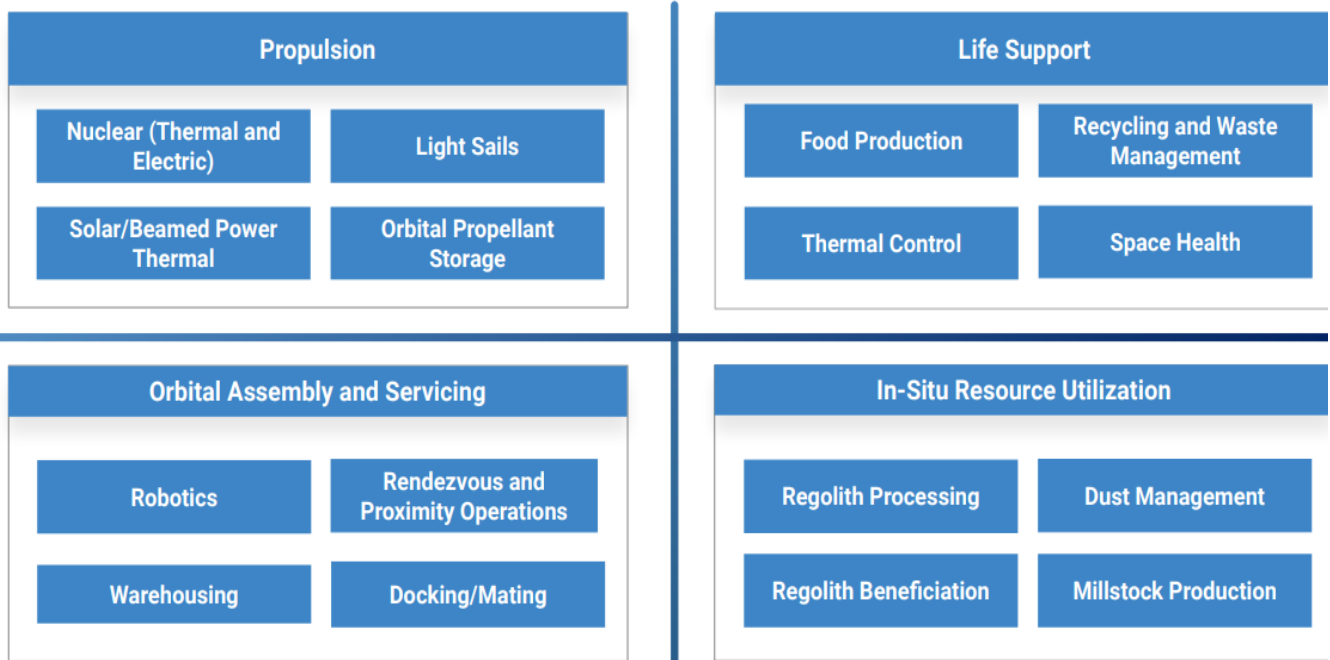
## SPACETECH – ECOSYSTEMS

Chart 30: SpaceTech Landscape Framework



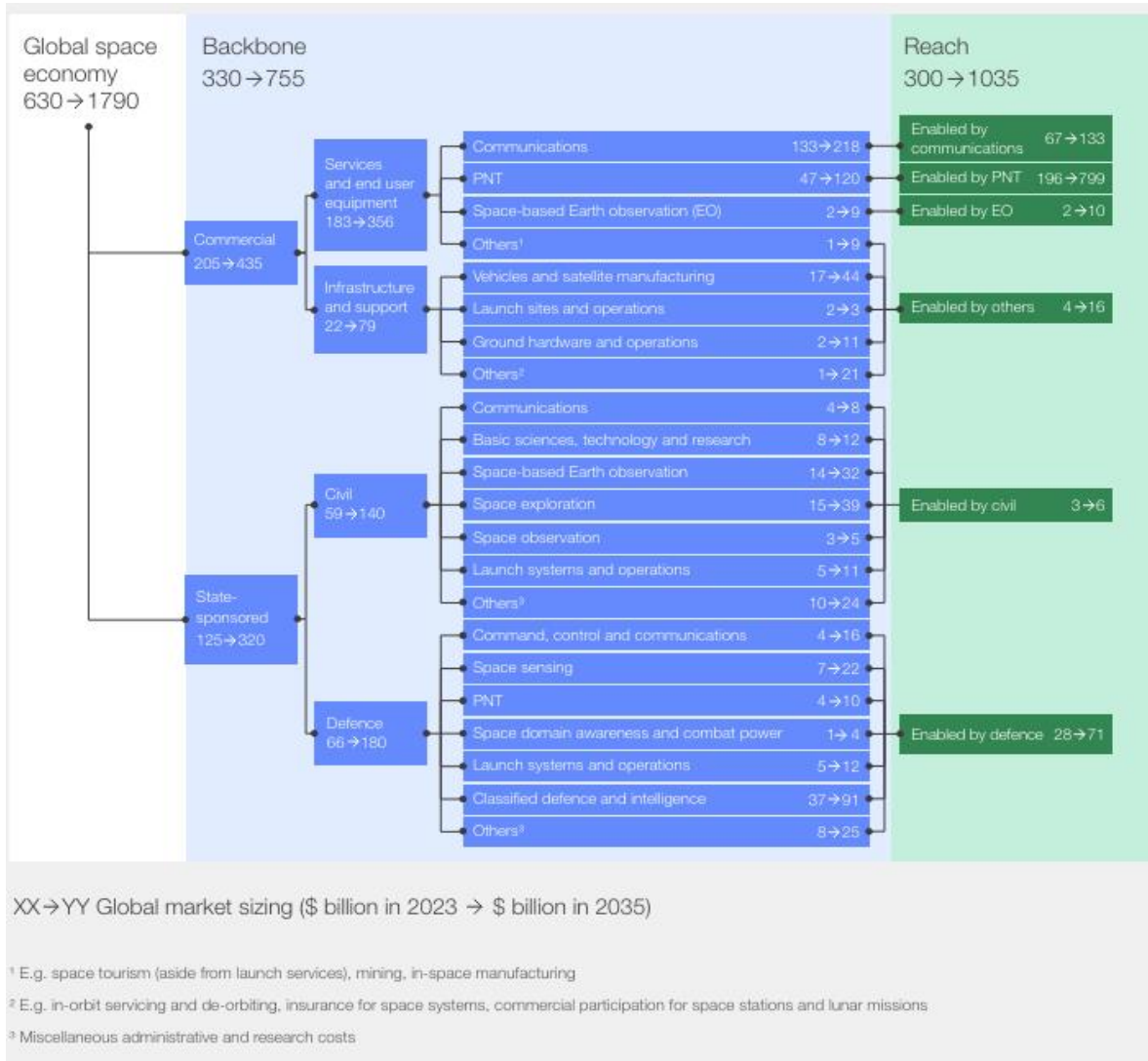
Source: Intro-act, SpaceTech Analytics

Chart 31: Space Applied Businesses



Source: Intro-act, SpaceTech Analytics

Chart 32: Global Space Economy Size (\$ billion)



Source: Intro-act, Seraphim Space, Future of Space Economy Research

Chart 33: Seraphim SpaceTech Ecosystem Map 2024 - In-Space Economy



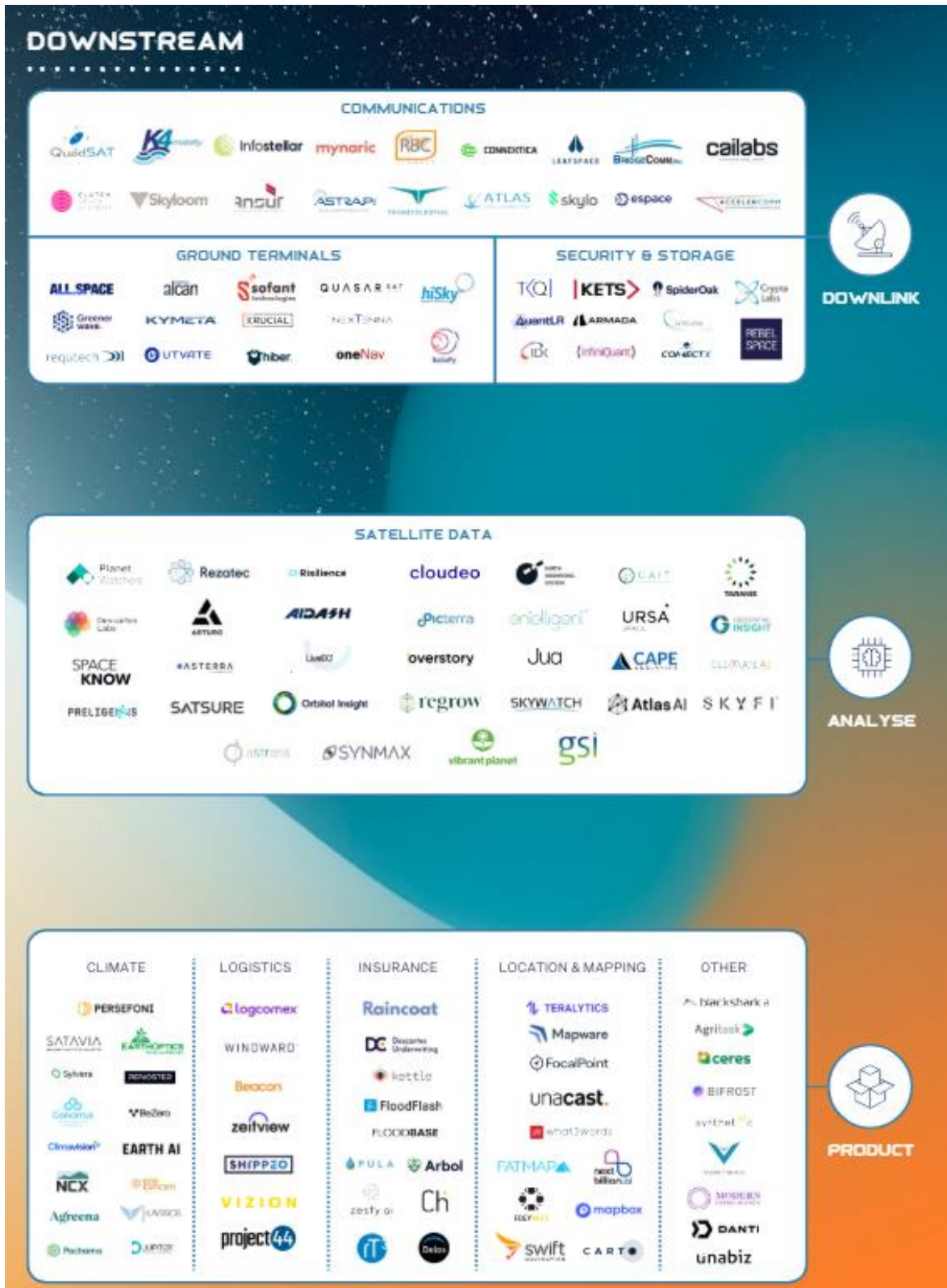
Source: Intro-act, Seraphim

Chart 34: Seraphim SpaceTech Ecosystem Map 2024 – Upstream Players



Source: Intro-act, Seraphim

Chart 35: Seraphim SpaceTech Ecosystem Map 2024 - Downstream Players



Source: Intro-act, Seraphim

## SPACETECH - FUNDING

Chart 36: Cumulative Private Market Equity Investment

Equity Investment	SINCE 2009	Q3 2024
<b>TOTAL</b>	<b>\$327.3B</b> 2,116 companies	<b>\$5.0B</b> 98 companies
<b>INFRASTRUCTURE</b>	<b>\$84.9B</b> 693 companies	<b>\$1.9B</b> 50 companies
<b>DISTRIBUTION</b>	<b>\$10.4B</b> 215 companies	<b>\$0.6B</b> 12 companies
<b>APPLICATIONS</b>	<b>\$232.0B</b> 1,207 companies	<b>\$2.5B</b> 36 companies

Exits	SINCE 2009	Q3 2024
<b>AQUISITIONS</b>	<b>418</b> (\$203.8B proceeds)	<b>16</b> (\$3.5B proceeds)
<b>VALUATION STEP-UP</b>	<b>2.1x</b> (median)	<b>1.8x</b> (median)
<b>IPOS</b>	<b>45</b> (\$32.0B proceeds)	<b>3</b> (\$0.1B proceeds)
<b>REVENUE MULTIPLE AT IPO</b>	<b>14.6x</b> (median)	<b>7.7x</b> (median)

Companies	MOST VALUABLE	LARGEST ROUNDS
<b>INFRASTRUCTURE</b>	<b>SpaceX</b> \$210.0B	<b>Blue Origin</b> \$500M
<b>DISTRIBUTION</b>	<b>project44</b> \$2.7B	<b>World Labs</b> \$230M
<b>APPLICATIONS</b>	<b>Anduril, Scale AI</b> \$14.0B	<b>Anduril</b> \$1,500M

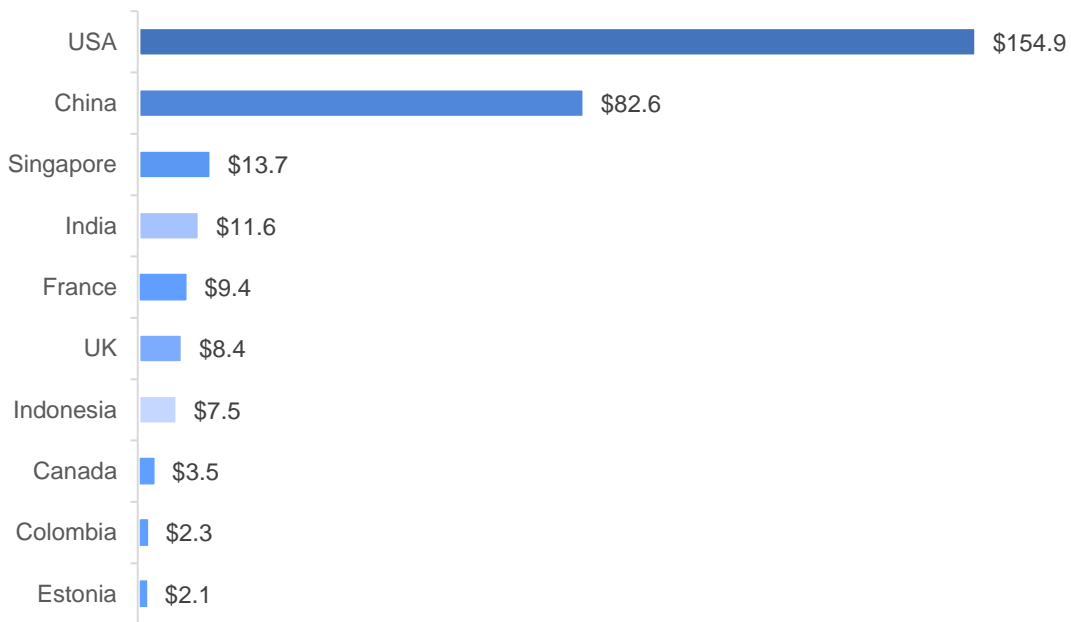
Source: Intro-act, Space Capital, Q3 2024

Chart 37: Top SpaceTech Investment Deals, 3Q24

Company	Stage	Amount (\$ millions)
World Labs	Series A	230
Astranis	Series D+	200
Impulse Space	Series B	150
Deep Blue Aerospace	Series B	139
Minospace (Beijing Weina Star Technology)	Series D+	137
Orbitworks	Series D+	100
iSpace China	Series C	99
X-Bow Launch Systems	Series B	70
Muon Space	Series B	57
D-Orbit	Series C Extension	56

Source: Intro-act, Seraphim Space

Chart 38: SpaceTech Equity Investment by Geography: Leading Countries (January 2014–September 2024)



Source: Intro-act, Space Capital

Chart 39: SpaceTech Institutional Owners League (Current)

Rank	Investor Name	Invested in SpaceTech (\$)	Q/Q Change (\$)	Change in Positions (#)	SpaceTech as % of AUM
1	The Vanguard Group, Inc.	667,093,368,261	(102,116,810,936)	-2	11.9%
2	BlackRock Fund Advisors	377,590,957,458	(56,612,078,725)	-3	6.8%
3	SSgA Funds Management, Inc.	318,190,278,449	(54,418,311,553)	-1	5.7%
4	Fidelity Management & Research Co. LLC	192,971,056,193	(39,729,984,879)	0	3.5%
5	Geode Capital Management LLC	169,595,539,428	(22,773,717,112)	-3	3.0%
6	T. Rowe Price Associates, Inc. (IM)	113,905,500,838	(23,303,991,518)	2	2.0%
7	JPMorgan Investment Management, Inc.	83,114,086,822	(11,735,218,622)	1	1.5%
8	Capital Research & Management Co. (World Investors)	82,956,434,795	(17,674,092,330)	1	1.5%
9	Capital Research & Management Co. (Global Investors)	80,488,734,563	(17,677,487,330)	-1	1.4%
10	Northern Trust Investments, Inc. (Investment Management)	68,834,268,578	(10,722,733,443)	-2	1.2%
11	Capital Research & Management Co. (International Investors)	64,790,573,473	(16,137,591,258)	3	1.2%
12	BlackRock Advisors (UK) Ltd.	61,192,617,218	(8,565,110,719)	-1	1.1%
13	Wellington Management Co. LLP	55,761,405,747	(9,641,567,960)	-3	1.0%
14	Charles Schwab Investment Management, Inc.	54,502,691,687	(7,584,178,922)	-2	1.0%
15	BlackRock Investment Management (UK) Ltd.	52,097,954,370	(7,321,479,778)	-5	0.9%
16	Morgan Stanley Smith Barney LLC (Investment Management)	45,106,766,069	(7,293,863,651)	-2	0.8%
17	Massachusetts Financial Services Co.	39,561,437,489	(10,025,368,192)	-1	0.7%
18	Goldman Sachs Asset Management LP	39,501,151,186	(6,281,654,092)	0	0.7%
19	AllianceBernstein LP	38,988,286,892	(6,169,424,157)	-3	0.7%
20	Legal & General Investment Management Ltd.	38,412,052,797	(4,822,935,971)	1	0.7%
21	Parametric Portfolio Associates LLC	37,358,061,290	(5,099,469,470)	0	0.7%
22	Columbia Management Investment Advisers LLC	35,096,036,987	(5,761,527,336)	1	0.6%
23	TIAA-CREF Investment Management LLC	33,239,264,013	(3,063,636,111)	0	0.6%
24	Fisher Asset Management LLC	32,127,666,424	(4,158,626,900)	-6	0.6%
25	Amundi Asset Management US, Inc.	29,591,580,354	(4,829,689,774)	-1	0.5%
	Others	2,775,449,817,746	(601,493,039,475)	618	49.7%
	Total	5,587,517,589,127	(1,065,013,590,214)	591	100.0%

Source: Intro-act, 13F Filings

Chart 40: Top 25 SpaceTech Buyers (Q/Q)

Rank	Investor Name	Invested in SpaceTech (\$)	Q/Q Change (\$)	Change in Positions (#)	SpaceTech as % of AUM
1	Capital Performance Advisors LLP	10,198,715	1,580,638	49	3.1%
2	Hemington Wealth Management LLC	10,203,818	(275,193)	33	2.7%
3	KB Asset Management Co. Ltd.	203,862,713	203,862,713	33	4.5%
4	Sterling Capital Management LLC	655,823,308	196,764,288	31	8.3%
5	Novate Global Markets Ltd. (United Kingdom)	42,666,519	42,666,519	30	15.2%
6	Claris Advisors LLC	3,098,590	446,757	28	1.3%
7	The Bryn Mawr Trust Co. (Investment Management)	693,013,079	491,754,787	26	12.4%
8	Catalyst Funds Management Pty Ltd.	51,302,057	51,302,057	25	11.3%
9	Flagship Harbor Advisors LLC	86,844,585	86,844,585	25	4.8%
10	FSA Wealth Management LLC	3,478,312	3,478,312	23	1.4%
11	Ashton Thomas Securities LLC	36,127,261	1,499,868	22	7.0%
12	Caitlin John LLC	8,120,658	8,120,658	22	5.1%
13	CWA Asset Management Group LLC	224,220,477	224,220,477	22	11.9%
14	Corecap Advisors LLC	63,575,362	36,293,665	21	3.0%
15	Jaffe Tilchin Investment Partners LLC	92,731,469	(7,112,826)	20	7.0%
16	RBC Dominion Securities, Inc.	47,432,721	(75,494,676)	20	0.8%
17	Truvestments Capital LLC	35,066,628	8,596,295	20	9.4%
18	Kennebec Savings Bank (Investment Management)	13,620,904	13,620,904	19	13.5%
19	TD Securities, Inc.	205,690	205,690	19	0.0%
20	Alpine Bank (Private Banking)	13,255,068	13,255,068	18	2.1%
21	Dark Forest Capital Management LP	35,096,448	(20,074,992)	18	4.5%
22	Mendota Financial Group LLC	2,932,792	829,740	18	1.4%
23	ORG Wealth Partners LLC	6,785,784	6,785,784	18	2.3%
24	Peterson Financial Group, Inc.	907,815	242,682	18	3.5%
25	Flaharty Asset Management LLC	5,203,097	(256,259)	17	0.7%

Source: Intro-act, 13F Filings

Chart 41: Top 25 SpaceTech Sellers (Q/Q)

Rank	Investor Name	Invested in SpaceTech (\$)	Q/Q Change (\$)	Change in Positions (#)	SpaceTech as % of AUM
1	Nuveen Asset Management LLC	10,446,316	(3,919,261,219)	<b>-58</b>	0.2%
2	Norges Bank Investment Management	1,309,986,281	(112,854,631,005)	<b>-57</b>	0.1%
3	Credit Suisse Asset Management (Schweiz) AG	1,671,374,367	(421,106,946)	<b>-32</b>	6.7%
4	The Retirement Systems of Alabama	3,982,402	(3,423,967,267)	<b>-31</b>	0.0%
5	IndexIQ Advisors LLC	18,535,346	(193,633,608)	<b>-30</b>	0.5%
6	Russell Investments Ltd.	194,998,532	(310,223,584)	<b>-29</b>	2.1%
7	Redwood Wealth Management Group LLC	10,715,010	(2,991,818)	<b>-27</b>	9.9%
8	Symmetry Partners LLC	3,476,113	(62,526,592)	<b>-26</b>	0.8%
9	Bankinter Gestion de Activos SA SGIIC	96,487,465	(116,765,135)	<b>-24</b>	2.4%
10	Kelly Financial Services LLC	3,701,713	(1,223,118)	<b>-23</b>	1.4%
11	Pictet Asset Management (Europe) SA (Italy)	236,021,377	(65,565,192)	<b>-23</b>	10.6%
12	RFP Financial Group LLC	9,851,291	(1,310,292)	<b>-23</b>	3.3%
13	Wetzel Investment Advisors, Inc.	4,082,323	(932,003)	<b>-23</b>	2.1%
14	Triad Wealth Partners LLC	6,272,241	(4,586,172)	<b>-22</b>	3.3%
15	Financiere de l'Echiquier SA	186,572,890	(624,954,666)	<b>-20</b>	1.6%
16	Fairway Wealth LLC	181,025	(542,003)	<b>-19</b>	0.1%
17	Gradient Investments LLC	228,634,234	(16,212,671)	<b>-19</b>	4.8%
18	SYSTEM Wealth Solutions LLC	230,437	(55,800,646)	<b>-19</b>	7.0%
19	Ashton Thomas Private Wealth LLC	116,942,950	(17,009,156)	<b>-18</b>	6.2%
20	China Asset Management Co., Ltd.	98,907,503	(28,466,551)	<b>-18</b>	0.1%
21	Lynx Investment Advisory LLC	7,535,340	(939,875)	<b>-18</b>	5.4%
22	Susquehanna Investment Group LLC	318,203,311	(21,913,859)	<b>-18</b>	4.1%
23	VisionPoint Advisory Group LLC	13,537,264	1,095,251	<b>-18</b>	4.6%
24	Candriam SCA	39,834,688	(10,764,148)	<b>-17</b>	4.2%
25	Feri Trust GmbH	174,254,432	(21,739,247)	<b>-17</b>	2.0%

Source: Intro-act, 13F Filings

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			Price Performance						Sales			EBITDA		Book Value		
12/31/2024			Share Price	Mkt Cap (\$ Mns)	Ent Val (\$ Mns)	% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
<b>Peer Set</b>																
<b>SPACE EXPLORATION AND SATELLITE MANUFACTURING</b>																
1	RAYTHEON TECHNO	RTX	115.72	154,025	192,837	11%	-28%	34%	79,009	82,922	2.3 x	12,102	13,524	14.3 x	45.92	2.5 x
2	HONEYWELL INTER	HON	225.89	146,884	168,514	7%	-16%	8%	37,850	40,644	4.1 x	9,617	10,428	16.2 x	26.77	8.4 x
3	LOCKHEED MARTIN	LMT	485.94	115,185	131,355	27%	-15%	37%	71,295	73,221	1.8 x	10,171	9,793	13.4 x	30.51	15.9 x
4	AIRBUS GROUP	AIR-FR	160.27	126,983	128,062	17%	-15%	26%	72,684	71,184	1.8 x	8,802	8,245	15.5 x	25.00	6.4 x
5	BOEING	BA	177.00	132,427	179,597	48%	-23%	-12%	73,293	78,745	2.3 x	(4,649)	3,945	45.5 x	(38.12)	-4.6 x
6	NORTHROP GRUM	NOC	469.29	68,373	83,146	18%	-11%	21%	40,989	42,239	2.0 x	4,244	5,776	14.4 x	101.14	4.6 x
7	DASSAULT SYSTEM	DSY-FR	34.69	46,429	44,384	53%	-5%	-41%	6,591	6,806	6.5 x	2,301	2,459	18.0 x	6.30	5.5 x
8	SYNOPTIS	SNPS	485.36	75,026	71,691	30%	-6%	32%	6,266	6,775	10.6 x	2,436	2,858	25.1 x	58.34	8.3 x
9	L3HARRIS TECHN	LHX	210.28	39,883	52,318	26%	-5%	-1%	21,142	21,764	2.4 x	4,028	3,936	13.3 x	100.23	2.1 x
10	BAE SYSTEMS	BA-GB	14.38	43,316	53,338	26%	-3%	94%	27,963	35,208	1.5 x	3,554	4,572	11.7 x	4.67	3.1 x
11	AMETEK	AME	180.26	41,696	43,857	10%	-17%	23%	6,910	7,265	6.0 x	2,150	2,307	19.0 x	41.29	4.4 x
12	THALES	HO-FR	143.57	29,568	33,907	31%	-2%	73%	18,540	20,836	1.6 x	2,778	3,212	10.6 x	36.72	3.9 x
13	KOMATSU	6301-JP	27.67	26,315	32,457	18%	-16%	25%	26,270	25,315	1.3 x	4,631	4,766	6.8 x	21.18	1.3 x
14	BALL	BALL	55.13	16,452	21,212	29%	-2%	-43%	12,318	12,207	1.7 x	2,040	2,020	10.5 x	22.27	2.5 x
15	MITSUBISHI ELECT	6503-JP	17.09	36,121	33,821	11%	-23%	37%	35,262	35,247	1.0 x	3,564	4,114	8.2 x	12.02	1.4 x
16	TELEDYNE TECHNO	TDY	464.13	21,630	23,872	6%	-23%	6%	5,593	5,859	4.1 x	1,345	1,450	16.5 x	205.78	2.3 x
17	TERADYNE	TER	125.92	20,508	20,035	30%	-27%	-23%	2,738	3,201	6.3 x	668	855	23.4 x	17.81	7.1 x
18	IDEX	IEX	209.29	15,848	17,317	18%	-9%	-11%	3,195	3,485	5.0 x	851	965	17.9 x	50.31	4.2 x
19	HEICO	HEI	237.74	13,072	35,636	19%	-29%	65%	3,858	4,219	8.4 x	1,003	1,116	31.9 x	26.20	9.1 x
20	LEONARDO-FINMEC	LDO-IT	26.92	15,562	20,199	5%	-39%	279%	18,453	17,748	1.1 x	1,792	2,096	9.6 x	15.25	1.8 x
21	IHI	7013-JP	59.23	9,162	12,583	5%	-69%	201%	10,597	-	-	1,125	1,386	9.1 x	17.87	3.3 x
22	SPIRIT AEROSYST	SPR	34.08	3,996	8,718	9%	-26%	-21%	6,478	7,408	1.2 x	(566)	615	14.2 x	(16.64)	-2.0 x
24	MOOG	MOG.A	196.84	5,750	7,637	16%	-31%	143%	3,609	3,712	2.1 x	-	543	14.1 x	58.17	3.4 x
25	VIRGIN GALACTIC	SPCE	5.88	170	(21)	774%	-10%	-98%	9	31	-0.7 x	(309)	(347)	-	12.68	0.5 x
26	3D SYSTEMS CORP	DDD	3.28	445	542	102%	-48%	-85%	444	449	1.2 x	(60)	(24)	-	1.62	2.0 x
27	PROTO LABS INC	PRLB	39.09	958	862	16%	-34%	-24%	504	504	1.7 x	84	73	11.8 x	27.74	1.4 x
28	OHB SWEDEN	OHB-DE	49.72	955	1,288	4%	-9%	22%	-	-	-	105	-	-	22.88	2.2 x
29	MARKFORGED HOLD	MKFG	3.14	65	20	180%	-50%	-94%	87	95	0.2 x	-	-	-	4.78	0.7 x
30	VELO3D INC	VLD	0.68	6	39	3169%	-56%	-100%	-	-	-	-	-	-	6.05	0.1 x
31	REDWIRE CORP	RDW	16.46	1,095	1,299	11%	-84%	144%	298	308	4.2 x	(7)	12	105.0 x	(1.46)	-11.3 x
32	MOMENTUS INC	MNTS	7.93	19	26	260%	-43%	-100%	0	-	-	(76)	-	-	(3.50)	-2.3 x
33	HEXCEL Corp	HXL	62.70	5,079	5,786	23%	-8%	21%	1,578	1,909	3.0 x	297	372	15.6 x	19.62	3.2 x
34	AAC CLYDE SPACE	AAC-SE	4.20	25	23	39%	-28%	-75%	21	34	0.7 x	(3)	2	10.1 x	10.60	0.4 x
35	GOMSPACE	GOMX-SE	0.39	55	61	50%	-14%	-54%	19	-	-	(22)	-	-	0.04	8.7 x
36	LATECOERE SA	LAT-FR	0.01	132	278	93%	-44%	-94%	505	700	0.4 x	(11)	5	56.7 x	0.01	0.8 x
37	ASTROCAST SA	ASTRO-NO	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	SIDUS SPACE	SIDU	4.90	42	49	285%	-77%	-100%	7	-	-	-	-	-	2.22	2.2 x
<b>LAUNCHERS</b>																
39	TE CONNECTIVITY	TEL	142.97	42,771	46,227	12%	-10%	-11%	15,845	16,532	2.8 x	3,813	4,026	11.5 x	41.19	3.5 x
40	ROCKET LAB USA INC	RKLB	25.47	12,733	12,761	13%	-86%	107%	364	569	22.4 x	(103)	(100)	-	0.84	30.3 x
41	ASTRA SPACE INC	ASTR	-	-	-	-	-	-	9	-	-	-	-	-	-	-
42	LILIUM GMBH	LILM	0.17	102	0	696%	-86%	-98%	0	-	-	-	-	-	(0.05)	-3.2 x

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43	AVIO SPA	AVIO-IT	14.43	380	351	5%	-39%	14%	379	398	0.9 x	28	29	12.1 x	12.34	1.2 x
<b>DATA SERVICES</b>																
44	HEXAGON	HEXA.B-SE	9.56	24,816	29,625	30%	-14%	-39%	5,820	5,777	5.1 x	2,051	2,147	13.8 x	3.94	2.4 x
45	UNITY SOFTWARE INC	U	22.47	9,052	10,247	89%	-38%	-84%	1,965	1,765	5.8 x	469	372	27.6 x	7.91	2.8 x
46	CLARIVATE PLC	CLVT	5.08	3,609	7,956	89%	-16%	-78%	2,577	2,566	3.1 x	1,073	1,046	7.6 x	7.76	0.7 x
47	BEIJING PIESAT	688066-CN	2.79	730	1,067	115%	-40%	-66%	357	384	2.8 x	62	72	14.8 x	1.09	2.6 x
48	PLANET LABS	PL	4.04	1,113	973	24%	-59%	-34%	242	264	3.7 x	(23)	10	101.3 x	1.57	2.6 x
49	MDA	MDA-CA	20.53	2,481	2,673	3%	-61%	173%	680	898	3.0 x	137	173	15.5 x	6.58	3.1 x
50	ARQIT QUANTUM INC	ARQQ	38.84	486	468	36%	-90%	-94%	20	6	85.1 x	(40)	(19)	-	1.02	37.9 x
51	TERRAN ORBITAL	LLAP				-	-	-	94	-	-	(71)	-	-	(1.17)	-
52	WEATHERNEWS INC	4825-JP	24.62	583	445	0%	-44%	-37%	147	149	3.0 x	-	-	-	6.10	4.0 x
53	SATELLOGIC	SATL	2.85	234	287	93%	-75%	-71%	6	-	-	-	-	-	0.21	13.6 x
54	SATREC INITIATIVE	099320-KR	27.21	298	222	56%	-17%	-30%	-	118	1.9 x	-	3	65.4 x	14.45	1.9 x
55	IMAGESAT INT	ISI-IL	3.69	226	272	17%	-31%	-	-	54	5.1 x	-	14	19.0 x	2.67	1.4 x
56	BLACKSKY TECH	BKSY	10.79	332	374	31%	-64%	-70%	107	126	3.0 x	14	22	16.6 x	3.62	3.0 x
57	SPIRE GLOBAL	SPIR	14.07	342	409	38%	-56%	-48%	115	131	3.1 x	6	15	27.1 x	3.51	4.0 x
58	WINDWARD	WNWD-GB	2.60	231	219	3%	-60%	-9%	22	34	6.3 x	(12)	(2)	-	0.04	64.4 x
<b>COMMUNICATIONS EQUIPMENT</b>																
59	MEDIATEK	2454-TW	43.16	69,130	63,927	8%	-36%	1%	16,226	17,177	3.7 x	3,768	3,776	16.9 x	7.96	5.4 x
60	SAFRAN S.A.	SAF-FR	219.63	93,042	91,419	10%	-22%	82%	20,298	28,163	3.2 x	3,628	5,524	16.5 x	27.63	7.9 x
61	AMPHENOL CORP.	APH	69.45	83,730	87,705	9%	-32%	59%	14,232	16,540	5.3 x	3,571	4,362	20.1 x	7.84	8.9 x
62	GARMIN LTD	GRMN	206.26	39,607	37,293	8%	-42%	51%	5,957	6,550	5.7 x	1,598	1,801	20.7 x	39.07	5.3 x
63	TRIMBLE INC	TRMB	70.66	17,256	18,213	9%	-31%	-19%	3,632	3,486	5.2 x	945	970	18.8 x	18.26	3.9 x
64	ELBIT SYS	ESLT	258.07	11,489	12,968	3%	-32%	48%	6,523	6,712	1.9 x	-	692	18.7 x	69.02	3.7 x
65	VALEO SA	FR-FR	9.64	2,359	7,411	67%	-20%	-68%	22,588	22,179	0.3 x	2,531	2,794	2.7 x	15.51	0.6 x
66	VERTIV	VRT	113.61	42,642	44,852	28%	-61%	355%	7,531	8,783	5.1 x	1,472	1,949	23.0 x	4.83	23.5 x
67	KRATOS DEFENSE	KTOS	26.38	3,985	3,973	9%	-37%	36%	1,127	1,221	3.3 x	110	115	34.6 x	8.89	3.0 x
68	TOMTOM NV	TOM2-NL	5.17	646	344	62%	-4%	-46%	621	595	0.6 x	18	21	16.7 x	1.19	4.3 x
69	ECHOSTAR CORP	SATS	22.90	3,217	31,325	31%	-48%	-13%	16,019	15,379	2.0 x	892	1,254	25.0 x	71.53	0.3 x
70	AMPLITECH GROUP	AMPG	5.14	101	95	25%	-88%	47%	12	11	8.8 x	(4)	(2)	-	1.84	2.8 x
71	MYNARIC AG	MYNA	0.75	19	89	752%	-56%	-94%	6	20	4.5 x	(72)	(49)	-	(2.18)	-0.3 x
<b>COMMUNICATIONS SERVICES</b>																
72	COMCAST CORP NEW	CMCSA	37.53	143,256	236,928	26%	-3%	-25%	123,069	122,474	1.9 x	37,269	38,210	6.2 x	22.37	1.7 x
73	AT&T INC	T	22.77	163,381	322,985	6%	-30%	-7%	122,060	123,682	2.6 x	44,524	45,625	7.1 x	14.27	1.6 x
74	SIRIUS XM	SIRI	22.80	7,734	18,333	149%	-10%	-64%	8,798	8,551	2.1 x	2,760	2,632	7.0 x	32.03	0.7 x
75	DISH NETWORK CORP	DISH				-	-	-	-	-	-	-	-	-	34.21	-
76	IRIDIUM COMM	IRDM	29.02	3,304	4,939	43%	-17%	-30%	812	840	5.9 x	468	483	10.2 x	5.81	5.0 x
77	SES SA	SESG-FR	3.17	1,214	3,429	121%	-6%	-58%	2,168	2,065	1.7 x	1,086	1,051	3.3 x	8.46	0.4 x
78	VIASAT INC	VSAT	8.51	1,093	6,900	242%	-21%	-81%	4,527	4,513	1.5 x	1,520	1,636	4.2 x	38.44	0.2 x
79	EUTELSAT COMM	ETL-FR	2.35	1,116	3,897	128%	-2%	-81%	1,343	1,262	3.1 x	877	718	5.4 x	8.40	0.3 x
80	GLOBALSTAR INC	GSAT	2.07	3,921	4,292	32%	-52%	78%	242	258	16.6 x	130	135	31.7 x	0.21	9.9 x
81	SKY PERFECT JSAT H	9412-JP	5.78	1,721	1,272	26%	-18%	67%	806	783	1.6 x	310	294	4.3 x	6.50	0.9 x
82	AST SPACEMOBILE INC	ASTS	21.10	4,227	4,116	85%	-91%	166%	3	5	831.5 x	(132)	(152)	-	1.82	11.6 x
83	GILAT SATELLITE	GILT	6.15	351	249	8%	-34%	-13%	303	310	0.8 x	25	48	5.2 x	5.11	1.2 x
84	TELESAT CORP	TSAT	16.44	229	3,005	14%	-58%	-43%	-	400	7.5 x	-	259	11.6 x	39.32	0.4 x
<b>SEMICONDUCTORS</b>																
85	NVIDIA CORP	NVDA	134.29	3,288,762	3,260,500	14%	-65%	357%	113,269	176,824	18.4 x	76,820	118,582	27.5 x	2.69	49.9 x

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86	<b>BROADCOM INC.</b>	<b>AVGO</b>	231.84	1,086,717	1,146,286	9%	-55%	248%	51,574	61,345	18.7 x	31,897	40,138	28.6 x	14.44	16.1 x
87	<b>TEXAS INSTR</b>	<b>TXN</b>	187.51	171,050	176,872	18%	-17%	-1%	15,711	16,526	10.7 x	7,022	8,013	22.1 x	18.93	9.9 x
88	<b>QUALCOM</b>	<b>QCOM</b>	153.62	170,672	172,812	50%	-12%	-16%	38,943	42,461	4.1 x	14,678	16,281	10.6 x	23.61	6.5 x
89	<b>INFINEON TECH</b>	<b>IFX-DE</b>	32.59	42,566	47,000	29%	-8%	-29%	16,114	15,343	3.1 x	5,017	4,352	10.8 x	13.02	2.5 x
90	<b>MICROCHIP TECH</b>	<b>MCHP</b>	57.35	30,798	36,969	75%	-4%	-34%	5,497	4,621	8.0 x	2,132	1,517	24.4 x	11.69	4.9 x
<b>SOFTWARE</b>																
91	<b>AUTODESK</b>	<b>ADSK</b>	295.57	63,548	64,413	11%	-34%	5%	5,961	6,695	9.6 x	2,274	2,517	25.6 x	12.17	24.3 x
92	<b>VERISK</b>	<b>VRSK</b>	275.43	38,894	41,698	8%	-21%	20%	2,823	3,040	13.7 x	1,541	1,672	24.9 x	2.12	130.0 x
93	<b>ANSYS INC</b>	<b>ANSS</b>	337.33	29,499	29,072	8%	-14%	-16%	2,468	2,667	10.9 x	1,031	1,261	23.1 x	66.67	5.1 x
94	<b>UIPATH INC</b>	<b>PATH</b>	12.71	5,937	5,498	119%	-18%	-71%	1,411	1,540	3.6 x	237	251	21.9 x	3.15	4.0 x
95	<b>TOPICUS</b>	<b>TOI-CA</b>	84.51	7,020	7,438	23%	-20%	-8%	-	1,324	5.6 x	-	379	19.6 x	3.47	24.4 x
96	<b>ENGHOUSE SYS</b>	<b>ENGH-CA</b>	18.84	1,043	854	52%	-2%	-51%	365	362	2.4 x	104	105	8.2 x	7.48	2.5 x
<b>DRONES/UAVs</b>																
97	<b>JOBY AV</b>	<b>JOBY</b>	8.13	6,220	5,542	15%	-45%	11%	0	7	745.3 x	(299)	(460)	-	1.09	7.5 x
98	<b>AEROVIRONMENT</b>	<b>AVAV</b>	153.89	4,340	4,322	54%	-24%	148%	762	930	4.6 x	114	171	25.2 x	30.43	5.1 x
99	<b>ARCHER AVI</b>	<b>ACHR</b>	9.75	3,794	3,717	20%	-71%	61%	0	17	220.0 x	(360)	(370)	-	1.10	8.9 x
100	<b>BLADE AIR MOB</b>	<b>BLDE</b>	4.25	333	219	22%	-42%	-52%	242	252	0.9 x	(4)	9	24.7 x	2.98	1.4 x
<b>DIVERSIFIED</b>																
101	<b>MICROSOFT</b>	<b>MSFT</b>	421.50	3,133,802	3,152,212	11%	-13%	25%	254,190	286,407	11.0 x	140,518	160,240	19.7 x	38.69	10.9 x
102	<b>AMAZON.COM INC</b>	<b>AMZN</b>	219.39	2,306,888	2,365,883	6%	-34%	32%	620,128	686,139	3.4 x	134,846	158,445	14.9 x	24.66	8.9 x
103	<b>ALPHABET</b>	<b>GOOGL</b>	189.30	1,106,080	2,253,280	6%	-31%	31%	339,859	379,497	5.9 x	143,142	166,426	13.5 x	25.61	7.4 x
104	<b>ORACLE</b>	<b>ORCL</b>	166.64	466,085	543,888	19%	-39%	91%	54,933	60,977	8.9 x	29,528	32,457	16.8 x	4.92	33.9 x
105	<b>KONGSBERG GRUP</b>	<b>KOG-NO</b>	112.50	19,792	19,616	10%	-60%	246%	4,333	4,724	4.2 x	693	796	24.6 x	8.85	12.7 x
106	<b>NANO DIMEN</b>	<b>NNDM</b>	2.48	544	(204)	21%	-18%	-35%	-	-	-	-	-	-	3.95	0.6 x
107	<b>TRANSDIGM GR</b>	<b>TDG</b>	1,267.28	71,260	89,948	15%	-23%	99%	7,939	8,897	10.1 x	4,173	4,738	19.0 x	(111.89)	-11.3 x
108	<b>CONSTELLATION SOFT</b>	<b>CSU-CA</b>	3,090.61	65,495	68,401	12%	-22%	66%	9,685	11,397	6.0 x	2,572	3,074	22.2 x	117.82	26.2 x
<b>SPACS</b>																
109	<b>DHC ACQUISITION</b>	<b>DHCA</b>	0.97	37	40	1928%	-32%	-90%	-	0	396.6 x	-	(20)	-	0.47	2.1 x
110	<b>GIGCAPITAL5</b>	<b>GIA</b>	0.49	11	20	2875%	-28%	-95%	-	-	-	-	-	-	(0.45)	-1.1 x
111	<b>BREEZE HOLDINGS</b>	<b>BREZ</b>	11.03	44	44	9%	-9%	8%	-	-	-	-	-	-	(0.71)	-15.5 x
112	<b>TG VENTURE</b>	<b>TGVC</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	<b>BROAD CAPITAL</b>	<b>BRAC</b>	11.77	55	40	5%	-6%	-	-	-	-	-	-	-	1.66	7.1 x
114	<b>EVE HOLDING INC</b>	<b>EVEX-US</b>	5.44	1,619	1,408	38%	-57%	-47%	0	0	-	(133)	(155)	-	0.55	9.9 x
115	<b>SATIXFY</b>	<b>SATX-US</b>	1.53	130	181	56%	-80%	-84%	-	18	9.9 x	-	-	-	(0.98)	-1.6 x
116	<b>INTUITIVE MACHINES</b>	<b>LUNR-US</b>	18.16	1,641	2,080	8%	-88%	88%	89	228	9.1 x	(10)	(39)	-	(6.20)	-2.9 x

Data updated as of 12/31/2024.

\* Companies for which quarterly NTM and LTM data is not available, yearly numbers are used.

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