



 NEWSPACE CAPITAL

Space Industry Review

Q3 2023



Space companies raised 39% more capital in Q3 compared to the previous quarter, demonstrating the space industry's continued strong growth driven by persistent demand for productivity and climate technologies. As the industry emerges as a catalyst for sustainable growth, it further motivates investors to venture into this domain, even as a challenging economic environment and limited liquidity subdue other sectors.

Q3 delivered a mixed bag of economic news. In the US, stronger than expected growth, upbeat hiring and high utilization numbers on the backdrop of easing inflation prompted the IMF to anticipate “a softer landing than earlier expected.” In the meanwhile, the other side of Atlantic is flirting with a recession. Sticky inflation, sluggish manufacturing and productivity numbers undermine the efforts to mend the economy both in the EU and the UK. **The aerospace industry continues to be a bright spot on the gloomy canvas with stellar performance across the Europe.**

The evident success of the space industry comes on the back of the insatiable demand for the productivity gains as the world is sobering from the “cheap money” binge. In our Q1 and Q2 Space Industry Review, we illustrated how space infrastructure emerges as an invisible backbone of the global economy. Space-enabled applications act as a catalyst that brings efficiency and productivity into many industries - from transportation and agriculture, to communication and finance.

The demand drives a growing market for better analytics, more precise positioning, stable communication and ubiquitous connectivity that are powered by constantly evolving satellite and ground infrastructure. Space industry is currently outperforming even best performing economies and space investments are beating wider market. After a slight dip in Q2, **space companies raised 39% more investment in Q3 than in the previous quarter** – well above the 7% growth of the overall funding globally. Moreover, space companies were responsible for some of the larger funding rounds.

As space is contributing to the health of the global economy, it is also helping to protect and revive our planet. And ahead of the COP28 UN Climate Change Conference in the UAE that kicks off in November, our In Focus section covers the critical role that space plays to the global climate strategies. Afterall, **doing well and doing good should go hand in hand!**

Enjoy the read!



Bogdan Gogulan
CEO & Managing Partner

In Focus: The Role of Space in Sustaining Our Planet

Space provides an unparalleled vantage point that destines space technology to make significant contributions to the climate-related strategies.

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Economic Review

The aerospace industry continues to be a bright spot on the gloomy canvas with a stellar performance across the UK and the common market.

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Investment Review

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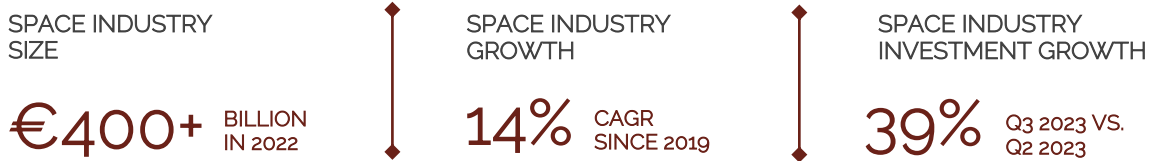
Portfolio Review

In the final section we share our team's rationale for investing in the leading growth-stage companies, the fundamental challenges they solve and how they help to deliver more sustainable and equitable economic growth.

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Highlights

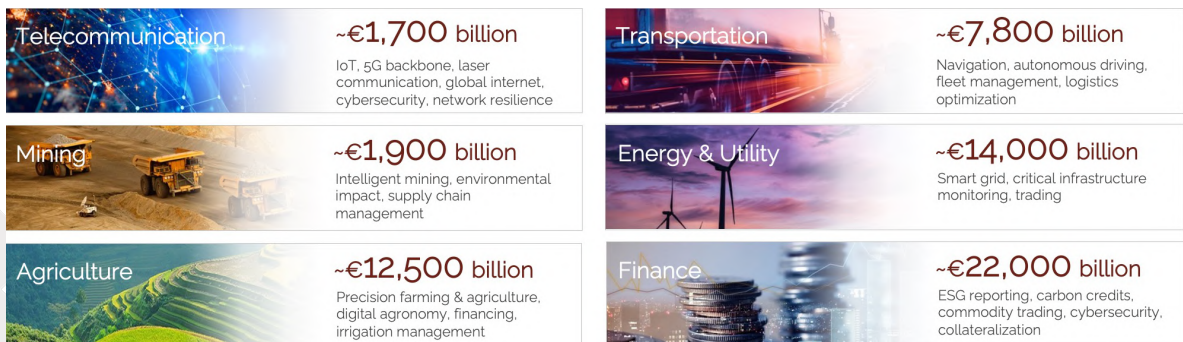
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Space holds the key to solving the productivity problem – as well as creating a more sustainable world, and offering attractive investor returns on the way.



The space-based products and services allow to unlock new productivity gains and growth opportunities across multiple industries that are worth trillions of euros.



Space is the next major domain. If space isn't part of your strategy, it should be - don't be left on the ground.
 (McKinsey & Company, March 2023)

In Focus: The Role of Space in Sustaining Our Planet

Space traverses a web of interrelated sectors, including agriculture, energy, finance, insurance, logistics and information technology. This distinctive viewpoint destines space technology to be a significant contributor to global climate strategies.

Space-enabled technologies are proving invaluable in the fight against climate change. Satellite data, for example, is critical for monitoring the world's rainforests. Through the use of satellites that bounce signals off the forest canopy, it becomes possible to measure the height of trees, detect illegal deforestation activities, and assess the progress of reforestation initiatives. This data is particularly beneficial for companies engaged in carbon credit programs that support rainforest protection efforts in remote regions where on-site verification can be challenging.

The voluntary carbon market is seen as a significant avenue for accelerating the transition to a net-zero future, especially when forest conservation and afforestation projects are rigorously monitored and documented. The ultimate goal is to create a robust \$50+ billion carbon credit market and provide validation and underwriting for new restoration projects by utilizing satellite imagery and analytics. Providing high-resolution real-time data on tree cover, height, and above-ground biomass will significantly improve our understanding of the effectiveness of carbon projects contributing to global climate efforts.

Below we look at some of the major factors causing climate change emissions from human activities, wildfires and agriculture, and how space-enabled technologies can mitigate their impact.

In the US, starting in 2024, companies producing "excess" methane emissions will face fines of \$900 per tone, increasing to \$1,500 per tone in 2026.

Anthropogenic Emissions

The role of satellite technologies in reducing emissions resulting from human activity is becoming increasingly evident. Independent research commissioned by Inmarsat found that these technologies are already lowering global carbon emissions by a staggering 1.5 billion tonnes (or 1.5 gigatons) annually. To put this into perspective, this is equivalent to nearly four times the entire UK's annual emissions in 2021 or the cumulative emissions from 50 million cars throughout their lifetime.

Moreover, the potential for further emissions reductions through the universal adoption of satellite technologies is substantial. According to the analysis by Globant, these technologies could potentially increase annual CO₂ savings to up to 5.5 billion tonnes, based on current technology capabilities alone. This would represent roughly one-sixth of the total carbon emissions required to limit the increase in global temperature to below 1.5°C by 2030.

The research indicates that the world is currently missing out on up to 4 billion tonnes of immediate CO₂ reductions by not fully harnessing the decarbonizing capabilities of satellite technologies. These technologies offer benefits such as fuel consumption savings and improved routing in transport, energy use optimization, and even methane emissions prevention.

Methane emissions, the second-largest contributor to global warming after carbon dioxide, have been on the rise since 2007 and pose a significant threat to staying below a 1.5°C increase in global temperatures. These emissions can originate from various sources, including oil and gas infrastructure, landfills, wetlands, and livestock. Satellite technology has become a game-changer in detecting and monitoring methane emissions, which trap 80 times more heat than carbon dioxide over a 20-year period.

Current climate governance heavily relies on self-reported emissions data from companies and governments. Independent satellite-based data often reveals higher emissions estimates, indicating a gap between these measurements and emissions calculated by independent models. The precision of satellite-based data can enable governments to fine or tax methane leaks, providing a more effective means of controlling emissions. In the US, starting in 2024, companies producing "excess" methane emissions will face fines of \$900 per tonne, increasing to \$1,500 per tonne in 2026.

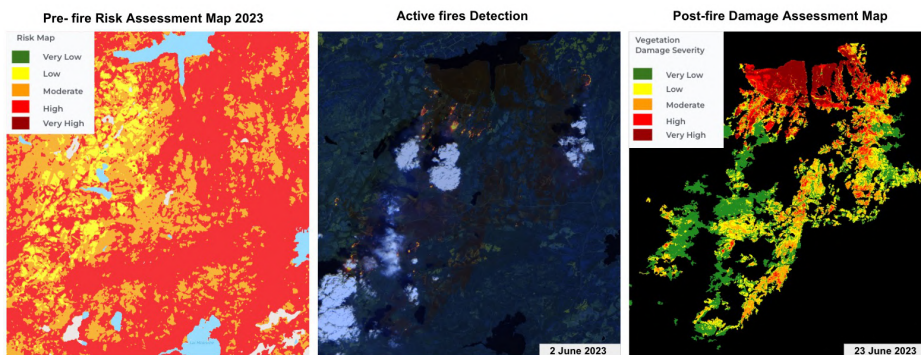
Wildfires

Wildfires are a natural part of many ecosystems, and while they emit greenhouse gases and aerosols such as carbon dioxide, methane, and black carbon, the regrowth of vegetation in burned areas typically balances out these emissions, resulting in a net-neutral effect on climate. However, with the increasing frequency and scale of wildfires due to climate change, the released greenhouse gases may not be entirely offset if plants cannot mature before burning or if the newly established vegetation is less efficient at carbon uptake. According to the International Energy Agency, wildfires emit about 8 billion tonnes of CO₂ per year. If we take account of CO₂ offset by renewed forest growth, the net emissions make up 5% to 10% of annual global CO₂ emissions each year.

The devastating impact of wildfires is evident from recent events. In 2019, wildfires caused an estimated \$4.5 billion in damage in California and Alaska. In August 2020, the Western United States experienced a severe wildfire outbreak, with fires spreading across California, Oregon, and Washington. This period saw five of the six largest wildfires on record in California, dating back to 1932. These fires merged and escalated into unprecedented mega-fires due to strong winds and hot, dry conditions. The economic toll of this record-breaking wildfire season exceeded \$19 billion, with \$16.5 billion in property damage.

Moreover, hundreds of forest fires since early May have released nearly 160 million tonnes of carbon, as reported by the Copernicus Atmosphere Monitoring Service (CAMS). This staggering release is equivalent to nearly 600 million tonnes of carbon dioxide, highlighting the urgent need for innovative tools and strategies to predict and mitigate the impact of these disasters.

In the face of such a disaster, space-enabled technologies provide unique tools to not only analyze past events but also predict future occurrences, forecasting the likelihood of wildfires in specific areas or around particular assets by monitoring various factors, including vegetation density, rainfall levels, proximity to roads, and common wind patterns. NewSpace Capital portfolio companies ICEYE and Kayrros are both providing wildfire detection analytics for government agencies, insurance companies and other stakeholders that tackle this important issue. This data not only contributes to the creation of more precise models, which aid in forecasting and responding to wildfires, but it also offers firefighters invaluable, potentially life-saving real-time information. This enables them to anticipate the progression of active fires and take preventive measures to contain their spread.



Source: Kayrros

Agriculture

The agrifood industry, a \$7.8 trillion global market that employs 40% of the world's workforce, faces challenges in scaling sustainably with current practices. Human agricultural activities, including livestock rearing, account for 96% of the mass of all mammals on Earth, while only 4% comprises other wildlife. Most birds are poultry, primarily chickens bred for human consumption. This unbalanced ecosystem poses a threat to planetary boundaries, with agriculture projected to use 70% of Earth's greenhouse gas emissions 'budget' by 2050.

Despite that, we still fail to feed humanity. As many as 828 million people, or 9.8% of the world's population, are affected by hunger. According to the World Health

Organization, around 2.3 billion people in the world (29.3% of the world's population) were moderately or severely food insecure in 2021. And the situation is expected to get worse, with a 56% shortfall projected between current food production and what will be needed by 2050.

Current agricultural practices also pose a significant risk to the stability of ecosystems and biodiversity. Soil erosion, estimated at 24 billion tonnes annually, results in a \$480 billion financial loss each year, and there has been a 50-70% loss of organic carbon from agricultural soils globally. These challenges highlight the necessity for a holistic and sustainable approach to food production.

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SPACE INDUSTRY REVIEW – Q3 2023

Addressing these issues involves tackling food waste throughout the supply chain, increasing agricultural productivity, and adopting digital agronomy technologies for precision farming and natural capital management. Space-enabled technologies like Earth Observation, Global Navigation Satellite System (GNSS), satellite communication and connectivity play a critical role by enabling yield estimation and optimization, more sustainable soil, water and fertilizer usage, as well as autonomy of equipment and continuous monitoring.

The World Economic Forum's report, "Space Applications in Agriculture: Enhancing Food and Water Security, Improving Climate Action", published in collaboration with McKinsey & Company, underscores the positive impact of satellite technology on the agricultural sector.

One notable example is the early detection of pests through hyperspectral and optical satellite imagery, which, if implemented on a large scale, has the potential to save up to 0.8 billion tonnes of crops annually.

Additionally, satellite-informed irrigation improvements can lead to a reduction in water usage by 5-10%, equivalent to saving up to 2.8 billion liters of freshwater.

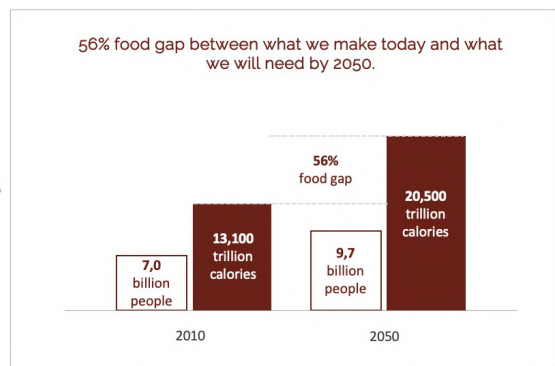
These advancements result in not only environmental and societal benefits but also economic returns. Reductions in food waste could contribute an additional \$150-175 billion in economic value for producers, as per analysis based on data from the UN Food and Agriculture Organization. Moreover, a 5% cost reduction translates to \$7-8 billion in input savings for growers.

In the US, 29% of row crop farmers and 45% of specialty crop farmers are already using or planning to employ Earth Observation within the next two years.

Importantly, the adoption of Earth Observation technology in agriculture is already gaining momentum. According to McKinsey & Company's 2022 digital farmer adoption survey, 29% of row crop farmers and 45% of specialty crop farmers in the US are already using or planning to employ Earth Observation within the next two years. These numbers are even higher in South America and Europe. Furthermore, the younger generation of operators is increasingly taking on management roles, with 60% of current users being under 44 years of age. As a result, the market for space-borne insights in agriculture is projected to double by 2030, reaching nearly \$1 billion. This growth reflects the

widespread recognition of the value and potential of satellite technology in enhancing food security, reducing waste, and improving resource efficiency in agriculture.

A good example of a company providing space-borne insights is NewSpace Capital portfolio company Kayrros. Kayrros provides the tools to monitor emissions, and at the same time address economic and social impact of agricultural activities. For example, it can monitor rice planting and predict harvest quality in West and Central Africa that helps people on the ground prepare in advance for possible food shortages and price instability.



Space technology is transforming how we do things on Earth. The value of space technologies is becoming more widely recognized and their usage is increasing. As the costs of launch, satellites and ground infrastructure come down and resolution improves, Earth Observation satellites help address food waste, freshwater usage and greenhouse gas emissions; prevent wildfires, floods and growing food prices.

As Elena Morettini, lead scientist behind the Globant report said: *"What we know is that from a technological and scientific standpoint, the potential reduction in CO2 emissions from satellite technologies is immense. It is definitely not a lack of innovation preventing greater sustainability success. Instead, it is a lack of investment that stands in the way of bringing the net zero reality closer..."* This is why, at NewSpace Capital, we strive to invest in the companies that have a significant impact on the sustainability of our planet, as well as our economy. **Doing good and doing well should go hand in hand!**

Economic Review

Q3 delivered a mixed bag of economic data. In the US, stronger than expected growth, September's upbeat hiring report and high utilization numbers on the backdrop of easing inflation prompted IMF to boost its projections for the world's largest economy, now forecasting 2.1% growth this year and 1.5% next year, a sign of "a softer landing than earlier expected." In the meanwhile, the other side of Atlantic is flirting with a recession – slight growth in one quarter is upset by a decline in the other, with the overall downward trend. Sluggish manufacturing, sticky inflation and poor productivity numbers undermine the efforts to mend the economy both in the EU and the UK. The aerospace industry continues to be a bright spot on the gloomy canvas with a stellar performance across the UK and the common market.

In the UK, industrial output is 2% lower so far this year than it was in 2021. However, the aerospace industry is diverging from the overall trend, growing despite the downturn and benefitting from a strong order book.

	GLOBAL	USA	EU	UK
GDP	<p>The baseline forecast for global growth to slow from 3.5% in 2022 to 3% in 2023, well below the historical (2000–19) average of 3.8%. Advanced economies are expected to slow from 2.6% in 2022 to 1.5% in 2023. Developing economies are projected to have a modest decline in growth from 4.1% in 2022 to 4% in 2023.</p>	<p>GDP rose by 4.9% (annualized) during Q3, well above the forecast and the most in nearly two years. Consumption drove expansion, but was supported by government spending and expansion in private inventories. The prospects for a soft-landing for the US economy have improved.</p>	<p>Europe's economy risks a recession after output falls in Q3 across the 20 countries of euro area by 0.1%. This contraction is led by the Ireland's volatile GDP that plunged 1.8%. France, Spain and Belgium experienced slight growth that failed to offset stagnation in Italy, 0.1% fall in Germany and contraction in smaller EU member states.</p>	<p>The last 1.5 years resulted in no growth. The economy was no larger in Aug'23 when compared with May'22. GDP is volatile, reflecting the multiple shocks, with some large falls being succeeded by a recovery, but no real momentum behind it. In August the economy grew by 0.2%, but from a lower base after July's 0.6% fall.</p>
INFLATION	<p>Globally, headline inflation continues to decelerate, from 9.2% in 2022, on a year-over-year basis, to 5.9% this year and 4.8 percent in 2024. Core inflation, excluding food and energy prices, is also projected to decline, albeit more gradually than headline inflation, to 4.5% in 2024.</p>	<p>Inflation leveled off to 3.7% in September compared to a year ago, extending a gradual slowdown in consumer prices, even as it slowed to 0.4% from 0.6% in August. Meanwhile, core inflation is up 4.1% from September last year, in line with expectations. Events in the Middle East continued to put upward pressure on energy prices over Q3. That's against a backdrop of generally rising oil prices since June (10% in July alone).</p>	<p>Inflation declined sharply in September to the lowest level in two years, strengthening hopes that that the EU Central Bank won't have to further raise interest rates from already-record highs. The annual rate was 4.3% in September, a drop from 5.2% in August, and the lowest since October 2021. Core inflation fell more than analysts expected - to 4.5% from 5.3%.</p>	<p>The annual rate of inflation reached 11.1% in October 2022, a 41-year high, before subsequently easing. Recent data shows it was 6.7% in September 2023, unchanged from August 2023. It is the highest headline inflation among the G7 countries. The BoE expects inflation to ease in 2023. In its latest set of forecasts published in early August 2023, it forecast an inflation rate of 4.9% in the final quarter of 2023.</p>
INDUSTRIAL OUTPUT	<p>Industrial output growth in China is in line with expectation at 4% YoY. In the month of September, industry value-add grew by 4.5%, maintaining the same growth rate as in August. Industrial production in India climbed 10.3% YoY in August 2023, the highest since June last year, from a 5.7% rise in the previous month and above expectations of 9 percent.</p>	<p>Industrial production increased 0.4% in September, easily beating expectations for a 0.1% gain. That meant advance at an annual rate of 2.5% in the third quarter. Capacity utilization for manufacturing edged up 0.1% to 77.8% in September, a rate that is just 0.4% point below its long-run (1972–2022) average.</p>	<p>In July 2023, industrial production decreased by 1.3% in both the euro area and the EU to rebound in August by 0.6% over previous month. We are now looking at a flat quarter overall. This is 5.1% drop over the same month in the previous year.</p>	<p>Industrial output so far this year is more than 2% lower than it was in 2021. The overall picture marks a strongly emerging sectoral divergence with the aerospace, food and chemicals sectors continuing to perform strongly relative to other sectors. The aerospace sector in particular has benefitted from a large number of orders.</p>
EMPLOYMENT	<p>The job market demonstrated resilience in Q3. Employment continued to hold up better than expected. That's especially true after strong jobs data for September. That offsets apparent jobs weakness over July and August. The unemployment is unchanged and near its 50-year low.</p>	<p>Between the end of June 2023 and the end of September 2023, private payroll employment was stable: -0.1% after +0.1% in the previous quarter. It was the second quarter of stability after many quarters of rise in 2021 and 2022. In Q3 temporary employment fell for the third consecutive quarter.</p>	<p>Wage growth has been accelerating in recent months with annualized growth in Q2 2023 of 11.1 per cent, compared with 6.5 per cent in Q1. This is well above the 3.5% growth rate that is roughly consistent with the 2% inflation target. This together with productivity decline might put pressure on employment.</p>	

Investment Review

Investments show signs of recovery, but how sustainable that recovery is too early to say. One thing is clear though – space investments are doing well relative to the rest of the market. This year space industry outperformed the broader market in two quarters so far. While overall investments were flat in Q1, the space industry delivered 75% growth over the last quarter of 2022. And Q3 numbers show that there is a 39% quarter over quarter increase in space-related investments with some of the larger rounds coming from the space industry.

Q3 2023 investment rebounded by 7% versus previous quarter. The growth is driven by late-stage investments, including later rounds in the space industry, while early-stage rounds declined across the globe. Europe led the charge this quarter with 28% rebound, with growth across a number of major markets, including UK, Sweden, France, and Germany. North America is flat overall, but with diverging trends for late and early-stage rounds, with latter taking a hit.

The growth is in strategic areas of AI, semiconductors, electric vehicles, space and sustainability. AI is leading the trend, with productivity-enhancing applications across transportation, defense and other industries capturing the majority of investor interest. There was a 39% increase in investments for the space companies, including \$350 million funding round for Axiom Space and \$290 million round for Sierra Space.

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Global

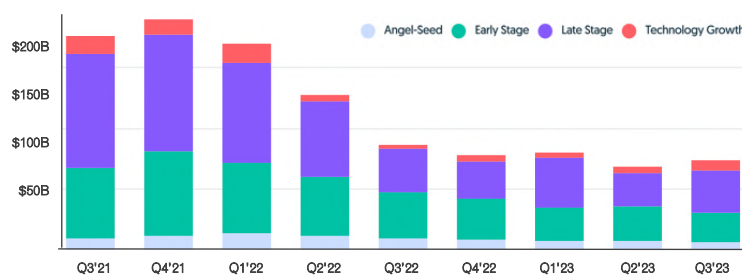
In the third quarter of 2023, global investments in private companies amounted to \$73 billion. This figure was 7% higher when compared to the previous quarter but represented a 15% decrease from the \$86 billion invested in the same quarter in 2022. Notably, funding for early-stage startups continued to decrease, indicating that the venture capital landscape had yet to fully open up. On the other hand, late-stage funding increased by nearly 10% compared to the previous year and by a significant 30% compared to the previous quarter. This boost was driven by companies in strategic sectors such as semiconductors, artificial intelligence, electric vehicles, and sustainability, which secured substantial investments.

September saw a noteworthy development as technology companies made their way into the public markets for the first time in 18 months. During that month, two well-established startups, Instacart and Klaviyo, went public,

suggesting that the initial public offering (IPO) markets might become more accessible in 2024. However, it's worth noting that both of these companies saw their stock prices decline from their IPO listing price, indicating that the public markets were particularly sensitive to pricing amidst the current economic conditions.

Late-stage funding experienced a significant 30% increase compared to the previous quarter and a nearly 10% increase compared to the previous year, reaching a total of \$43 billion. Much of this surge was observed in markets outside of North America, particularly in Europe, where late-stage funding doubled compared to the previous quarter and rose by 20% compared to the previous year, driven by substantial funding deals in the energy and manufacturing sectors. Conversely, all regions saw declines in early-stage and seed funding.

Graph 1: Global funding volume (Q3'21 – Q3'23), \$ billion



Source: Crunchbase

North America

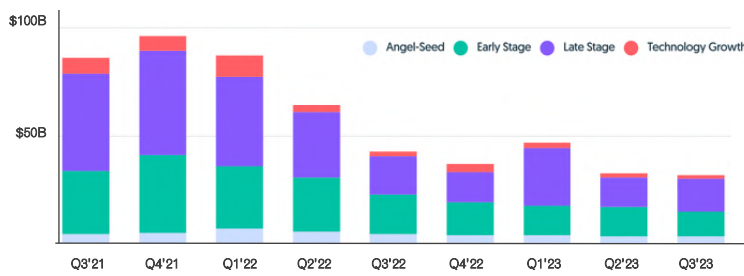
In the third quarter of 2023, investors allocated \$31.4 billion to startups in the United States and Canada. This amount represents only a slight 3% decrease from the previous quarter, suggesting that while investors are not abandoning this asset class, they are not overly enthusiastic about pouring more money into it. There was a partial recovery in later-stage funding, but early-stage investment experienced a noticeable decline, reaching its lowest quarterly total in years. Seed funding also decreased, signaling a more challenging environment for founders to raise capital.

During the third quarter, later-stage investments increased, driven by larger funding rounds in sectors like cleantech and artificial intelligence. In total, investors injected \$16.8 billion into late- and growth-stage venture investments in Q3. This marked an 8% increase from the previous quarter but a 15% decrease compared to the same period in the previous year.

One notable example of a substantial funding round was in the commercial spaceflight sector, where Axiom Space secured \$350 million. Additionally, Sierra Space, a commercial space startup based in Louisville, Colorado, raised \$290 million in a Series B round, valuing the company at \$5.3 billion.

Overall, as the third quarter came to a close, it appears that the startup investment landscape has yet to fully regain its momentum since the market downturn that began the previous year. Early-stage investment remains subdued, and while some high-profile startups can go public, they are not generating significant excitement in the markets. Nonetheless, there are some positive signs, notably an increase in later-stage investment.

Graph 2: N America funding volume (Q3'21 – Q3'23), \$ billion



Source: Crunchbase

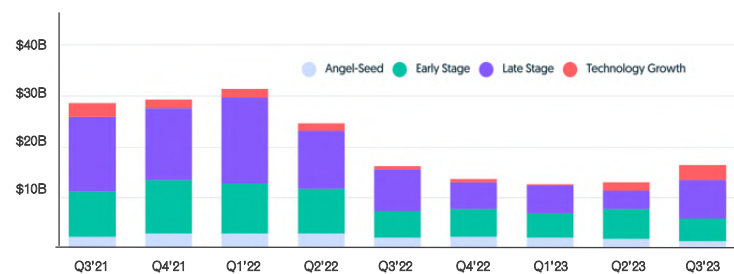
Europe & UK

In the third quarter of 2023, funding for European startups surged to \$16.4 billion, marking a significant increase of 28% compared to the previous quarter and remaining relatively stable when compared to the same period in the previous year. This growth was primarily driven by late-stage funding. Among European regions, the United Kingdom secured the highest amount of funding, followed by Sweden, France, and Germany.

Late-stage funding in Europe experienced a remarkable growth compared on previous quarter, with substantial investments made in the sustainable energy sector. Notably, European companies claimed a larger share of the global funding, reaching around 23% of total in the third quarter, especially as funding levels remained steady in North America.

In the field of artificial intelligence (AI), European companies made a notable mark by raising \$1.8 billion in Q3 2023, constituting 11% of the continent's total funding and close to one-fifth of global AI funding. Several prominent European AI companies secured significant rounds of funding during this period, including Conigital, a UK-based driverless transport company; Helsing, an AI defense company located in Berlin; Poolside, an AI infrastructure firm based in Paris; Tractable, a London-based company specializing in AI for disaster recovery; and Neura Robotics, a German developer of consumer and industrial robotics.

Graph 3: Europe funding volume (Q3'21 – Q3'23), \$ billion



Source: Crunchbase

Space

The space investment landscape in the third quarter continues to demonstrate signs of recovery following the downturn experienced in the latter half of 2022. There was a 39% increase in investment, totaling \$1.6 billion in Q3 compared to \$1.16 billion in Q2. This remarkable growth indicates that the space industry is outperforming the broader market.

A notable shift occurred in the distribution of investment between early-stage and late-stage deals. In Q3, 82% of investments were directed toward late-stage businesses, in contrast to 63% in Q2. This shift was primarily fueled by the resurgence of large-scale growth rounds. This trend reflects a positive shift in the fundraising environment for growth deals, signifying a return to confidence in the space industry, particularly for larger investments.

The space technology sector in Q3 witnessed a notable concentration of investment in the top 10 deals, with a substantial 79% of total investment being funneled into these select deals. This concentration was chiefly driven by the substantial investments made in the top three deals: Axiom Space, Sierra Space, and MapBox.

Furthermore, M&A activity within the sector has reached an all-time high. The most prominent deals consisted of corporate M&A and private equity transactions. Notably, Eutelsat completed acquisition of OneWeb, BAE Systems announced the acquisition of Ball Aerospace, and KKR made a take-private offer to OHB. Overall, the resurgence of growth rounds, increasing M&A, and private equity activity indicate the establishment of the space-enabled economy.

Other notable events in the industry include landing of the Indian mission on the south pole of the moon; Northrop Grumman joining Voyager Space commercial space station project; Chang Guang, a Chinese satellite operator, successfully sending 10 Gbps satellite-to-ground laser communication; and ESA bidding farewell to Ariane 5 rocket (after 25 years and 116 launches).

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Portfolio Review

ICEYE

The Finnish Earth Observation company operates the world's largest constellation of high-resolution Synthetic Aperture Radar (SAR) satellites. ICEYE's technology provides high-resolution, low-latency images of the Earth surface even at night and through the clouds. Company's data solves a fundamental challenge of accessing reliable and consistent data globally. ICEYE puts a sensitive, but relatively small SAR sensor on a satellite platform that could operate from the LEO orbit, drastically cutting the cost of the technology and dramatically increasing its resolution and accuracy. The SAR images now provide resolutions comparable to that of optical systems (up to 15 cm) at a fraction of older SAR technology costs. Company's product portfolio includes data, analytics and missions. It serves the needs of sovereign and commercial clients across insurance, maritime, critical infrastructure, national security, disaster recovery, agriculture and finance industries. NewSpace Capital participated in the company's C round.

Recent developments in satellite technology are making significant strides in disaster response, national defense, and scientific research. ICEYE, a leading provider of radar imaging satellites, is at the center of two pioneering partnerships.

In Australia, ICEYE has been selected by the Federal Government to supply crucial flood and bushfire hazard data to enhance the country's disaster response capabilities. Using Synthetic Aperture Radar (SAR) imagery, ICEYE's Flood and Bushfire Insights products provide real-time intelligence, aiding emergency response and recovery efforts. In Poland, ICEYE Poland is partnering with key defense organizations to strengthen the nation's defense capabilities. This collaboration aims to equip the Polish Armed Forces with advanced radar satellite technology, including fixed and mobile ground stations, enhancing situational awareness for national defense.

ICEYE is also making its mark in the United States by supplying NASA with SAR data for Earth science research, allowing NASA to tap into ICEYE's extensive SAR archive for enhanced understanding of Earth's geology, topography, and climate change.

These partnerships underline the growing role of satellite technology in addressing pressing global challenges, providing invaluable insights for disaster management, national security, and scientific advancement. They signify a significant step towards a more resilient and data-driven future.



Australian Government Selects ICEYE for Near Real-Time Flood and Bushfire Data to Strengthen Disaster Response

ICEYE has been selected by the Australian government to provide flood and bushfire hazard data for all states and territories in the country, aiming to improve disaster response and recovery outcomes. ICEYE's near real-time insights will be available to agencies through Esri's ArcGIS mapping software.

ICEYE, PGZ, and WZŁ-1 Enter Strategic Partnership: Mobile Ground Station for SAR Satellites to Be Built in Poland

ICEYE has partnered with Polska Grupa Zbrojeniowa S.A and Wojskowe Zakłady Łączności No. 1 S.A. to strengthen Poland's defense capabilities by offering a solution that includes ground stations and synthetic aperture radar (SAR) satellites. The collaboration aims to provide high-resolution imagery regardless of weather conditions, with ICEYE responsible for space infrastructure, PGZ and WZŁ-1 for the ground segment.



ICEYE US Receives First Task Order Under NASA Commercial SmallSat Data Acquisition Program

ICEYE US Inc has received its first Task Order under a Blanket Purchase Agreement with NASA, allowing NASA to evaluate ICEYE's synthetic-aperture radar (SAR) data for Earth Science research. This partnership marks a significant milestone in commercial SAR capabilities in the United States and aims to provide valuable insights for NASA's Earth Science objectives by leveraging ICEYE's radar satellite imagery.



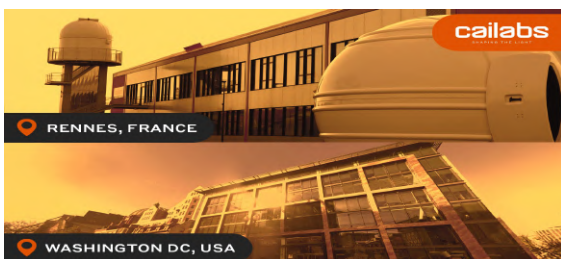
CAILABS

Cailabs is a French company that provides photonics solutions for space and terrestrial applications. Company's technology of "shaping light" with certain predefined qualities commands multiple patent families and has found numerous applications across medical devices, industrial applications, terrestrial (fiber networks) and space communication. In space, Cailabs is solving a fundamental challenge for the €30 billion satellite communication industry, where the growth of ground-to-space communication is outpacing the growth of terrestrial data exchange, while the bandwidth capacity is limited by the finite physical limits of available radio frequencies. Cailabs solved the problem of atmospheric disturbance, enabling the use of light for data transfer between Earth and space. Ground stations produced by the company allow transfer of data to the satellites and back at a higher data rate and bandwidth, while providing higher security and stability of connection. NewSpace Capital participated in the C round and joined the Board of the company.

In a strategic move that underscores the evolving landscape of laser communications in the aerospace and defense industry, global deep-tech leader Cailabs has announced the opening of its new office in downtown Washington, D.C. With a focus on providing turnkey optical ground stations designed to manage atmospheric turbulence and facilitate high-capacity laser communications, Cailabs is positioning itself to meet the growing demand in the United States, particularly from the defense sector.

This development aligns with Cailabs' recognition in the French Tech 2030 startup program, unveiled by President Emmanuel Macron and managed by Bpifrance and La French Tech. Cailabs' innovations are considered highly relevant to the themes of the \$100 billion France 2030 investment plan, which focuses on supporting businesses, rethinking production models, transforming infrastructure, and investing in training, all with an emphasis on decarbonization and sustainable growth.

The appeal of laser communications lies in its rapid maturation over recent years, establishing itself as a fast, reliable, and secure mode of communication with the ability to carry substantial data loads. Cailabs' unique technology enhances the efficiency and resilience of laser communications, making it an indispensable complement to traditional radio communication, especially in defense applications.



Cailabs opening Washington office to support DoD

Cailabs has opened an office in downtown Washington DC, to meet the growing demand for high-capacity laser communications, particularly in the US defense sector. Cailabs' CEO, Jean-François Morizur, emphasized the importance of laser technology for defense and its potential to complement radio communications, as the company supports the Space Development Agency's laser communications roadmap.

How deep tech founders can secure early-stage fundraising in a downturn

Jean-François Morizur, the CEO and founder of Cailabs, who was honored as one of Forbes 30 Under 30 in the fields of science and healthcare, shared insights into Cailabs' journey and emphasized the significance of securing the right investors in an article published on TechCrunch.



Cailabs Welcomes Recognition of the Strategic Role of Atmospheric Laser Communications in the 2024-2030 Military Programming Law

Recognition of this technology helps consolidate France's leadership and that of the world-class industrial leaders operating in the country, particularly in the Breton photonics and telecommunications triangle of which Cailabs is a part.



Kayros

Kayros is a Paris based company which integrates satellite imagery, unconventional data and market information on its leading global asset observation platform. Kayros' delivers decision-making solutions while empowering stakeholders to reduce greenhouse gas emissions and navigate climate and energy-transition risks. Kayros is a global leader in providing analysis with a unique level of accuracy and insight by combining data from different satellite constellations that can greatly vary in format, temporal and spatial resolution. Kayros' proprietary database of industrial assets across the globe ensures there is a link between space data and specific market players, both companies and countries. The company enables an unprecedented level of transparency and accountability. In 2023, Kayros was named Time100 world' most influential companies. It was also included in FrenchTech 2030 program and Fortune "Change the World" list. Kayros clients include United Nations and IEA. NewSpace Capital participated in the company's C round.

In today's world, the looming threat of climate change demands innovative solutions and global cooperation. One pressing issue is the need to mitigate methane emissions, a potent greenhouse gas with a far greater warming potential than carbon dioxide, particularly in its initial years in the atmosphere. This urgency has driven pioneering efforts, and at the forefront of this battle is Kayros, a company harnessing advanced technology. They employ cutting-edge satellite imagery and data analytics to detect methane leaks and provide invaluable climate insights. Bloomberg recently reported that Kayros' satellite imagery captured a significant methane leak in Kazakhstan, a revelation that ignited global concern and prompted swift action.

This breakthrough underscores the immense potential of technology and data-driven solutions in addressing climate-related issues. Kayros' outstanding work in this field earned the company a well-deserved spot on Fortune's "Change the World 2023" list, a prestigious recognition of their exceptional contributions in the fight against climate change.

In July, the global insurance giant AXA joined forces with Kayros to launch a groundbreaking wildfire risk prevention service. This initiative combines data and satellite imagery to predict environmental risks, demonstrating the formidable impact of collaboration in managing the increasing threat of wildfires.

Kayros stand as beacons of innovation and cooperation, illuminating the path forward in our mission to protect the planet and secure a sustainable future.

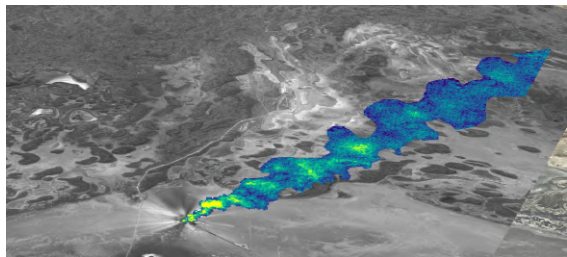


Kayros named on Fortune's 'Change the World' 2023 list; company calls for ban on methane super-emitters

Kayros has been recognized on Fortune's annual Change the World list for its efforts in addressing climate change. Kayros, known for using satellite imagery and analytics to provide climate data, has made substantial contributions to the climate conversation, detecting methane leaks and advocating for a ban on methane 'super-emitters,' which Fortune acknowledges as a significant and easily achievable climate intervention.

Scientists Say They've Detected a Huge Methane Leak in Kazakhstan

Kayros's satellite imagery, as reported by Bloomberg, revealed a substantial methane leak resulting from a natural gas well blowout in Kazakhstan, contradicting the company's claim of hot vapor. The incident has raised concerns about methane emissions' environmental impact.



AXA Unveils Wildfire Risk Prevention Service in France

AXA has introduced a new wildfire risk prevention service in collaboration with Kayros, utilizing satellite imagery and over 20 risk factors to create updated risk maps and analyses. This service, available through AXA's Digital Commercial Platform, is designed to evaluate and manage wildfire exposure and risk for commercial clients in France, offering a forward-looking approach to risk assessment.



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