

VENTURE CAPITAL INDEX

SERAPHIM SPACETECH

Q2 2022



SERAPHIM

In terms of total capital raised, Space Tech investment has performed better than expected despite the economic downturn seen in the last quarter. Private investment in Space Tech reached \$12.2bn in the 12 months to Q2 '22, exceeding Full Year 2021 at \$12.1bn.

While growth stage investment slowed, Seed investment increased, with YTD Seed funding surpassing FY '21, by 40% at \$4.7bn. 2022 looks to be a record-breaking year for early-stage investment in Space Tech in both number of deals and total capital raised.

Overall deal volume fell to 90 deals closed in Q2, versus a record 128 in Q1 '22. Average and median deal sizes are up this quarter. Growth investments were concentrated this quarter in a small number of deals. SpaceX raised a \$1.7bn round (50% of capital raised this quarter), exceeding its 2021 raise of \$1.5bn and Sierra Space's Q4 '21 raise. SpaceX is now a mature (20 years old), high value company and continues to attract growth investors despite the overall contraction in growth capital.

Despite talk of a pull back from capital intensive businesses, the largest deals were found in the more capital intensive businesses in the Upstream category. 9 of the top 10 deals in Q2 were in the Upstream, Platform, and Launch categories.

Some sectors (Build and Beyond Earth) saw a higher number of deals but reduced total capital raised. In a year of record Seed investment, investors may be seeking to invest in longer-term or capital-intensive businesses at the Seed stage.

With new listing rules, SPACs have fallen out of favour. No new SPAC deals were announced in Q2 2022 – in stark contrast to the numerous deals announced and completed in 2021.

We currently anticipate that the economic slowdown will have an impact on investment through Q3 '22, and as such anticipate reduced levels of investment in the short term. Q2 2022 trends suggest that growth investment may be particularly affected.

Highlights

\$12.2BN

invested in last 12 months

\$3.2BN

invested in Q2 (\$3.2bn in Q1 '22)

90

deals closed in Q2 (128 in Q1)

370

on Seraphim Index

\$1.7BN

biggest deal closed in Q2 (SpaceX)

\$36M

average deal size in Q2 (vs. \$31m Q1)

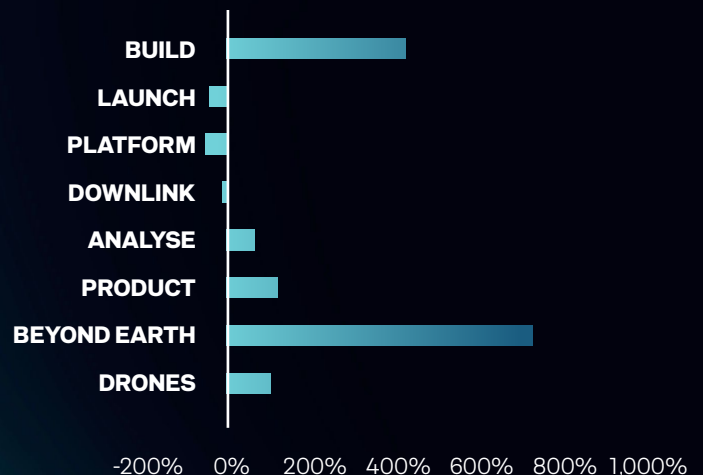
\$8M

median deal size in Q2 (vs. \$9.6m Q1)

0

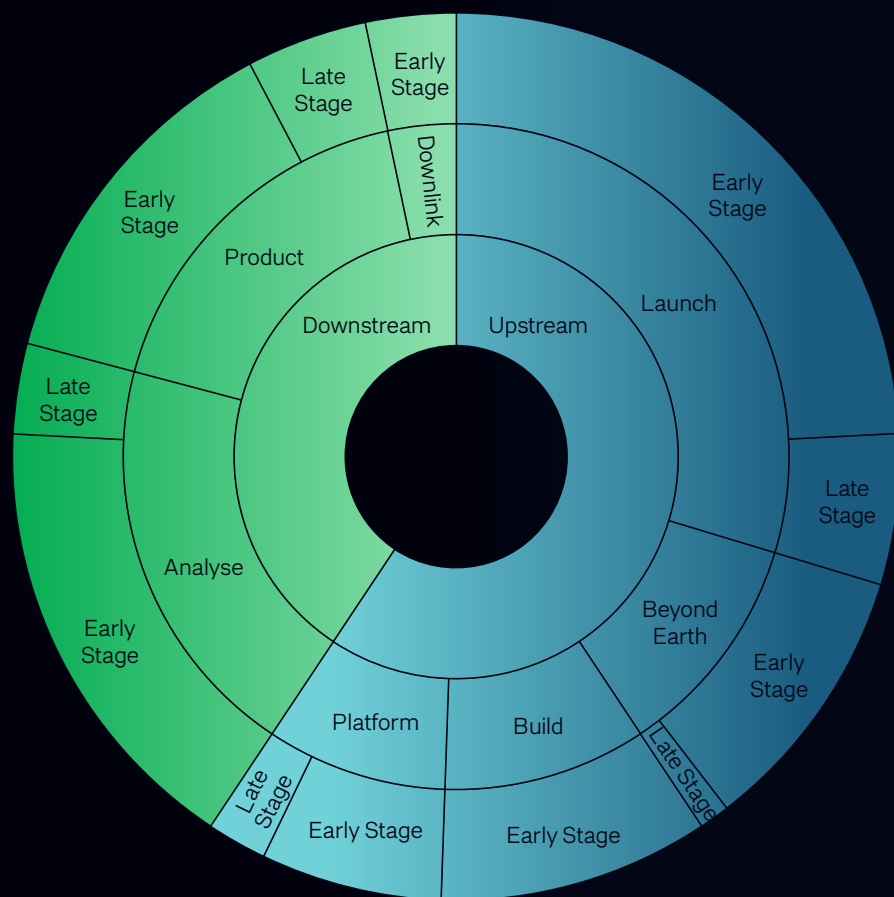
space-related SPACS announced (vs 1 in Q1)

Investment (\$), Year to Q2 '22 vs. Q2 '21 (% Change)



Launch and Platforms saw reduced TTM investment against the previous period. These are arguably the best funded and most mature segments of the New Space ecosystem to date. Following numerous SPAC transactions, many of these companies are well progressed and no longer require access to VC/private investment. As such, recorded investment into these categories has slowed. High growth in Build could be a result of increased government defence departments interest following Russia's invasion of Ukraine. Beyond Earth's significant increase in investment may be attributed to its low starting point.

Q2 2022 DEALS ACTIVITY (# DEALS)



The number of transactions in Q2'22 fell by 30% from the record highs of 128 seen in Q1'22. This was driven by the global economic downturn.

With overall number of deals down, the proportion of Downstream deals (Light blue) grew to account for 40% of Q2 deals, slightly up from 33% in the previous quarter.

Early stage transactions (Seed through to Series B) accounted for the majority of total deal volume at 83%. This is a modest decrease from Q1 at 91%. The number of growth deals is down.

Launch, Analyse, and Product were the categories with the highest number of deals, taking over from Platforms and Build which have historically seen more deals. This meant that in Q2, 2 of the top 3 categories were in the Downstream segment, correlated with more early stage deals in Downstream.

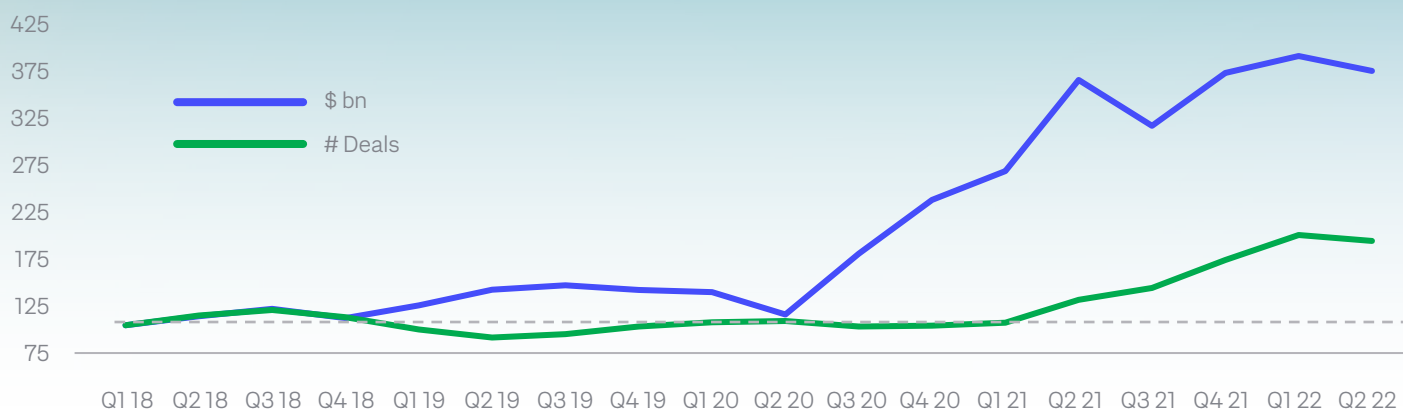
Q2 2022 Top Deals

Overall, the top 10 deals in Q1 accounted for 83% of the total funding for the quarter – a significant increase from 58% in the previous quarter. Most of this is driven by SpaceX's \$1.7bn round. Space Tech investment is international: North American, European and Asian companies are, as usual, represented in the top 10 deals of the quarter. Notably, South Korea features in the top 10 deals for the first time. Platform and Launch account for nine of the top ten deals

this quarter. Top investment remains concentrated in Upstream, though capital invested is clearly reduced from previous quarters. We anticipate a gradual shift towards greater investment in downstream analytics and applications as these sectors leverage the new capabilities and novel datasets provided by the recent activity in the Upstream segment.

COMPANY	COUNTRY	DATA LIFECYCLE	SUB CATEGORY	STAGE	AMOUNT (\$m)
SpaceX	US	Platform	Satellites - Telecoms	Series Q	1,725
Beta Technologies	US	Launch	Flight & Delivery	Series B	375
ExPace	China	Launch	Launchers	Series B	237
Capella Space	US	Platform	Satellites - Earth Observation	Series C	97
Orienspace	China	Launch	Launchers	Series A	60
Pachama	US	Product	Data Platforms	Series B	55
Wingcopter	Germany	Launch	Flight & Delivery	Series A	44
Pyka	US	Launch	Flight & Delivery	Series A	37
Quantum Systems	Germany	Launch	Flight & Delivery	Series A	32
Innospace	South Korea	Launch	Launchers	Series B	28

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



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

Q2 investment saw a slight slowdown in growth, as the normalised index fell to 370, down from the record 386 seen in Q1. However total capital investment is still strong and in line with Q4'21 which was at 368.

The number of deals has declined following recent record highs. Deal volumes in Q2 2022 fell to 90, down from record quarterly highs of 128 and 127 in the previous two quarters.

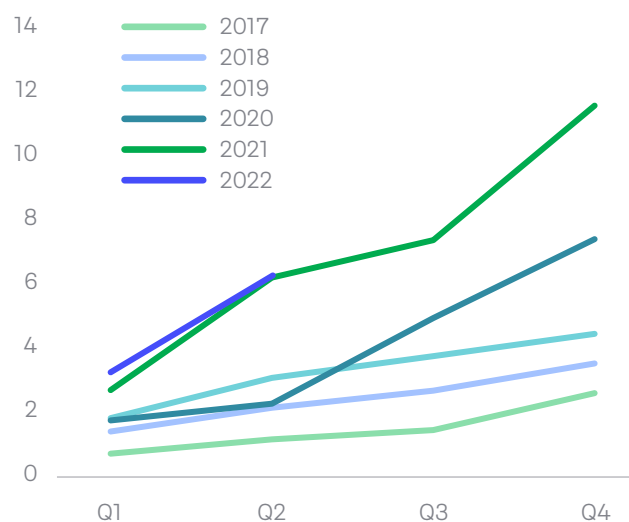
These figures show that while economic uncertainty is growing, and deal activity is down, appetite for space investment still far exceeds historic (2017 – 2020) norms.

Seraphim Quarterly Investment Tracker (\$bn Invested)



Overall global private investment into space tech remained roughly constant at \$3.2bn this quarter vs \$3.3bn in the previous quarter. The trailing 12 months value of investment declined slightly from record highs of \$12.7bn, to \$12.2bn. Quarterly investment in Q1 and Q2 2022 is still well above historic norms. Is the industry seeing a decline from record highs, that will bottom out at a higher level than previous norms? Seraphim will keep a close eye on activity in the latter half of 2022.

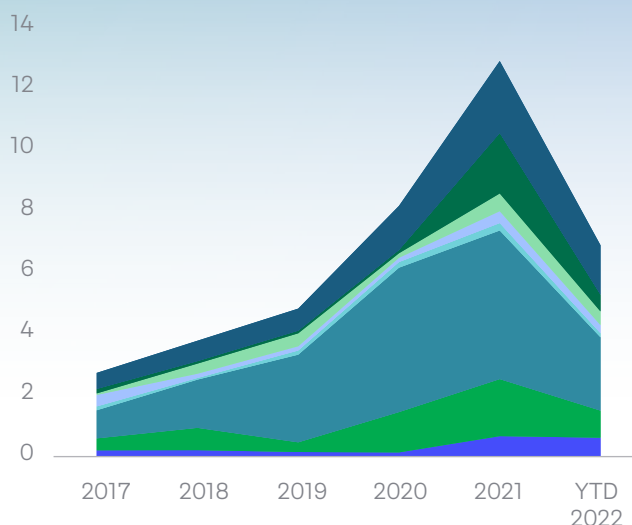
Seraphim Annual Investment Tracker (\$bn Invested)



2022 investment has had a strong start, matching the trajectory of 2021's record-breaking year. Capital invested in the six months to June 22 has already exceeded the whole year figures for 2017 – 2021. It remains to be seen whether, given current macro-economic headwinds, the second half of 2022 will result in 2021's figures also being surpassed.

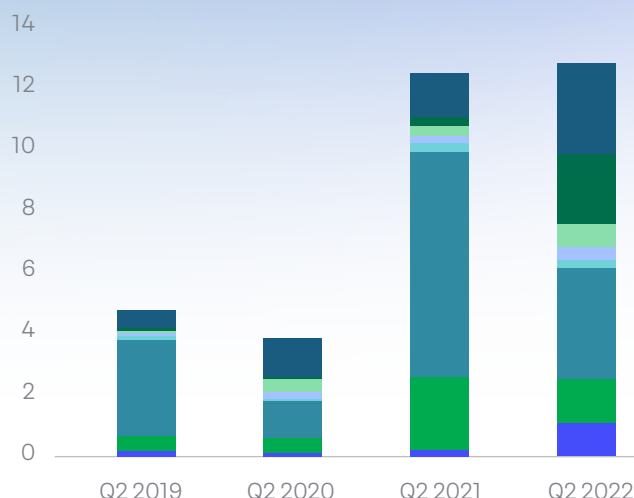
■ Drones ■ Beyond Earth ■ Product ■ Analyse
■ Downlink ■ Platform ■ Launch ■ Build

Annual Investment (\$bn)



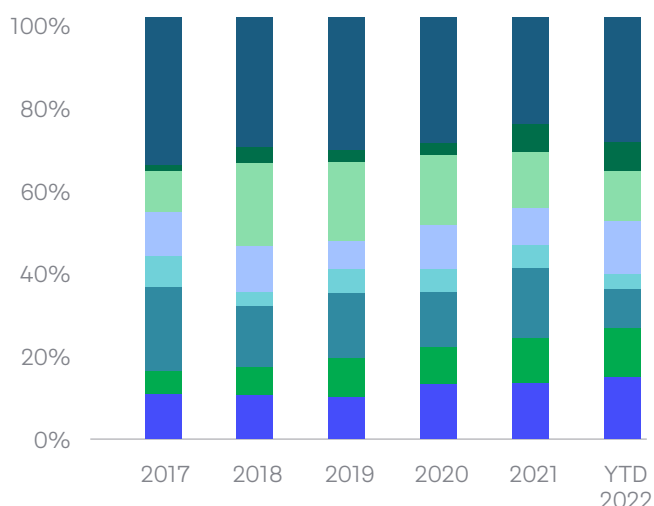
Most sectors are roughly in line with last year's activity, at close to 50% of their 2021 levels by Q2 2022. Notable exceptions include: Build, which is set to exceed 2021's record activity and Downlink, which is trending up slightly. Analyse, Product, and Drones are all up significantly, and may be set for a record breaking 2022. Beyond Earth is the only category which has dropped substantially, total investment falling by almost 90%.

Last 12 Months Investment (\$bn)



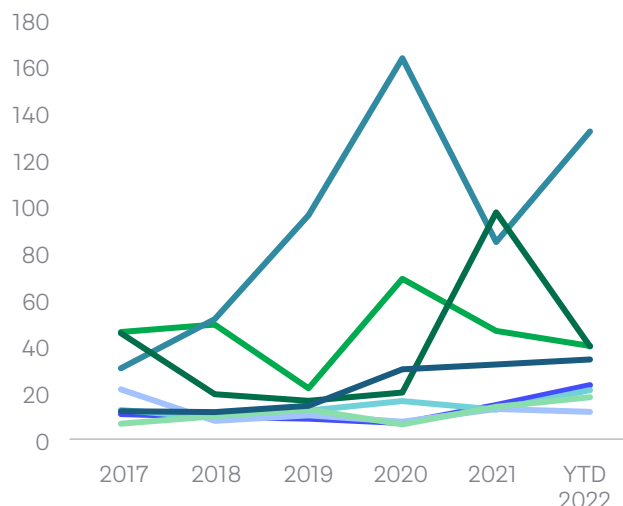
Despite a reduction in Beyond Earth funding in Q2 22, YoY growth remains high due to large transactions in Q4 21 (Sierra Space \$1.4bn) and Q1 22 (Virgin Galactic \$425m). Overall, Beyond Earth investment has sky-rocketed (7.4X) over the last 12 months despite the large drop off in Q2' 2022. Platform investment dropped dramatically: experiencing a 50% decrease (\$7bn to \$3.5bn) over the last 12 months.

Number of Deals



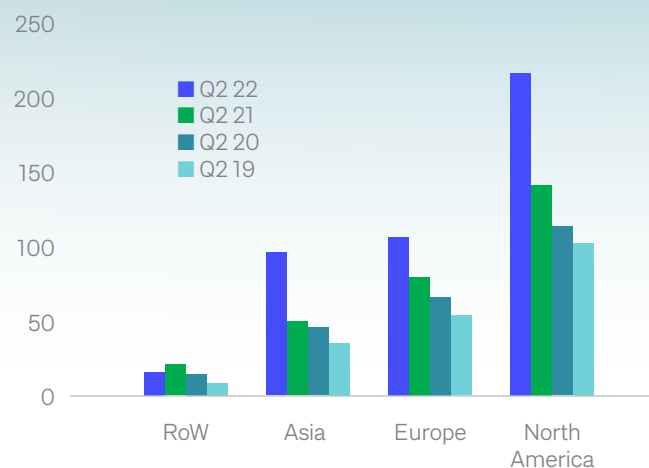
Most categories are showing higher number of deals, correlated with increased Seed investment in these sectors. Analyse is set to have a particularly strong year, likely a result of increased interest in geospatial analytics following Russia's invasion of Ukraine. Platform is a notable exception, where numbers of deals are down and the large amount of capital raised is concentrated in SpaceX's \$1.7bn round.

Average Deal Size (\$m)



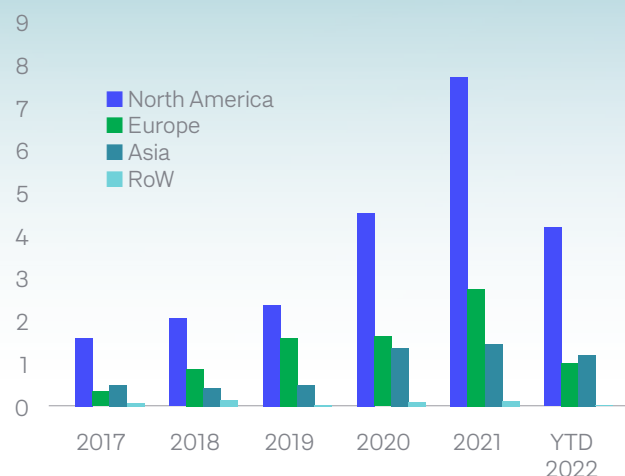
Average deal size for Beyond Earth dropped to \$39m from a high of \$97m in 2021, although much of 2021's activity can be attributed to Sierra Space's outlier \$1.4bn round. The current YTD figure better reflects the typical round size for the category. Platforms saw an increase in average deal size, although this again is largely due to SpaceX's \$1.7bn Series Q in Q2 22. Clearly space is a market where some exceptionally large rounds can drive much of the quarter's activity.

No. Deals Last 12 Months Investment



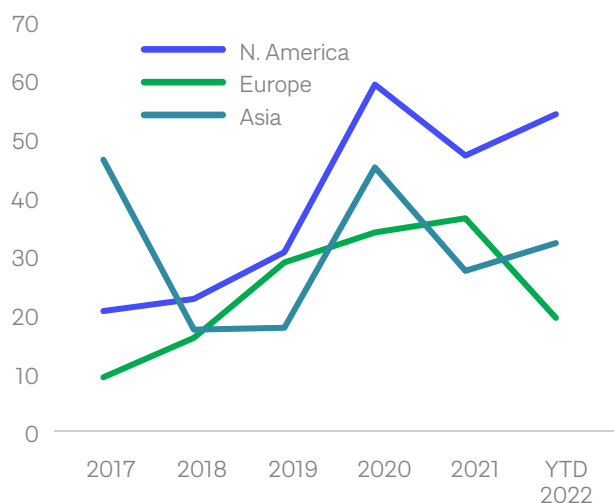
The number of deals in the last 12 month period is up by 49% from 282 in the LTM to Q2 21, to 421 in the LTM to Q2 22. Despite the economic downturn, TTM deal volume in Asia, Europe and North America continues to exceed all previous 12 month periods. ROW saw a reduction in the number of deals for the first time, suggesting that retraction in investment during an economic downturn may first affects companies in the more nascent space economies.

Investment By Region (\$bn)



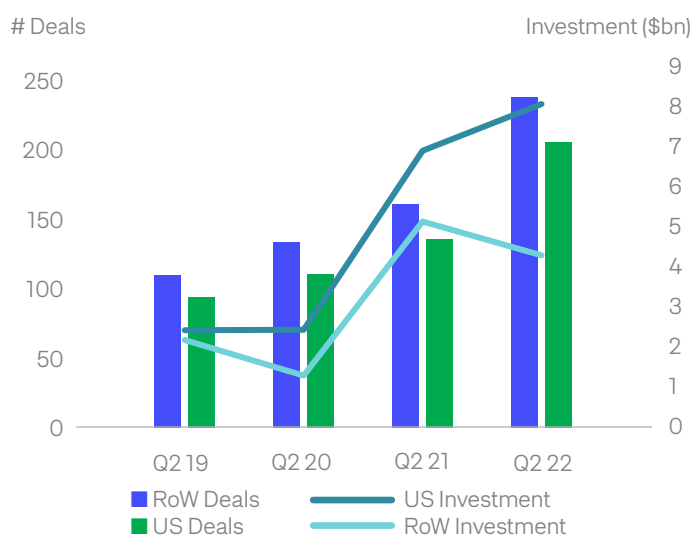
North America continues to attract the vast majority of investment for YTD 22. The level of investment for YTD 22 is nearly on par with that of 2020, exceeding all previous years. The large rounds raised by SpaceX and drone companies have contributed to this. Investment in Asia was primarily driven by China: 8 of the 20 deals recorded were Chinese deals, and were responsible for 81% of the investment in Asia. In terms of capital raised, European investment this quarter is concentrated in Seed and Series A.

Average Deal Size By Region (\$m)



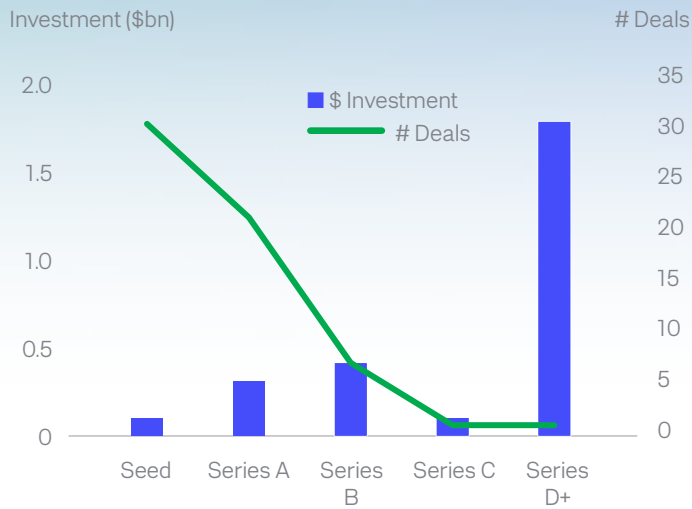
Average investment size in Asia has grown due to a higher proportion of later stage deals than in Europe. Conversely, the average deal size has reduced in Europe, where most deals were Pre-Seed, Seed, and Series A activity. North American average deal size grew to \$53m in YTD 22 but does not exceed the \$58m high of 2020.

US vs. RoW Investment Activity (LTM)



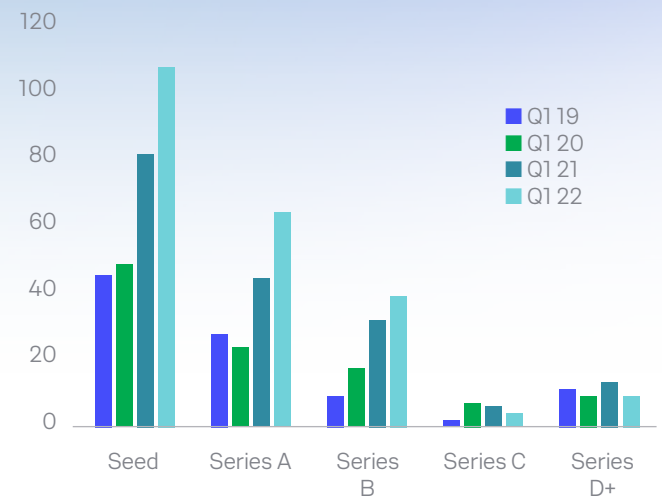
In the LTM to Q2 22, investment in the US has diverged significantly from the investment in ROW. US investment currently accounts for 65% of global Space Tech investment and increased from \$6.8bn to \$8bn, whereas RoW investment reduced from \$5.1bn to \$4.2bn in the same period. The market has always been stronger in US but this effect seems to have increased in the last 12 months.

Deals in Q2 2022



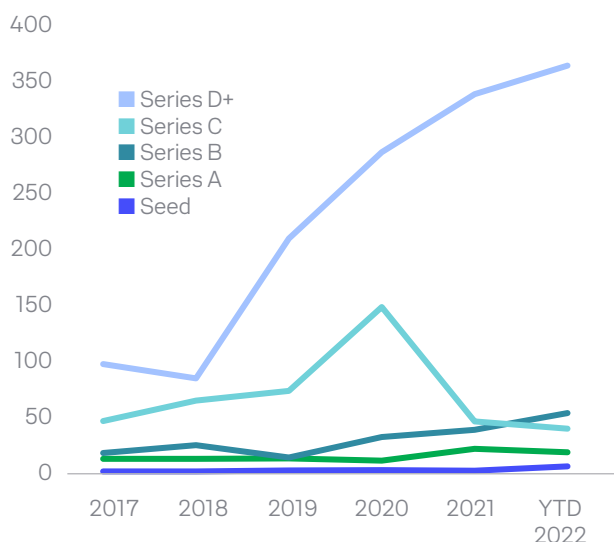
The proportion of Seed and Series A deals grew this quarter, accounting for 72% of deals in Q1 and 85% in Q2. The number of Series C+ deals fell from 7 in Q1 22, to 2 in Q2 22. This notable drop-off shows that growth capital is only available for the strongest of companies in the Space Tech ecosystem. The single series D+ round is attributable to SpaceX, and accounts for over 50% of Space Tech investment this quarter.

No. Deals YTD (Q2 2022)



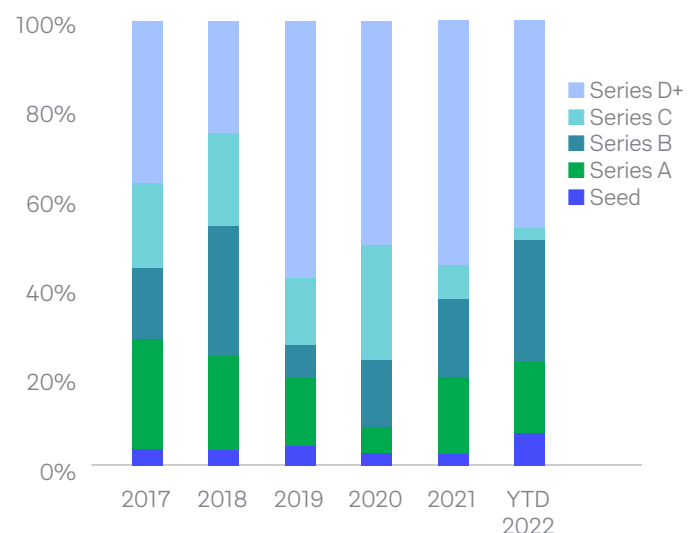
The number of deals in YTD Q2 remain at record highs in all deal stages with the exception of Series C and D+ (Series C down from 6 to 4, and Series D+ down from 13 to 9). Series A deals experienced the greatest increase over the previous 12 month period, growing by 44% from 43 for YTD Q2 21, up to 62 for YTD 22.

Average Deal Size (\$m)



With the exception of SpaceX's D+ deal, late stage rounds dropped or stagnated. Average deal sizes in Series A and Series B were largely consistent with previous years. Seed deals saw a 2.5X increase in size against 2021. This is due to a number of unusually large Seed deals in Q1 2022: Celestia Aerospace \$105m, E-Space \$50m, Radian Aerospace \$27.5m

\$ Invested By Stage (\$bn)



Seed funding in YTD 22 has already surpassed the \$3.4bn raise in FY 21, by 40% at \$4.7bn. 2022 is poised to be a record year for Space Tech Seed investment investing in terms of number of deals, investment raised, and average deal sizes. SpaceX (at Series Q) is the primary Series D+ investment and continues to dominate late stage investment.

Announced & Completed Space SPAC Deals

Following recent unfavourable market conditions, and considerable shareprice underperformance of SPACs, there has been minimal

SPAC activity in Q1 & Q2 2022. We anticipate this to continue and expect limited SPAC/IPO activity for the remainder of the year

ANNOUNCED	COMPANY	REGION	SPAC SPONSOR/ EXCHANGE	DATA LIFECYCLE / SUB CATEGORY	AMOUNT	PRO FORMA EV	MARKET CAP 30/6/22	ESTIMATED CLOSE DATE
Oct 20	Momentus	US	\$SRAC / Nasdaq	Launch / Space Tugs	\$247m	\$667m	\$176.6m	Listed
Dec 20	AST&Science	US	\$NPA / Nasdaq	Platform / Satcoms	\$462m	\$1.4bn	\$325.9m	Listed
Dec 20	Blade Urban Air Mobility	US	\$EXPC / Nasdaq	Launch / Flight & Delivery	\$365m	\$825m	\$317.3m	Listed
Feb 21	Astra	US	\$HOL / Nasdaq	Launch / Rockets	\$500m	\$2.1bn	\$327.6m	Listed
Feb 21	Spire	US	\$NSH / NYSE	Platform / Earth Observation	\$265m	\$1.6bn	\$162.2m	Listed
Feb 21	Archer Aviation	US	\$ACIC / NYSE	Launch / Flight & Delivery	\$857m	\$1.7bn	\$755.3m	Listed
Feb 21	Joby Aviation	US	\$RTP / NYSE	Launch / Flight & Delivery	\$1.6bn	\$4.5bn	\$3.0bn	Listed
Mar 21	BlackSky	US	\$SFTW / NYSE	Platform / Earth Observation	\$285m	\$1.1bn	\$278.5m	Listed
Mar 21	Rocket Lab	US	\$VACQ / Nasdaq	Launch / Rockets	\$777m	\$4.8bn	\$1.8bn	Listed
Mar 21	Redwire	US	\$GNPK / NYSE	Beyond Earth / Space Infrastructure	\$170m	\$0.62bn	\$191.0m	Listed
Mar 21	Lilium	Europe	\$QELL / Nasdaq	Launch / Flight & Delivery	\$584m	\$2.6bn	\$687.2m	Listed
May 21	ArQit	UK	\$CENH / Nasdaq	Platform / Satcoms	\$115m	\$1.1bn	\$769.4m	Listed
June 21	Vertical	UK	\$BSN / NYSE	Launch / Flight & Delivery	\$300m	\$2.1bn	\$658.8m	Listed
Jul 21	Planet	US	\$DMYQ / NYSE	Platform / Earth Observation	\$590m	\$2.4bn	\$1.2bn	Listed
Jul 21	Satellologic	South America	\$CFV / Nasdaq	Platform / Earth Observation	\$262m	\$780m	\$371.1m	Listed
Aug 21	Virgin Orbit	UK	\$NGCA.O / Nasdaq	Launch / Rockets	\$228m	\$3.3bn	\$1.3bn	Listed
Oct 21	Terran Orbital	US	\$TWNT / NYSE	Build / Satellite Manufacturers	\$255m	\$1.6bn	\$630m	Listed
Dec 21	Tomorrow.io	US	\$PTOC / Nasdaq	Product / Data Platforms	\$420m	\$1.2bn	-	Cancelled
Dec 21	Eve	South America	\$ZNTE / Nasdaq	Launch / Flight & Delivery	\$377m	\$2.4bn*	\$1.6bn	Listed
Jan 22	D-Orbit	Europe	\$BREZ / Nasdaq	Launch / Space Tugs	\$185m	\$1.3bn	-	Cancelled
Mar 22	SatixFy	Europe	\$EDNC / Nasdaq	Build / Space Hardware	\$230m	\$632	-	Q3/Q4 22

ANGEL PLATFORM + ACCELERATOR + VC FUNDS + RESEARCH

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.



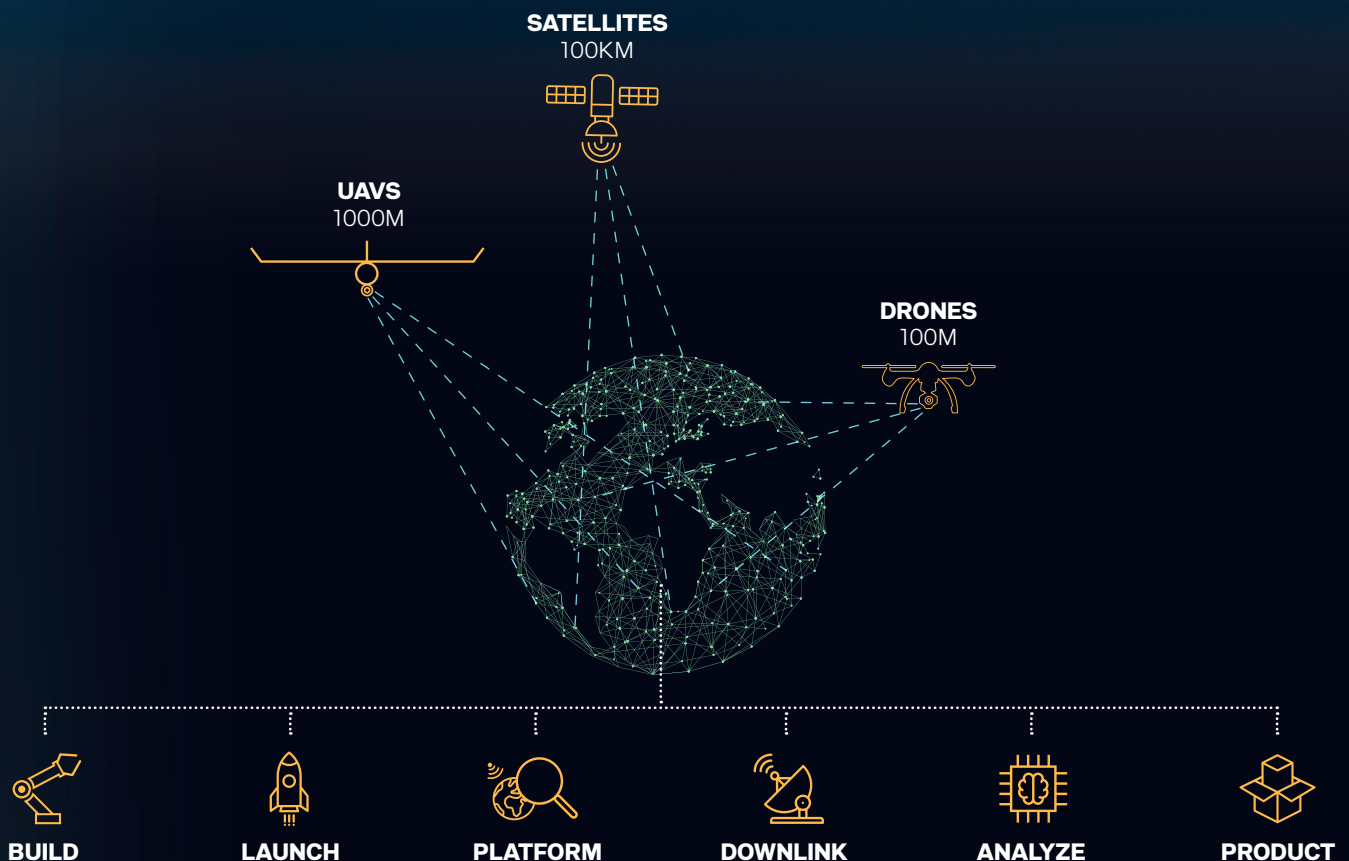
Mark Boggett
CEO



James Bruegger
CIO



Rob Desborough
Accelerator & Early Stage



Current Portfolio

We are the most prolific investor in SpaceTech globally. Across our different activities, we currently have a portfolio of more than 70 of the world's leading SpaceTech start-ups.

Fund



Accelerator



Seraphim News

[Isotropic Systems has rebranded to ALL SPACE](#)

[Xona Space Systems Successfully raised over \\$25m in funding to date – including funds from GPS satellite maker Lockheed Martin](#)

[Satellites will act as thermometers in the sky](#)

[UK government gives the green light for world's longest drone 'superhighway'](#)

[Portfolio company SatelliteVu strikes deal with landmark to provide climate change data to the UK land & property market sectors](#)

[Portfolio company Operan secures \\$12 million to create a new standard for autonomous machines](#)

[Astroscale announces arrival of Nick Shave as managing director](#)

[Seraphim Space Camp mission 8 alumni Ubotica technologies raised \\$4.2million seed round](#)

[SpaceX successfully launches Falcon 9 including satellites from 5 Seraphim portfolio companies](#)

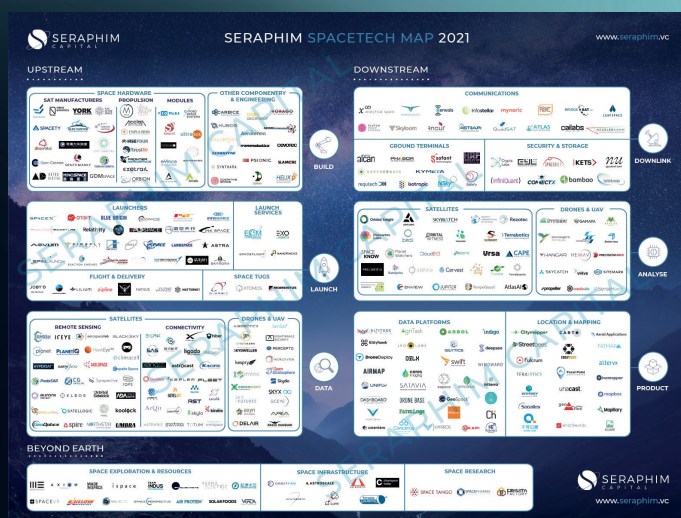
[Seraphim Space Camp launch Mission 9](#)

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.

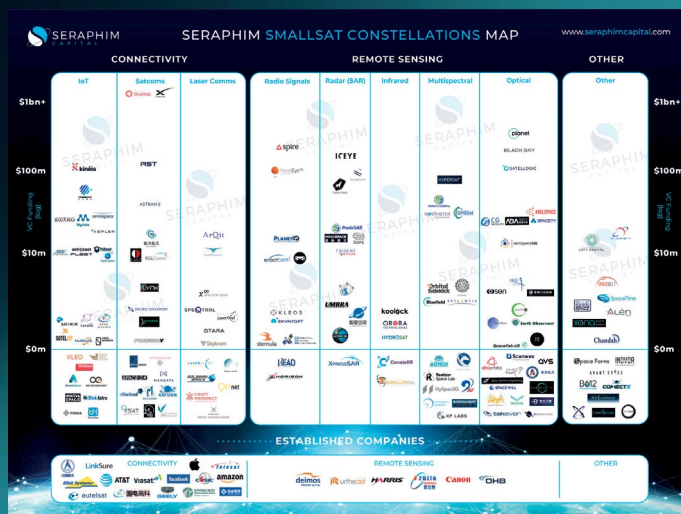
Further Research

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 Spacetechnology. Key periodic research we publish includes our widely recognised SpaceTech Ecosystem and Smallsat Constellation market maps.



SPACE TECH MAP

Global VC backed emerging leaders per category



SMALLSAT CONSTELLATION MAP

Global VC backed companies across categories

