

QUARTERLY REVIEW OF GLOBAL PRIVATE INVESTMENT

# GENERATION SPACE INDEX

Q4 2024



GENERATION  
SPACE

# EXECUTIVE SUMMARY

The SpaceTech investment sector concluded 2024 on a strong note with a total 601 deals completed in the year, setting a new record and representing an almost 50% increase y-o-y. Despite a modest decline in quarterly investment from \$1.9bn in Q3 to \$1.8bn in Q4, total investments for the year reached \$8.6bn, marking a 25% y-o-y growth from \$6.9bn in 2023.

This quarter, investment activity continued to centre on capital-intensive sectors such as satellite, launch services, and space logistics. There was a notable increase in activity in Beyond Earth, with three out of the top ten deals from this segment. Firefly Aerospace secured the largest deal of the quarter, raising an over-subscribed \$175m Series D round.

European firms were notably active, with significant investments in The Exploration Company, ICEYE and ALL.SPACE. Meanwhile, Asia's increasing investments highlighted the growing competitiveness of the Chinese market. Throughout the year, the US and China alternated as leaders in SpaceTech investment, with the US ultimately ending 2024 maintaining its leadership position.

Seed-stage deals dominated the quarter, accounting for approximately 55% of deal count. After a challenging 2023 for Series A rounds, Series A activity rebounded in 2024. Later-stage rounds, particularly Series D+, also experienced significant growth y-o-y, signalling a recovery of growth investing and an healthy indicator for the overall SpaceTech market.

Standout deals in the fourth quarter included Apple's \$1.7bn investment in Globalstar for a 20% stake, and the \$1.25bn secondary sale of SpaceX shares, valuing the company at \$350bn. Before this transaction, SpaceX was valued at \$210bn following a secondary share sale earlier in the year. For the purpose of this report, both Globalstar and SpaceX deals have been excluded as they cannot be classified as SpaceTech VC investments.

Publicly listed SpaceTech companies exhibited strong performance during the fourth quarter, following the market uncertainty pre-US elections. Notable performers include RocketLab (+c.175%) and Redwire (+c.155%).

As we close the year, the outlook for 2025 remains positive. With strong government support, growing investor confidence, and accelerating technological advancements, we look forward to seeing how these trends shape investor decision-making in the year ahead.

## KEY HIGHLIGHTS FROM THE QUARTER

**\$8.6BN**

invested in the **Trailing Twelve Months (TTM) to Q4 24**  
(\$6.9bn in TTM to Q4 23)

**\$1.8BN**

invested in **Q4 24** (\$1.9bn in Q3 24)

**601**

deals in **TTM to Q4 24** (415 in TTM to Q4 23)

**133**

deals in **Q4 24** (149 in Q3 24)

**\$175M**

biggest deal closed in **Q4 24** (Firefly Aerospace)

**\$20M**

average deal size in **Q4 24** (\$18m in Q3 24)

**\$7.7M**

median deal size in **Q4 24** (\$3.9m Q3 24)

**Trump's Space and VC Heavy White House:** Silicon Valley may exert influence beyond just the tech ecosystem after President-elect Donald Trump appointed multiple tech leaders to key roles within his administration. Most notably is Elon Musk, who has been tasked with co-leading the newly created Department of Government Efficiency to reduce governmental bureaucracy. While his involvement could bring greater attention to the space sector, some predict that SpaceX may capture most of the benefit and extend its lead in the launch market. Concurrently, Musk's friend Jared Isaacman is set to lead NASA. Isaacman is a tech billionaire who made headlines earlier this year for being the first non-private citizens to complete a spacewalk on SpaceX's Polaris Dawn mission. While NASA has historically been at the forefront of space exploration, its progress has slowed down. Isaacman's appointment aims to bring a more commercial focus to the agency. If confirmed, he would oversee NASA's c.\$25bn budget and future missions. Other notable additions to the administration include Scott Kapor, managing partner at Andreessen Horowitz, nominated to lead the Office of Personnel Management; Sriram Krishnan, formerly a GP at Andreessen Horowitz, serving as an AI Advisor at the Office of Science and Technology Policy; David Sacks, partner at Craft Ventures and former PayPal COO, appointed as 'czar' of crypto and AI; and Ken Howery, co-founder of PayPal and Founders Fund, named U.S. ambassador to Denmark.

**Apple Acquires 20% Ownership of Globalstar:** Satellite operator Globalstar's stock price rose 97% through November and December after Apple announced its plans to invest more than a billion dollars into the company to expand its satellite network for iPhone satellite services. The two companies first partnered in 2022, with Apple rolling out an emergency

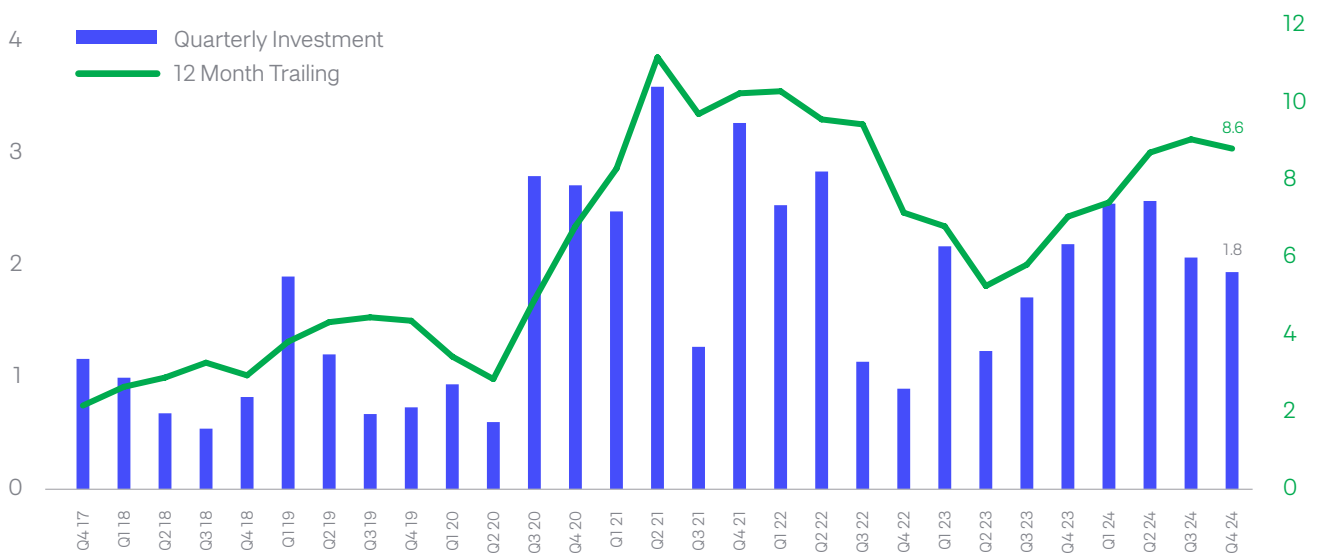
SOS feature via satellite for the iPhone 14. A year later, Apple gave Globalstar \$252m as a prepayment to cover the upfront costs of replenishing its LEO constellations. Currently, the company operates 31 satellites with 26 more planned. Given Apple's hefty investment, some reports estimate that 85% of Globalstar's network capacity will be allocated to Apple.

**SpaceX Valuation Jumps to \$350bn:** SpaceX reached a record valuation of \$350bn following a secondary share sale in 2024. This marks a 67% jump from an earlier 2024 secondary sale that valued the company at \$210bn. This most recent \$1.25bn tender offer, priced at \$185 per share, allowed investors and the company itself to buy shares from insiders, mostly to provide liquidity to employees and early shareholders. The company's near-monopoly in the U.S. launch market, amid competitors struggling to match its pace, may explain why SpaceX is buying back \$500m worth of common shares. This latest valuation crowns SpaceX as the world's most valuable startup and ranks the company higher than most of the companies in the S&P 500.

**Growing Demand Drives DoD's Commercial Space Program Funding Increase:** The US DoD is significantly boosting its investment in LEO satellite services, increasing spending from \$900m to a projected \$13bn over the next four years. This sharp rise is driven by growing demand across the military, highlighting the critical role high-speed satellite internet now plays in military operations. Services like SpaceX's Starlink are in high demand, and the government program is being expanded to accommodate increased competition, including Amazon Kuiper, which is expected to enter the LEO internet market in 2025. Prior to this funding increase, \$660m had already been spent towards Starshield, a militarized version of the Starlink service.

## INVESTMENT OVERVIEW

### Seraphim Quarterly Investment Tracker (\$bn)



Overall, 2024 was a year of strong performance for investments in SpaceTech companies. The year ended with TTM investment slightly declining compared to the previous quarter (\$8.6bn vs \$8.8bn), after five consecutive quarters of

growth. Similarly, quarterly investment also declined slightly, from \$1.9bn in Q3 to \$1.8bn in Q4.

## Seraphim Trailing 12 Months (TTM) Investment Activity Index (Q1 2018 = 100)



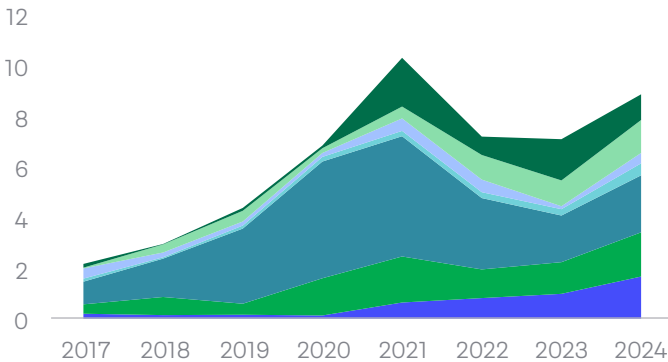
The Seraphim Space Index is a barometer of investment activity, showing the global volume and value of venture capital deals within the Space sector on a 12-month trailing basis, indexed against Q1 2018.

SpaceTech continues to significantly outperform general VC investment, which has remained stagnant following the pullback in light of economic uncertainty through 2022.

## DATA LIFECYCLE

■ Beyond Earth
 ■ Product
 ■ Analyse
 ■ Downlink
 ■ Platform
 ■ Launch
 ■ Build

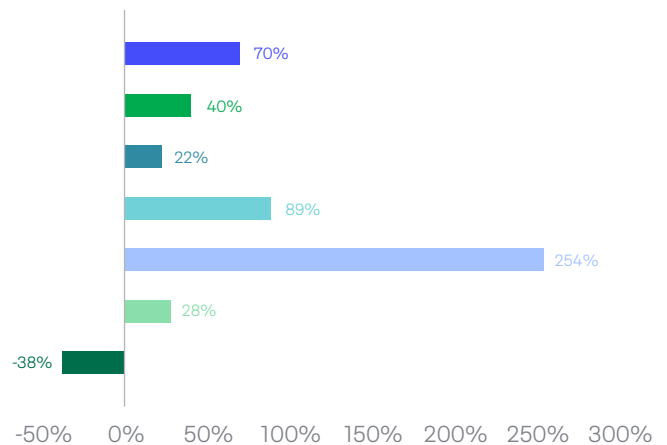
### Annual Investment (\$bn)



2024 was an exceptional year for space investments, with a total of \$8.6bn invested in SpaceTech companies compared to \$6.9bn in 2023, a 25% increase y-o-y. All segments, with the exception of Beyond Earth, recorded growth compared to the previous year, with notable performances in the Analyse (+c.250%) and Downlink (+c.90%) segments.

The strong performance in the Analyse segment was driven both by a significant increase in number of investments (+c.95%) and larger deal sizes. Major transactions in this segment were concentrated in Q1, which saw Exodigo's \$105m Series A, Insight M's \$52m Series D and AiDash's \$50m Series C. In contrast, Q4 witnessed fewer and smaller deals. For comparison, the largest 2023 investments in the Analyse segment were SatSure and Vibrant Planet's

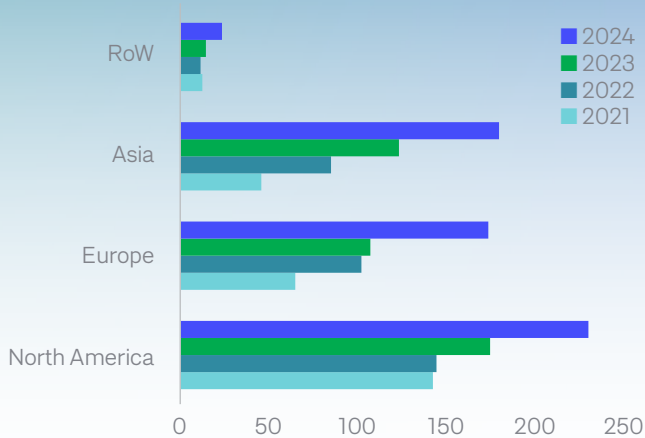
### Investment, TTM to 2024 vs 2023 (% Change)



\$15m Series A rounds. The Downlink segment also experienced notable growth, driven by a +c.60% increase in transaction volume and larger deal sizes, including ALL.SPACE's \$44m Series C round in Q4.

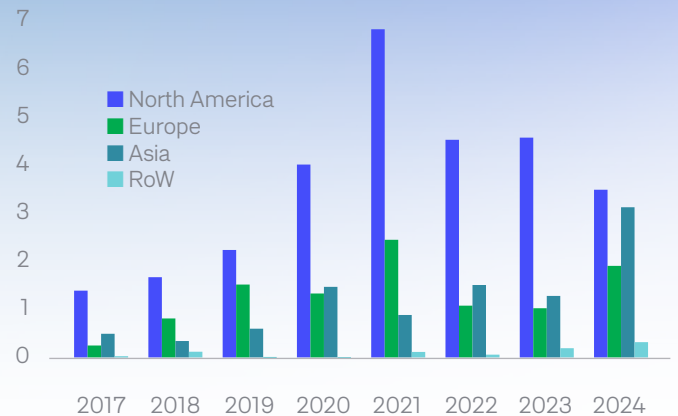
The decline in the Beyond Earth segment can be largely attributed to an exceptionally strong performance in 2023, which was driven by large investments including Axiom Space's \$350m Series C round and Sierra Space's \$290m Series D+ round. In comparison, the largest deal in this segment in 2024 was The Exploration Company's \$158m Series B in Q4.

## Number of Deals (TTM)



North America maintained its leadership position in 2024, recording the highest number of deals at 228 for the year. However, Asia has been steadily narrowing the gap in recent years and has now surpassed Europe in terms of deal activity for the second year in a row, with 178 deals compared to Europe's 172 in 2024. Within Asia, China accounted for the largest share, contributing 83 out of the 178 deals in the region.

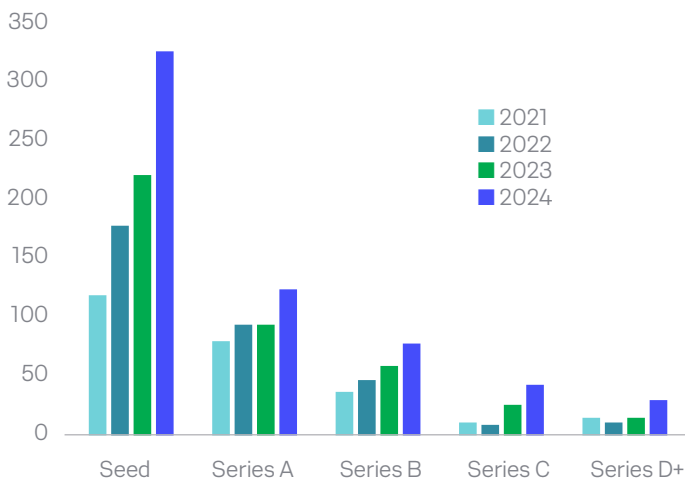
## Investment By Region (\$bn)



Investments in North America declined 25% y-o-y largely driven by a lack of SpaceX primary raises (vs their \$750m round in 2023), and smaller deals (6 deals above \$100m vs 9 in 2023). At the same time, other regions witnessed significant growth: Europe recorded an 85% increase y-o-y, while Asia surged by 145%. Notably, Asia outpaced North America during the first half of the year; however, the trend reversed in the second half, with North America finishing the year slightly ahead at c.\$3.4bn, compared to Asia's c.\$3bn. RoW also saw a c.65% increase y-o-y: notably, there was a significant uptick in investments in Africa, after years of little activity.

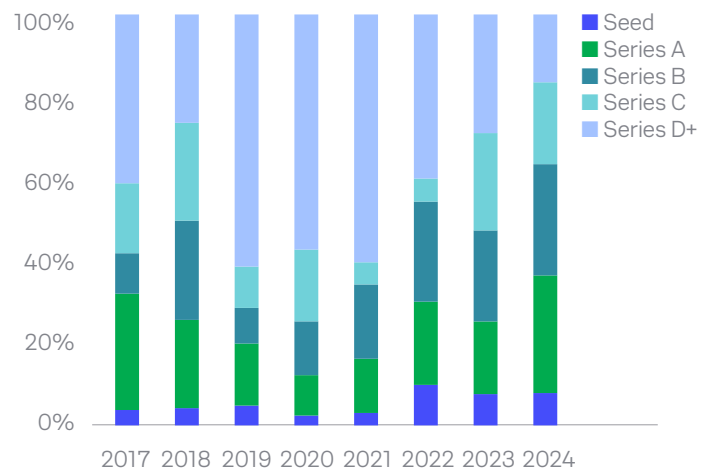
# STAGE OF INVESTMENT ANALYSIS

## Number of Deals (TTM)



Seed deals continued to dominate the investment landscape in 2024, with a significant increase y-o-y of approximately 50%. After a challenging 2023 for Series A rounds, 2024 saw a rebound in activity, reflecting renewed investor confidence. Later-stage rounds also experienced significant growth, with Series D+ rounds recording the largest y-o-y jump (+c.100%). We view this trend as a healthy indicator for the market and it aligns with the broader pattern of private companies remaining private for longer.

## Investment Concentration (\$bn)



2024 ended confirming the trend evidenced in the previous quarter: the landscape of space sector investment has shifted significantly compared to the 2019-2021 period, when the majority of funding was concentrated in a handful of mature Series D+ companies (e.g., SpaceX and OneWeb).

In 2024, Series D+ rounds accounted for approximately 17% of total investment, reflecting a notable decline in capital concentration among more established companies. Instead, the majority of investment was directed toward Series A rounds, which represented around 30% of total funding for the year.

# TOP 10 DEALS OF THE QUARTER

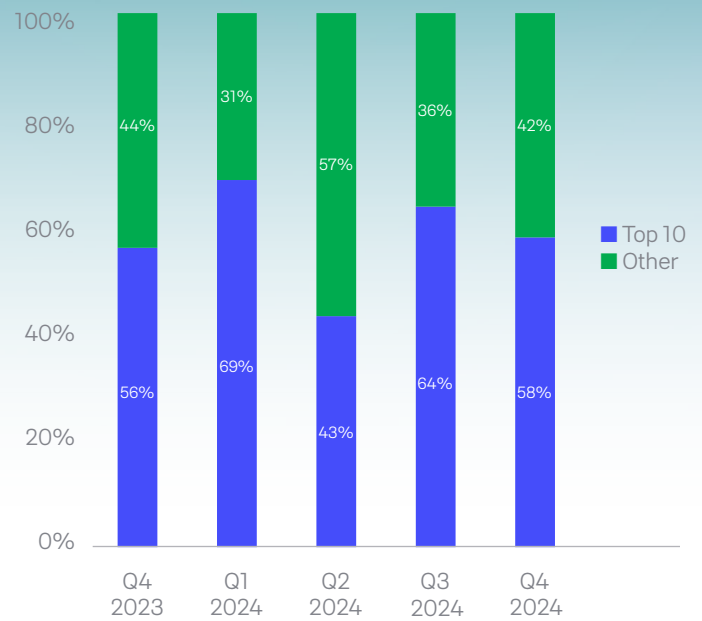
## Q4 2024 Top Deals

As in the previous quarter, the majority of this quarter's top deals were concentrated in capital-intensive sectors, such as satellite and space logistics and infrastructure technologies. Notably, three out of the top 10 deals originated from the Beyond Earth segment, with The Exploration Company and Impulse Space raising \$158m and \$150m respectively in their Series B rounds, and Inversion raising \$44m in a Series A round.

The largest transaction of the quarter was Firefly Aerospace's oversubscribed \$175m Series D round, which valued the company at over \$2bn. Firefly provides industry-leading space services spanning launch, lunar, and on-orbit programs.

Notably, European companies featured more prominently among the top deals this quarter: alongside The Exploration Company, ICEYE and ALL.SPACE raised a combined \$109m.

Chinese firms also maintained a strong presence in the top 10, with notable Series C and D+ rounds raised by Genesat and Landspace.



COMPANY	COUNTRY	DATA LIFECYCLE	SUB CATEGORY	STAGE	AMOUNT (\$m)
<b>Firefly Aerospace</b>	US	Launch	Rockets	Series D	\$175m
<b>The Exploration Company</b>	Germany	Beyond Earth	Space Logistics	Series B	\$158m
<b>Impulse Space</b>	US	Beyond Earth	Space Logistics	Series B	\$150m
<b>Genesat</b>	China	Platforms	Satellites - Telecoms	Series C	\$137m
<b>Landspace</b>	China	Launch	Rockets	Series D+	\$123m
<b>Fleet Space Technologies</b>	Australia	Platforms	Satellites - IOT Networks	Series D+	\$100m
<b>ICEYE</b>	Finland	Platforms	Satellites - Earth Observation	Series D+	\$65m
<b>Q-CTRL</b>	Australia	Build	Electronics & Robotics	Series B	\$59m
<b>ALL.SPACE</b>	UK	Downlink	Ground Terminals	Series C	\$44m
<b>Inversion</b>	US	Beyond Earth	Space Infrastructure	Series A	\$44m

## CONCLUSION AND OUTLOOK

2024 was an outstanding year for space sector investments, with total funding reaching \$8.6bn, a significant increase from \$6.9bn in 2023. The year also set a new record for deal activity, with over 600 transactions completed, compared to 415 in 2023, driven largely by a robust pipeline of seed-stage businesses. Additionally, there was notable investment activity outside of traditional VC deals, including Apple's \$1.7bn investment in Globalstar and SpaceX's \$1.25bn secondary share sale.

Following a period of market uncertainty prior to the US elections, publicly listed SpaceTech companies experienced strong investor interest in Q4, with many achieving double- and even triple-digit gains. Standout performers included RocketLab (+c.175%), and Redwire (+c.155%).

Looking ahead, we expect increasing competition between the US and China for strategic dominance in space. This rivalry is likely to intensify following the election of Donald Trump, bolstered by the DoD's expanded Commercial Space Program funding and the appointment of multiple tech leaders in the new US administration. With these developments, we remain optimistic about the continued growth and innovation in the space sector in 2025.

## VC FUNDS + RESEARCH + ACCELERATOR

### **Our Model:** Inception to exit support powered by smart capital

Seraphim is the world's leading specialist investor in SpaceTech.

Powered by smart capital from leading Space companies and government agencies, we have a unique model combining investment funds, accelerators, and an angel investor platform.

We use our panoptic view of the SpaceTech ecosystem to provide inception to exit support to the sector's most ambitious and fearless entrepreneurs as they aspire to harness the infinite potential of Space to help push the boundaries of what is currently possible by turning science fiction into science fact.

Seraphim Space Investment Trust Plc is listed on the London Stock Exchange (Ticker: SSIT)

### **Our Focus:** Businesses collecting & communicating data from above

We are focused exclusively on the multi \$trillion SpaceTech investment market.

We believe SpaceTech is at the nexus of mega-trends that will define societal change over forthcoming decades and has a unique role to play in addressing the world's most pressing problems.

Radical advances in the Space sector mean a data and connectivity tsunami is about to transform the world as we know it, driving the next major paradigm shift in the global economy.

We invest in companies that are enabling, generating and exploiting data being collected and communicated from above.



**Mark Boggett**  
CEO



**James Bruegger**  
CIO



**Rob Desborough**  
Accelerator &  
Early Stage

## Methodology & Taxonomy

We use a wide range of different data sources to compile our investment tracker. This includes proprietary, off-market information from our deal flow and network, deal databases such as Crunchbase, industry news sources such as SpaceNews and TechCrunch, and public announcements from companies themselves. We only include third party capital invested on an arm's length basis and therefore do not include personal investment that the likes of Jeff Bezos may make in their own space initiatives.



### BUILD

- Building & selling satellites, autonomous systems
- Components, sub-systems, complete systems
- Hardware (sensors), software (i.e. control system), hybrid (i.e. machine vision)



### LAUNCH

- Building & launching rockets
- Launch-related services



### PLATFORM

- Any data collection / space platform (i.e. smallsat, HAPs)
- Multi-modal: look, listen, communicate



### DOWNLINK

- Facilitate transmission of data from space / aerial platform back down to earth
- Satcoms & terrestrial comms networks
- Data storage, processing, security



### ANALYZE

- Analysis of data from space / aerial platforms
- A.I / machine learning enabled analytics



### PRODUCT

- Packaging of different data streams (space & non space)
- Tailored to specific use cases in specific verticals
- Location, monitoring, insight, mapping



### BEYOND EARTH

- In-Space infrastructure (i.e. Space stations)
- In-Space services (i.e. Satellite refuelling, servicing and repair)
- Utilising the microgravity environment for R&D and manufacturing

## Current Portfolio

We are the most prolific investor in SpaceTech globally. Across our different activities, we currently have a portfolio of more than 100 of the world's leading SpaceTech start-ups.

### Fund

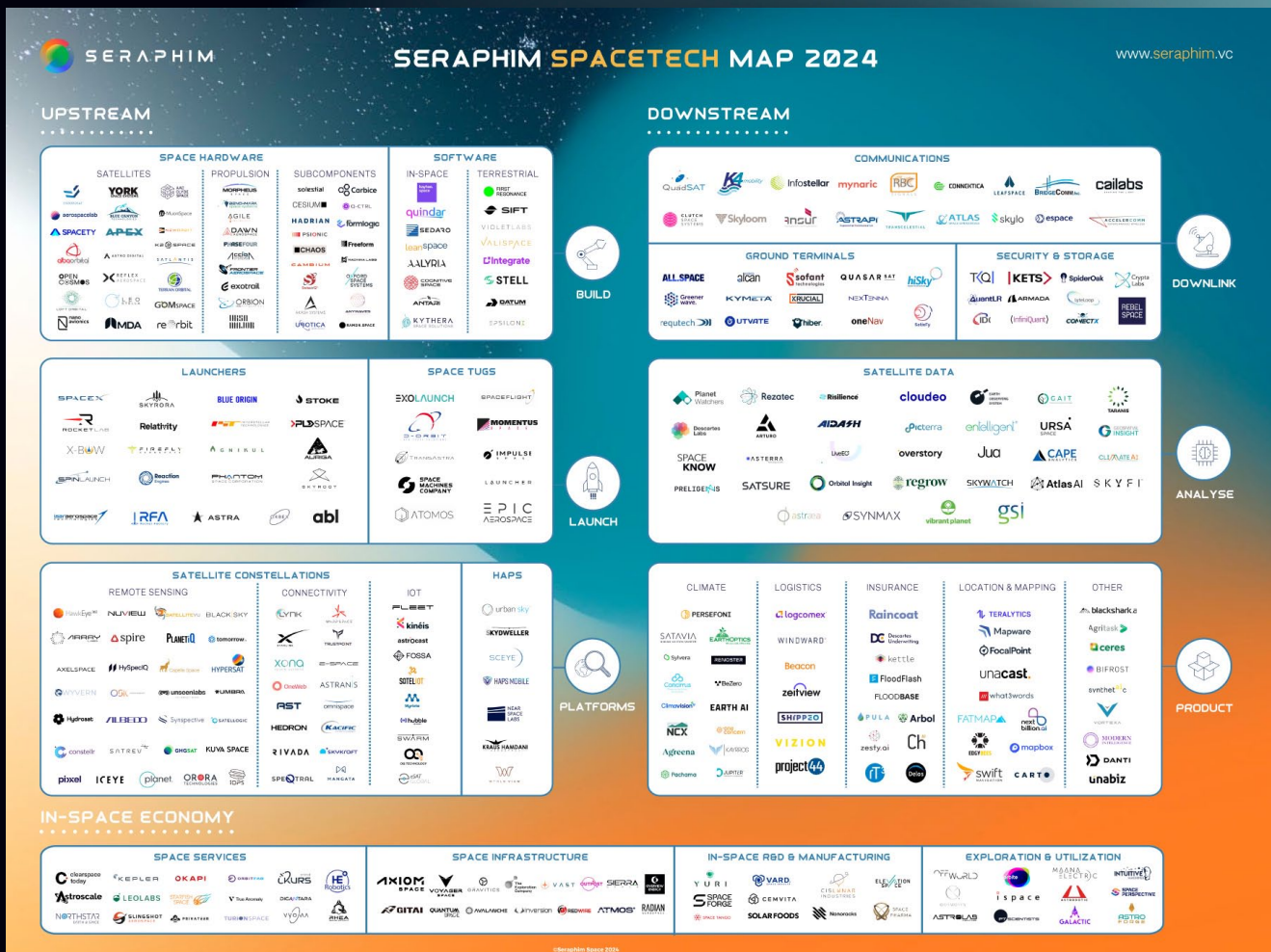


### Accelerator





We routinely publish our own research and insights on our website with a view to helping other investors share our excitement for the multi-decade transformational potential of Spacetech. Key periodic research we publish includes our widely recognised SpaceTech Ecosystem and Smallsat Constellation market maps.



## SERAPHIM SPACETECH ECOSYSTEM MAP 2024

Global VC backed emerging leaders per category.



[DOWNLOAD](#)

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