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Rethinking Europe’s Space Strategy for the 21st Century: From Legacy Champions to the New Space Economy

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EXECUTIVE SUMMARY

Europe stands at a critical juncture in the evolution of the global space economy. Once a technological leader with deep capabilities across the space value chain, the EU now risks structural marginalisation as the sector shifts from a state-led model ("Old Space"), driven by geopolitical competition, to a commercially driven, innovation-intensive paradigm ("New Space"). This transformation is characterised by declining launch costs, large-scale satellite constellations, and the integration of space infrastructure with advanced digital technologies.

Against this backdrop, we argue that Europe's relative decline is not incidental but rooted in **three mutually reinforcing structural challenges:** a persistent capital markets gap, insufficient and fragmented public investment, and an industrial policy framework that continues to favour legacy incumbents over emerging high-growth firms.

The US has led this transition through deliberate policy choices that fostered competition and enabled private firms to scale. China is increasingly following a similar path, combining strong state direction with growing commercial dynamism. Europe, by contrast, has struggled to adapt its institutional and industrial frameworks to this new reality.

Empirical evidence reveals a **widening gap** between Europe and its global competitors. Across key indicators, Europe consistently underperforms relative to the US and China:

- **Launch capability** remains limited and volatile. In 2025, the US recorded **181 orbital launches,** while China conducted **92**, compared to just **8 in the EU**, following a collapse to only **3 launches annually in 2023 and 2024.**

- **Satellite deployment** has grown only incrementally. The EU increased deployments from **16 satellites in 2015 to 135 in 2025**, while China added **371 satellites** and US actors, driven largely by SpaceX, deployed over **3,700 satellites in 2025.**

- **Innovation capacity** has also declined. The EU's global share of space-related patents fell from around **11 per cent in 2000 to about 6 per cent in 2023,** while China surged to **over 70 per cent** – driven by high patenting volumes, though concerns about average quality persist – and the US declined to roughly **12 per cent.**

Drawing on evidence from our **ECIPE Space Economy Database,** the paper identifies **three core challenges** underpinning Europe's declining space competitiveness:

1. Capital Markets Gap

Europe's space startup ecosystem is constrained by **insufficient access to scale-up financing.** While the EU hosts a comparable number of startups to the US and more than twice as many as China, these firms receive significantly less funding.

- Too many leading EU space startups fail to reach meaningful funding scale: **42 per cent** have raised under USD 10 million, compared to just **8 per cent in the US** and **12 per cent in China.**

- Average funding per space startup in the EU is just over **USD 48 million,** compared to nearly **USD 317 million in the US** and more than **USD 195 million in China.**

This funding gap limits the ability of European firms to scale, commercialise innovations, and compete globally. The problem reflects broader structural weaknesses in European capital markets, including limited venture capital depth and underdeveloped public equity markets.

2. Insufficient and Fragmented Public Investment

Public investment plays a critical role in the space sector, not only by funding R&D but also by creating demand through procurement and long-term contracts. Here too, Europe lags:

- In 2024, EU public space spending remained below **USD 15 billion, less than one-fifth of US levels** and behind China's roughly **USD 20 billion.**

- Growth in European spending has also been slower. Between 2016 and 2024, EU public space expenditure increased by **66 per cent,** compared to **121 per cent in the US** and over 3**00 per cent in China.**

- Funding is **highly fragmented** across national and EU-level programmes and multiple agencies.

Where the US uses large-scale, coordinated public investment to catalyse private sector growth, Europe **fails to create strong demand signals for private capital.**

3. Industrial Policy Misalignment

Europe's industrial policy framework remains anchored in an earlier era of state-led space activity. It continues to prioritise **established corporate incumbents** through procurement rules, regulatory frameworks, and institutional practices.

Key features include:

- The **geographical return principle,** which allocates contracts based on national contributions rather than competitiveness.

- Regulatory frameworks, including the **EU Space Act and Digital Networks Act** that risk continuing reliance on legacy "champions" as the primary vehicles for competitiveness.

This structure limits the emergence of **disruptive entrants** capable of driving innovation in the New Space economy.

The result is an **increasingly unbalanced ecosystem.** Europe retains strong legacy industrial capabilities and continues to generate significant corporate revenues, but lacks the financial and entrepreneurial dynamism required to renew this industrial base. By comparison, France's Old Space sector remains strong, with corporate space revenues at roughly **2.5 times the US level relative to GDP,** but it lags in New Space financing, where, again relative to GDP, French startups attract around **6 times less venture funding** than their US counterparts.

The consequences of this structural lag extend beyond the space sector itself. Space infrastructure is becoming a foundational layer of modern economies, underpinning communications, navigation, defence, and data systems. Falling behind in this domain risks a **broader erosion of economic and strategic competitiveness.**

Europe's challenge in the space economy requires a **fundamental rethinking** of the relationship between public policy, private capital, and industrial organisation. Without such reforms, Europe risks remaining a **capable but increasingly peripheral player** in one of the most strategically important industries of the 21st century.

1. INTRODUCTION

For decades, the domain of outer space was defined by the logic of geopolitical competition. During the Cold War, space became an arena of superpower rivalry, with states acting as the primary investors, operators, and beneficiaries of space activity. The "Old Space" era was therefore driven less by economic incentives than by the pursuit of technological supremacy and national prestige. Yet even as governments competed for orbital dominance, the foundations of a different model of space activity were emerging, one in which private companies would play a growing role in developing, launching, and commercialising space technologies.

This shift marks the emergence of the "New Space" era. Over the past two decades, private actors have moved to the centre of the space economy. Companies are developing telecommunications large satellite constellations, commercial space stations, next-generation launch systems, and emerging concepts such as orbital data infrastructure. While many firms still operate as contractors for government missions, they are increasingly pursuing independent commercial ventures serving civilian and enterprise markets. The integration of space infrastructure with artificial intelligence, advanced robotics, autonomous systems, quantum technologies, and other emerging capabilities is accelerating this transformation, making space an increasingly important extension of the digital and economic systems that underpin everyday life on Earth. What was once primarily a domain of state power is gradually becoming a platform for large-scale economic value creation.

The EU is not absent from this shift. Europe has a distinguished history in space, institutional frameworks, scientific expertise, and industrial capability built over generations. Yet the empirical picture that emerges from a systematic analysis of the global space economy is one of a bloc that is falling behind, not at the frontier, and at risk of being structurally marginalised in the sectors that will define the next phase of space development. The question is not whether Europe cares about space competitiveness – it does – but whether its current institutional arrangements, financing structures, and policy frameworks are adequate to the scale of the challenge it faces.

This paper argues that the answer, on current evidence, is no – and that Europe's lag is not incidental but structural, rooted in three interlocking failures that compound one another. The first is a capital markets failure of striking proportions. Space is a capital-intensive sector in which competitive end-to-end infrastructure, spanning launch systems, low-Earth-orbit satellite communications, and defence and intelligence applications require sustained investment at a scale that European private markets have consistently failed to provide. The result is a generation of European space companies that are technically capable but financially stunted, unable to achieve the scale necessary to compete.

This private investment shortfall is compounded by a second structural problem: fragmented and comparatively modest public expenditure. The US and China have used sustained, strategically directed public investment not merely to fund missions, but to anchor commercial ecosystems, creating the procurement demand, long-term contracts, and risk tolerance that attract private capital at scale. The EU's public space expenditure, while growing in nominal terms, remains insufficient to replicate this model. Announced investment plans, however ambitious they appear in political discourse, have not translated into the kind of coherent, demand-signalling commitment that would catalyse private co-investment. The two shortfalls, private and public, reinforce one another, leaving European space companies starved of the capital required to match the pace of development in the US and China.

Yet both of these failures may be rooted in a deeper challenge: an industrial policy framework that, we argue, is no longer fully aligned with the dynamics of the modern space economy. The legislative architecture governing Europe's space sector, including the proposed EU Space Act and Digital Networks Act (DNA), raises concerns that these regulatory instruments may reinforce the position of established and underperforming incumbents rather than fostering the emergence of high-growth new entrants.

Although these rules are newly proposed, they reflect regulatory assumptions derived from an earlier era of state-led, incumbent-centred space activity. They are now being applied to a sector increasingly shaped by commercialisation, where competitive advantage depends on speed of iteration, rapid scaling, and technological experimentation. In this context, we argue that the continued dominance of legacy corporate actors, combined with regulatory frameworks, and agencies that prioritise stability and compliance, may constrain the structural space in which disruptive entrants, similar to those that transformed the sector in the US and China, might otherwise emerge.

These three problems – a capital markets gap, inadequate public investment, and an outdated industrial policy framework – do not operate in isolation. They are mutually reinforcing: weak private capital markets reduce the pool of high-growth entrants; insufficient public expenditure fails to provide the demand signals that would attract private capital; and a regulatory framework shaped around incumbents forecloses the competitive dynamics that might otherwise correct for both. The result is a compounding structural lag at precisely the moment when the global space economy is undergoing one of its most rapid and consequential periods of transformation. As commercialisation accelerates and the cost of access to space continues to decline, the gap between where Europe stands and where it needs to be is not narrowing; it is widening.

This paper examines the sources of this divergence by drawing on empirical evidence from our ECIPE Space Economy Database. Building on our previous work on quantum technologies, we have constructed a dataset using publicly available sources that tracks leading actors in the global space sector, including both countries and companies, spanning startups as well as established corporations. This paper, the first in a series, provides an initial overview of our principal findings and highlights the structural patterns shaping Europe's relative position in the space economy.

Section 2 situates the EU within the global space landscape, documenting Europe's changing position across three core indicators: orbital launch cadence, satellite deployment, and space-related patent activity, relative to the US, China, and Russia. Section 3 examines the two financial dimensions of Europe's challenge: the persistent capital markets gap that prevents leading EU space startups from achieving the scale of their American and Chinese counterparts, and the fragmented and comparatively modest levels of public space expenditure that compound the private investment shortfall. Section 4 turns to the industrial policy framework underpinning Europe's space economy, analysing how the dominance of legacy incumbents, combined with the design of recent EU legislative proposals, including the EU Space Act and the DNA, are shaping the competitive dynamics of the sector. Section 5 concludes by drawing together these findings.

2. THE TRANSFORMATION OF THE GLOBAL SPACE INDUSTRY AND EUROPE'S POSITION

2.1 From Space Race to New Space: The Commercialisation of the Final Frontier

The commercialisation of space has fundamentally altered the terms of competition. Whereas the original space race was largely defined by space-to-Earth applications – communication relays, navigation signals, and Earth observation – the emerging New Space era increasingly looks toward space-to-space activities such as in-orbit servicing, on-orbit manufacturing, and the potential extraction of lunar and asteroidal resources to support sustained human activity beyond Earth's atmosphere. While the empirical analysis in this paper focuses on the foundational infrastructure that underpins both paradigms – launch capability, satellite deployment, and innovation capacity – this longer-term trajectory provides the strategic context within which Europe's current competitive position must be understood. The direction of travel matters as much as the starting point: a bloc that is already falling behind in the foundational layer risks facing compounding disadvantages as the technological frontier advances.

The structural driver of this shift was a deliberate policy choice in the US. Beginning in the mid-2000s, NASA introduced commercial partnership programmes, most notably the Commercial Orbital Transportation Services (COTS) and the Commercial Crew Program (CCP), that contracted private firms to develop launch and cargo capabilities in competition with one another, rather than procuring them through traditional cost-plus contracting. The results were transformative. Launch costs fell dramatically: where it once cost approximately USD 80,000 to place a single gallon of water into orbit aboard the Space Shuttle, reusable launch vehicle technology has reduced that figure to around USD 11,000 today.[2] The European Space Agency (ESA) did not adopt a comparable competition-based procurement model until 2023, nearly two decades after NASA launched COTS.[3]

This dynamic is also advancing into a new phase. As the International Space Station (ISS) approaches its planned deorbit around 2030, NASA's Commercial LEO Destinations programme is actively incentivising the development of privately operated successors, with private

[2] NASA. (2008). Space transportation system facts. https://www.nasa.gov/centers/marshall/news/background/facts/astp.html as referenced in Pyle, R. (2019). Space 2.0: How private spaceflight, a resurgent NASA, and international partners are creating a new space age. BenBella Books.

[3] Nicoli, F., Sekut, K., and Porcaro, G. (2023). Can Europe make its space launch industry competitive? Bruegel. Available at: https://www.bruegel.org/analysis/can-europe-make-its-space-launch-industry-competitive

companies such as Axiom Space, Starlab, and Orbital Reef pursuing the next generation of orbital habitats.[4] Looking further ahead, advances in in-space resource utilisation, including the extraction of water and hydrogen from the Moon and asteroids for use as propellant and radiation shielding,[5] promise to reduce dependence on Earth-sourced supply chains entirely. In the New Space era, reusability and cost efficiency are not competitive advantages; they are the baseline conditions for market participation – conditions that the EU has been comparatively slow to capitalise on.

2.2 Europe‘s Space Capabilities in a Global Context

To understand Europe's current position in the global space economy, it is necessary to first consider where the continent came from, before the New Space era transformed the terms of competition. Europe's trajectory in the space sector has not been one of persistent underperformance, but of earlier technological leadership followed by challenges in adapting to the sector's evolving dynamics. This distinction matters because it clarifies the diagnosis: Europe's challenge lies not in a historical capability deficit but in adapting its competitiveness to a changing sector.

Through ESA, EU Member States built a competitive space industry from the 1980s onwards. Critically, this strength was not confined to a single domain. Europe developed deep capacity across the full space value chain: upstream manufacturing and system integration, midstream launch services, and a rising downstream sector encompassing telecommunications, satellite navigation, and Earth observation.

Europe's dominance was not accidental; it was built around a genuine geographic advantage. The Guiana Space Centre at Kourou, located near the equator in French Guiana, enables launches with minimal plane-change manoeuvres, translating directly into fuel savings and increased payload capacity to geostationary orbit. This made Kourou structurally suited to the dominant commercial market of the era: GEO telecommunications satellites.

The commercial share of European space manufacturing turnover grew from 28 per cent in 1991 to 45 per cent by 2010.[6] Every major non-geostationary communication satellite constellation of the period, including Iridium NEXT, O3b Networks, and Globalstar's second generation, was captured by European industry. In terms of manufacturing efficiency, each billion dollars of European space expenditure generated 3.5 tonnes of institutional and 4 tonnes of commercial satellites, far exceeding comparable US ratios of 1.5 and 1.25 tonnes respectively.[7]

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4 Scholes, S. (2025, February 26). Private Space Stations of the Future Promise Luxury. But Can They Deliver? Scientific American. Available at: https://www.scientificamerican.com/article/private-space-stations-of-the-future-promise-luxury-but-can-they-deliver/

5 Pyle, R. (2019). Space 2.0: How private spaceflight, a resurgent NASA, and international partners are creating a new space age. BenBella Books.

6 UK Parliament. Written evidence submitted by the Director General of the European Space Agency (ESA016). Available at: https://committees.parliament.uk/writtenevidence/44313/pdf/

7 Ibid.

Through Arianespace, Europe leveraged this advantage to capture up to 60 per cent of the global geostationary launch market from the 1980s through to the early 2010s.[8] By February 2011, the Ariane rocket family, spanning Ariane 1 through Ariane 5 and Vega, had completed its 200th launch.[9] Ariane 6, in its four-booster configuration, reflects the same strategic logic: with a lift capacity of approximately 22 tonnes to LEO and 11.5 tonnes to GTO, it remains technically competitive with SpaceX's Falcon 9 in LEO and superior in GEO performance.[10] The difficulty is that the market moved. The New Space era shifted the centre of gravity decisively towards LEO megaconstellations, high-cadence commercial launches, and rapid reusability – segments in which Kourou's equatorial advantage is largely irrelevant and actually became a structural liability. One can say that Europe had optimised expertly for a market that was about to shrink in relative terms.

Europe's capabilities were developed under conditions characteristic of an earlier phase of the space sector, defined by precision engineering, long development cycles, stable government procurement, and high barriers to entry that insulated incumbents from commercial competition. In that context, the European space industry's institutional depth, multi-government coordination model, and emphasis on technical reliability and proven designs provided important advantages. As market conditions evolved, however, these same institutional characteristics became sources of weakness. The emergence of the New Space economy introduced a different set of competitive dynamics, in which speed of development, rapid design cycles, and commercial risk-taking became increasingly important.

The inflection point is visible in retrospect. Between 1998 and 2004, Europe undertook four major studies on reusable launch vehicle technologies but did not reach a definitive policy decision.[11] ESA projected that reusability would not be technically feasible until at least 2005, pending advances in materials, propulsion, avionics, and aerothermodynamics[12] – a delay that allowed capability gaps to widen precisely as the commercial sector began to accelerate. This indecision was not merely a technical delay; it was a signal of the deeper structural problem: a multi-government body optimising for consensus and sovereignty rather than competitiveness.

When ESA finally approved the Ariane 6 programme in 2012 as a lower-cost successor to Ariane 5, it made a deliberate decision to forgo reusability. By the early 2010s, SpaceX had already begun taking meaningful market share from Arianespace, and a 2019 French Court of Audit report found Ariane 6 to be uncompetitive with the reusable Falcon 9, warning that the rocket's commercial viability would depend on continuous public subsidy.[13] To sustain the programme

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8 Arianespace. (2014, September, 8). World Satellite Business Week 2014: A rich harvest of contracts for Arianespace [Press release]. Arianespace, as referenced in Gatti, E. and D'Ottavio, A. (2025). The missing rocket: An economic and engineering analysis of the reusability dilemma in the European space sector. Intereconomics: Review of European Economic Policy, 60(2), 88–95. https://doi.org/10.2478/ie-2025-0018

9 Ibid.

10 Ibid.

11 Gatti, E. and D'Ottavio, A. (2025). The missing rocket: An economic and engineering analysis of the reusability dilemma in the European space sector. Intereconomics: Review of European Economic Policy, 60(2), 88–95. https://doi.org/10.2478/ie-2025-0018

12 Ibid.

13 Berger, E. (2019, February 9). French auditor says Ariane 6 rocket too conventional to compete with SpaceX. ArsTechnica. Available at: https://arstechnica.com/science/2019/02/french-auditor-says-ariane-6-rocket-too-conventional-to-compete-with-spacex/

at all, ESA Member States agreed to subsidise it with up to EUR 340 million annually, with an additional EUR 21 million for the operation of Vega C.[14]

Ariane 6 flew its maiden launch in July 2024, four years behind schedule,[15] and into a market that had already moved past it. The projected cost per mission now exceeds USD 108 million (from an original USD 76 million per launch for two-booster Ariane 62 and USD 98 million for Ariane 64), against approximately USD 67-70 million for a Falcon 9 – a gap that reusability continues to widen with each successive SpaceX flight.[16]

In this context, a clear assessment of the EU's technological position today relative to other major space powers is essential to understand both its competitive strengths and its structural vulnerabilities. Countless indicators could be used to evaluate the state of European space capabilities in comparison with other major players in the New Space era. In this section, we focus on three core indicators that capture complementary dimensions of capability: annual orbital launches, satellites launched, and global share of patent publications in space science. While no single metric is sufficient on its own, taken together they provide a robust picture of industrial capacity, operational scale, and technological dynamism.

We begin with annual orbital launches. This indicator measures the number of launch attempts aimed at placing payloads into Earth orbit within a given year. Launch activity is a proxy for autonomous access to space, industrial reliability, and the maturity of launch systems. Sustained launch cadence reflects not only technological capability but also production capacity and demand conditions. It is therefore a central indicator of a country or region's strategic space posture.

Figure 1 plots the number of attempted orbital launches in the EU, the US, China, and Russia between 2015 and 2025.

The most striking development is the sharp acceleration of US launch activity. After a period of moderate growth between 2015 and 2019, US launches increased dramatically from 2021 onwards, reaching 181 orbital attempts in 2025. This surge largely reflects the steep reduction in launch costs driven by American private space companies, most famously SpaceX. Reusable rockets and more cost-efficient production methods have reduced the cost of access to space by roughly a factor of 30 compared with the early 1980s.[17]

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[14] Parsonson, A. (2023, November 7). ArianeGroup to Receive €340M Per Year to Operate Ariane 6. European Spaceflight. https://europeanspaceflight.com/arianegroup-to-receive-e340m-per-year-to-operate-ariane-6/

[15] Castel, F. (2024, June 24). Europe aims to end space access crisis with Ariane 6's inaugural launch. SpaceNews. https://spacenews.com/europe-aims-to-end-space-access-crisis-with-ariane-6s-inaugural-launch/

[16] Posaner. J. (2024, July 10). How Europe's rocket program lost big to Elon Musk: The inside story. Politico. Available at: https://www.politico.eu/article/how-europe-screwed-up-its-rocket-program/ ; also see: Parsonson, A. (2024, March 29). CNES Boss Blames Contractors for Ariane 6 Being Too Expensive. European Spaceflight. Available at: https://europeanspaceflight.com/cnes-boss-blames-contractors-for-ariane-6-being-too-expensive/

[17] Citigroup. (2022, May 9). Space: The dawn of a new age. Citi Global Perspectives & Solutions. https://www.citigroup.com/global/insights/space_20220509

China also exhibits sustained growth over the period. Although its trajectory is less steep than that of the US, the overall trend is consistently upward, with launches rising from 19 in 2015 to 92 by 2025. China has not yet matched the dramatic cost reductions achieved by the US with SpaceX, largely because it lacks reusable launch systems operating at very high launch frequency and scale.[18] Nevertheless, even in the absence of mature reusable launch technologies, China has managed to reduce costs and expand its orbital launch cadence, largely thanks to manufacturing advantages and tightly integrated supply chains.[19]

Russia, by contrast, displays relative stagnation. With 26 launches in 2015 – the highest number among the major space powers at the time – Russia initially held a leading position. However, while both the US and China significantly expanded their launch cadence, Russia failed to keep pace. Launch numbers steadily declined over the decade, falling to 17 by 2025.

Europe, however, presents the most concerning trajectory. Launch activity remains consistently low throughout the period, with the EU recording the smallest number of launches among the major space players every single year. After 2021, activity becomes particularly volatile, collapsing to just 3 launches annually in 2023 and 2024, before only partially recovering to 8 in 2025. These low numbers are explained by the fact that even European public institutions and satellite operators increasingly rely on SpaceX for launches, whose services cost up to three times less than those of Europe's traditional launch provider, Arianespace.[20]

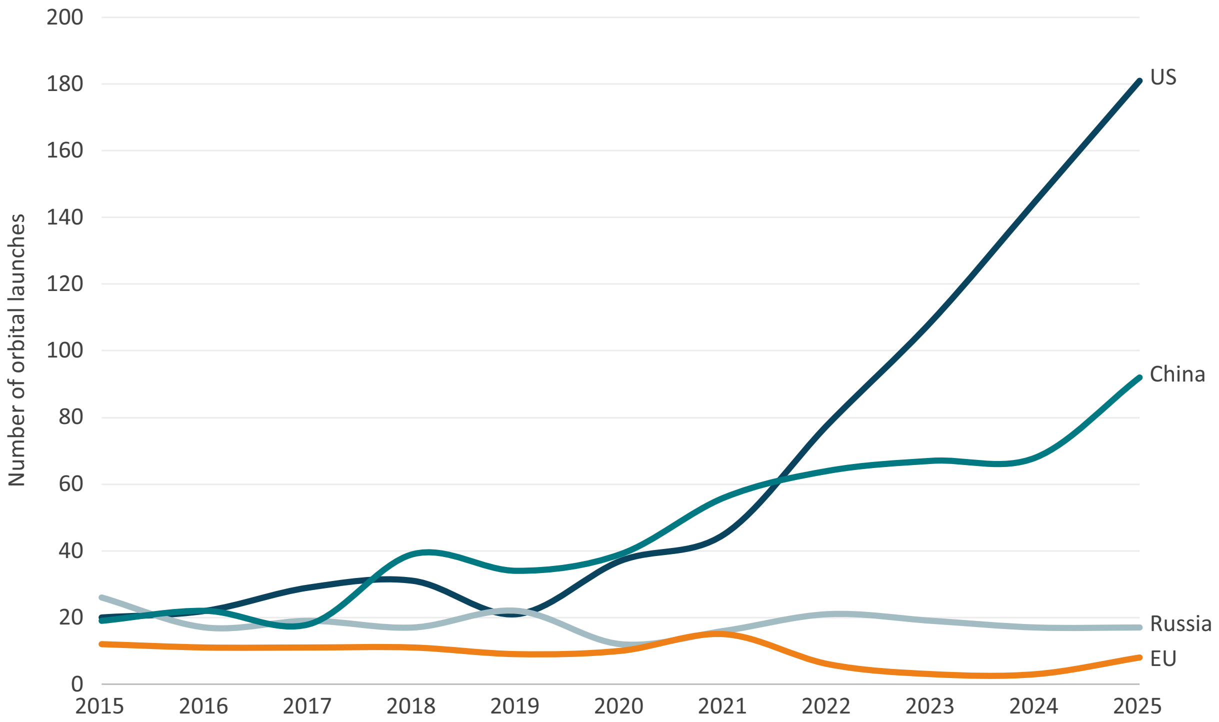
Overall, the figure illustrates not merely differences in scale but a widening structural gap. While the US and China have entered a phase of industrial acceleration driven by significant reductions in launch costs, Europe and Russia have struggled to maintain consistent launch capacity. The divergence raises important questions about long-term competitiveness and strategic positioning in access to space.

[18] Stephens, P. (2026, March 1). China's rocket deficit. The Wire China. https://www.thewirechina.com/2026/03/01/chinas-rocket-deficit/

[19] Qiao, X. (2025, October 23). China's commercial rocket launchers close cost gap with SpaceX. Yicai Global. https://www.yicaiglobal.com/news/chinas-commercial-rocket-launch-costs-to-likely-near-those-of-spacex-in-2026

[20] Schaefer, P. (2026, March 1). The EU's space ambition has a rocket problem. The Parliament Magazine. https://www.theparliamentmagazine.eu/news/article/europes-space-ambitions-has-a-launch-problem

FIGURE 1: ANNUAL ORBITAL LAUNCHES IN THE EU, US, CHINA AND RUSSIA, 2015–2025



Source: ECIPE calculations based on Jonathan's Space Pages data.[21]

A second indicator, closely related to orbital launch activity, is the number of satellites launched. This metric captures the total number of satellites placed into orbit by commercial, civil, or military actors in each region or country. Unlike launch counts, which reflect access-to-space capacity and industrial launch cadence, satellite numbers provide insight into the scale of orbital deployment as well as the breadth of downstream activity.

While satellites are sent into orbit via launch vehicles, a single rocket can carry multiple payloads. As a result, satellite counts measure a distinct dimension of capability: not merely the ability to launch, but the extent to which actors are actively building, deploying, and scaling space-based infrastructure. High satellite volumes often signal the development of large constellations and sustained commercial demand.

In other words, if annual launches are a proxy for industrial access and launch system maturity, satellite deployments reflect the intensity of space utilisation and the expansion of orbital assets. Taken together, the two indicators allow us to differentiate between mere increases in launch cadence and deeper structural expansion of a country's presence in orbit.

[21] McDowell, J. Satellite statistics: Launches. Jonathan's Space Pages. https://planet4589.org/space/stats/launches.html

Figure 2 presents the number of satellites launched annually in the 2015–2025 period by the EU, China, and Russia, while distinguishing between SpaceX as a standalone actor and other US entities. The chart reveals an even sharper divergence than Figure 1 once satellite deployment, rather than launch frequency, is considered.

The most revealing feature is the exponential growth of SpaceX, which necessitates the use of a logarithmic scale. From single-digit satellite deployments in the mid- to late 2010s, SpaceX's annual numbers surge dramatically after 2019, reaching 3,178 satellites launched in 2025. Other US entities show steady but more moderate expansion, increasing from around 110 satellites annually in the mid-2010s to 542 by 2025. This reflects a broadening US ecosystem, though one in which deployment capacity remains highly concentrated in a dominant private actor.

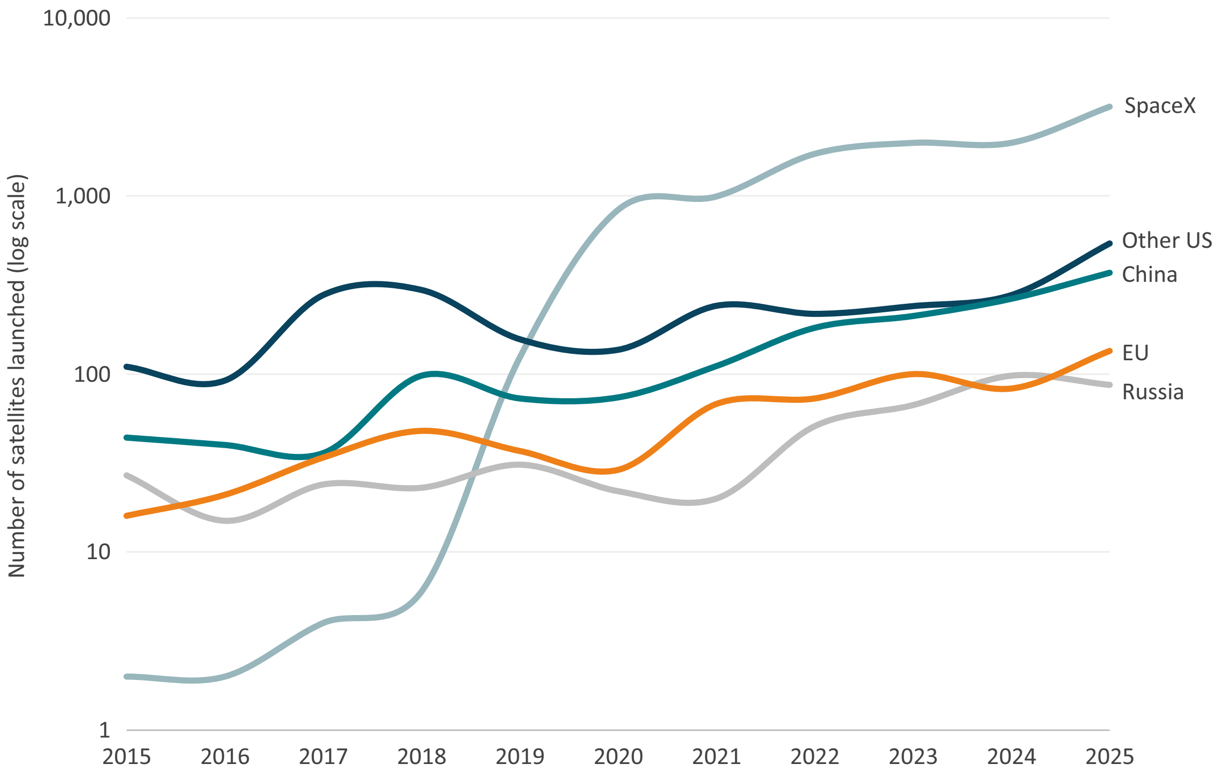
China follows a clear upward trajectory. Satellite deployments rise consistently over the decade and accelerate after 2021, reaching 371 in 2025. Although still far below SpaceX's scale, China is converging with other US operators.

Europe's trajectory, by contrast, is comparatively modest. While deployments increase over time – from 16 satellites in 2015 to 135 in 2025 – the scale remains limited. Growth is gradual rather than transformative, indicating incremental expansion rather than systemic scaling of orbital infrastructure.

Russia, meanwhile, exhibits relatively low and volatile deployment levels throughout the period. With only limited acceleration post-2022, annual deployments reach 87 satellites in 2025. Compared to both the US and China, Russia's expansion in orbital assets remains constrained.

Taken together, the logarithmic scale makes clear that the divergence is not marginal but orders of magnitude in nature. While the US in particular – driven largely by SpaceX – has entered a phase of constellation-driven expansion, Europe's presence in orbit remains comparatively small and incremental.

FIGURE 2: SATELLITES LAUNCHED PER YEAR BY THE EU, US, CHINA, RUSSIA AND SPACEX, 2015–2025



Source: ECIPE calculations based on Jonathan's Space Pages data.[22]

Lastly, another informative indicator of a country's long-term space capabilities is its global share of space-related patent publications. Unlike launch activity or satellite deployment, which capture operational scale, patenting reflects technological dynamism, innovation intensity, and the capacity to generate new knowledge.

Patents must, however, be interpreted with caution in the space sector.[23] Because many space technologies overlap with defence applications, government procurement and security restrictions have historically limited the disclosure of inventions through patent filings. However, as commercial space activities have expanded over the past two decades and procurement frameworks increasingly allow firms to retain intellectual property developed under public contracts, patenting has become more common.[24] Despite these limitations, patent publications remain a useful indicator of technological capabilities. A stable or rising share suggests active research ecosystems and sustained investment in innovation, while a declining share may signal a loss of technological weight.

[22] McDowell, J. Satellite statistics: Payloads. Jonathan's Space Pages. https://planet4589.org/space/stats/pay.html

[23] Notably, patenting activity does not necessarily translate into more innovative activity. See, e.g., Torrance, A. W., Friedman, L. C. and Singh, T. (2025). Is China's patent boom a bust? Houston Law Review, 63(2), pp. 453–496. https://houstonlawreview.org/article/154481-is-china-s-patent-boom-a-bust. Nonetheless, patenting activity likely is directionally correlated with innovative activity.

[24] Veugelers, R., Sekut, K. and Nicoli, F. (2025). Relaunching Europe's space economy (Bruegel Blueprint No. 36). Bruegel. https://www.bruegel.org/sites/default/files/2025-08/Bruegel%20Blueprint%2036.pdf

Figure 3 shows the global share of space-related patent publications for the EU, the US, China and Russia between 2000 and 2023.

The most striking development is the rapid rise of China. From negligible levels in the early 2000s, China's share increased sharply from the late 2000s onwards and now exceeds 70 per cent. This growth mirrors a broader increase in Chinese patenting activity across all sectors. Some analysts argue that this trend often reflects quantity rather than quality.[25] However, evidence also points to increasing citation rates for Chinese patents in areas such as space propulsion systems, suggesting improving technological impact.[26] Moreover, studies focusing specifically on highly cited space patents also show Chinese applicants emerging as global leaders.[27]

In contrast, the US' share declined steadily from around 40 per cent in the early 2000s to 12 per cent in 2023. The EU also experienced a gradual decline, falling from around 11 per cent in 2000 to about 6 per cent in recent years. Meanwhile, Russia's share decreased to near-zero levels over the same period.

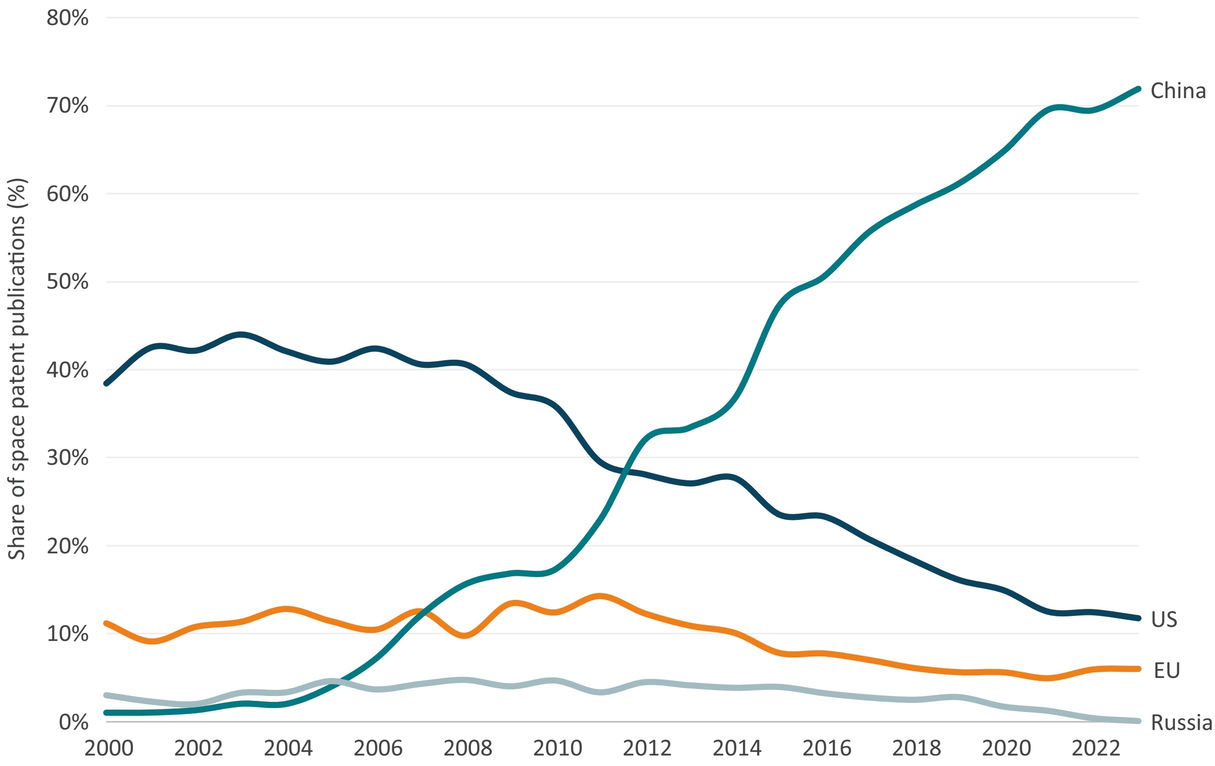
Overall, the figure illustrates a significant shift in the geography of space innovation. While the US and Europe remain important innovation centres, China has rapidly expanded its technological footprint in the global space sector.

[25] Torrance, A. W., Friedman, L. C. and Singh, T. (2025). Is China's patent boom a bust? Houston Law Review, 63(2), pp. 453–496. https://houstonlawreview.org/article/154481-is-china-s-patent-boom-a-bust

[26] European Patent Office (EPO), European Space Policy Institute (ESPI) and European Space Agency (ESA). (2024). Patent insight report: Propulsion systems for space. https://link.epo.org/web/business/patent-insight-reports/en-propulsion-systems-for-space.pdf

[27] Veugelers, R., Sekut, K. and Nicoli, F. (2025). Relaunching Europe's space economy (Bruegel Blueprint No. 36). Bruegel. https://www.bruegel.org/sites/default/files/2025-08/Bruegel%20Blueprint%2036.pdf

FIGURE 3: GLOBAL SHARE OF PATENT PUBLICATIONS IN SPACE SCIENCE BY THE EU, US, CHINA AND RUSSIA, 2000–2023



Source: ECIPE calculations based on WIPO data.[28]

Over the past decade, the US and China have made substantial strides in space capabilities. SpaceX and other space startups have been a key driver of US growth, deploying thousands of satellites annually and maintaining a dominant position in both orbital launches and satellite deployments. While the US share of space patents has seen a remarkable decline, its operational capabilities remain formidable.

China, meanwhile, has hugely increased its share of space-related patents, launches, and satellite deployments, signalling a robust expansion of its technological and industrial space capabilities.

In stark contrast, Russia – once a leading space power – has become largely irrelevant, with its patent share and satellite launches experiencing a significant decline over the decade.

Europe's performance stands in sharp contrast to both the US and China. Although it remains a significant player, Europe's share of space patents has halved, and its satellite deployment and launch activity remain modest. This stagnation raises critical questions about why Europe

[28] World Intellectual Property Organization. (2025). Introduction to space transportation. In WIPO technology trends technical annex: The future of transportation in space. https://www.wipo.int/web-publications/wipo-technology-trends-technical-annex-the-future-of-transportation-in-space/en/introduction-to-space-transportation.html

has struggled to keep pace with the US and China and what policies could help restore its competitiveness in the global space arena.

3. UNPACKING EUROPE'S SPACE LAG: FINANCING THE SPACE ECONOMY

As highlighted in the previous section, Europe faces significant challenges in the space sector. Amid the rapid transformation of the global space industry, the EU clearly trails behind the US and China in terms of several critical capabilities.

The European Commission recently set out to address Europe's widening gap with other major space powers. In this context, in June 2025, it launched the EU Space Act with the stated objective of ensuring the safety, resilience, and environmental sustainability of space activities while boosting the competitiveness of the EU space sector.[29]

However, the mismatch between the policy diagnosis underlying the EU Space Act and the structural constraints shaping Europe's position in the global space economy is striking. The Commission's impact assessment identifies three central problems: regulatory fragmentation across Member States, risks related to safety and resilience, and the environmental sustainability of space activities.[30] While these issues are not insignificant, they do not explain why the EU trails the US and China in launch capacity or satellite deployment.

Our analysis also identifies three core challenges shaping Europe's position in the space economy. However, they are of a different nature. Rather than regulatory fragmentation, Europe's space lag is primarily driven by three structural policy challenges:

1. **Capital markets problem:** As the space industry becomes increasingly dominated by young, fast-growing private sector players – particularly startups capable of introducing groundbreaking innovations – the EU lags behind both the US and China. While Europe has a growing number of such companies, many struggle to scale and make a significant impact on the industry. This reflects a broader weakness in Europe's capital markets, which limits the availability of large-scale venture capital and growth financing.

2. **Government funding problem:** Public space expenditures in Europe remain fragmented across Member States and numerous European space agencies. More importantly, public investment levels remain comparatively modest, both in absolute terms and relative to GDP, when compared with the public space spending of the US and China.

[29] European Commission. (2025). EU Space Act. Directorate-General for Defence Industry and Space. https://defence-industry-space.ec.europa.eu/eu-space-act_en

[30] European Commission. (2025). Commission staff working document: Executive summary of the impact assessment report accompanying the proposal for a regulation on the safety, resilience and sustainability of space activities in the Union (EU Space Act) (SWD(2025) 336 final). https://defence-industry-space.ec.europa.eu/document/download/84813bcb-51e3-4b49-bc8b-0ad53b8677c0_en?filename=SWD-Executive-summary-of-the-impact-assessment.pdf

3. **Industrial policy problem:** EU space policy has historically focused on established aerospace incumbents. While these firms continue to play an important role, this legacy-first approach has left comparatively less room for emerging space companies that could drive the next phase of industry growth, as has occurred in the US and increasingly in China.

These three issues are closely interconnected and together shape Europe's competitive position in the global space economy. The following sections examine them in turn. **Section 3** focuses on the financial constraints facing the European space sector, including capital markets and government funding. **Section 4** then turns to the industrial policy framework shaping the structure of the European space industry, including an analysis of how the EU Space Act and the Digital Networks Act, the EU's two most significant recent legislative interventions in the space and satellite connectivity sectors, inadvertently push incumbent dominance across the upstream, midstream, and downstream segments of the value chain.

3.1 Capital Markets Constraints: Europe's Struggle to Scale Space Startups

As highlighted in Section 2, space startups are playing an increasingly significant role in shaping the global innovation landscape and advancing industry development. While estimates vary, market research suggests there are between 2,750 and 2,850 space companies worldwide.[31] The majority of these companies are small, with limited impact on the broader space industry. However, even when focusing on the most influential players, as tracked in the ECIPE Space Economy Database, startups still feature prominently.[32] Among the 346 leading space companies we identified, 295 – or 85 percent – are classified as startups or small and medium-sized enterprises (SMEs).

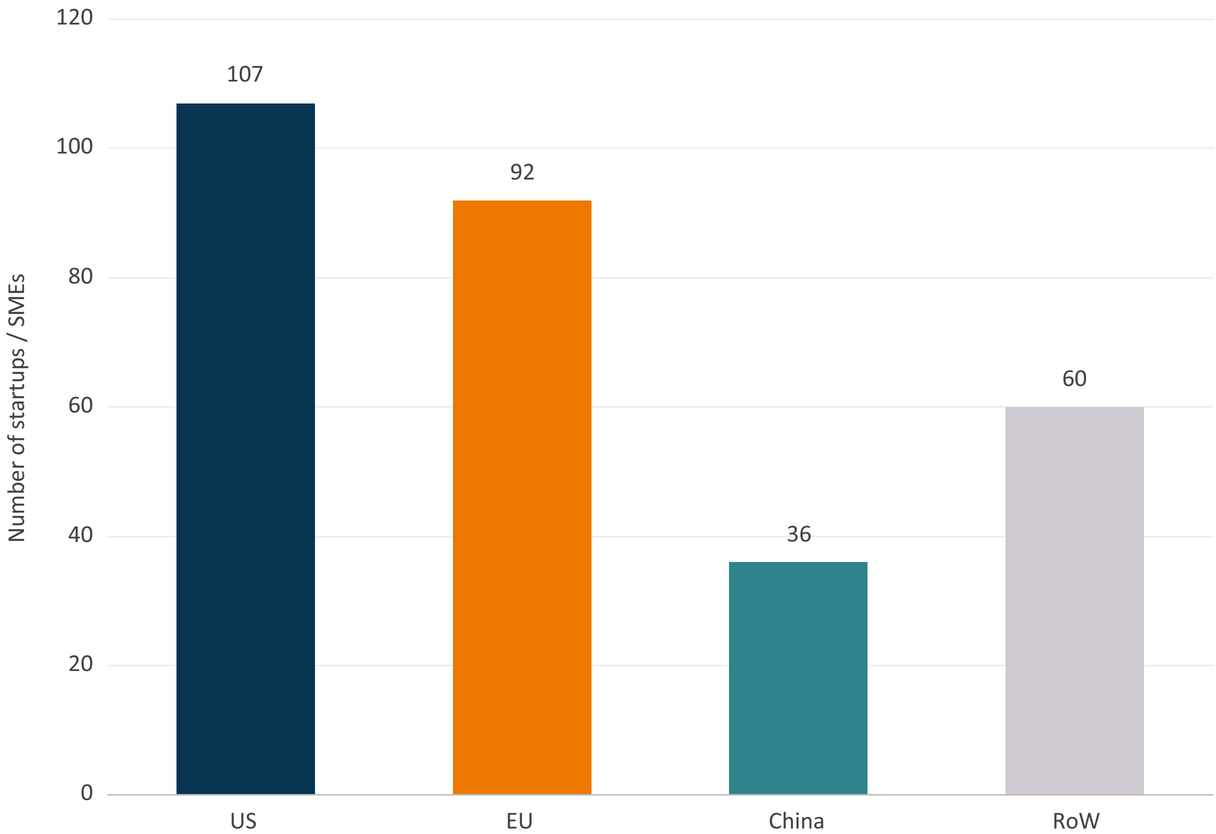
Figure 4 provides an overview of the 295 leading space startups and SMEs tracked in the ECIPE Space Economy Database by region of headquarters.[33] The US leads with 107 startups, followed closely by the EU with 92, and China with 36. The remaining countries account for 60 startups combined.

[31] PitchBook. Space Technology Overview. https://pitchbook.com/profiles/industry/space-technology#overview; also see: Tracxn. (2026). Space Tech – 2026 Market & Investments Trends. https://tracxn.com/d/sectors/space-tech/__1XRa6K4xC5mQ78RD1PlUviHapeZCqi_gJA6tg92REnt4

[32] The 295 space startups and SMEs in the ECIPE Space Economy Database account for between 90 and 95 per cent of all venture capital funding in the space tech sector, making them a clear representation of the industry's most influential players.

[33] "Leading" space startups are active firms with fewer than 500 employees, consistently identified as key actors in the space industry across multiple official and industry sources, rather than by any single metric such as revenue or funding. For further details on company identification in the ECIPE Space Economy Database, see the Methodology.

FIGURE 4: NUMBER OF LEADING SPACE STARTUPS AND SMES BY REGION



Source: ECIPE Space Economy Database.

Interestingly, the EU is not far behind the US in terms of the number of leading space startups. However, quantity does not necessarily equate to funding size. In other words, a large startup base does not mean that firms receive the level of financing required to grow, commercialise their technologies, and compete globally. Europe illustrates this pattern particularly well.

Figure 5 shifts the focus from the number of startups to the total venture funding they have received as of February this year, broken down by country of headquarters. The chart includes both the EU as a whole and individual EU Member States, all represented in orange.

There is a significant disparity in venture funding for space startups across countries, with the US leading the pack by a considerable margin. The US alone accounts for nearly USD 34 billion of the global total, which exceeds USD 54 billion, representing a striking 62 per cent share of the total space tech venture funding.

As the best-funded space startup in the world by a commanding lead, SpaceX is singled out within the US bar with USD 10 billion in funding, a figure higher than the total funding of any other country, except the US itself. However, even without SpaceX, US space venture funding would still be more than three times higher than China's and more than five times higher than the EU's, pointing to the strength of the American space startup ecosystem beyond its flagship company.

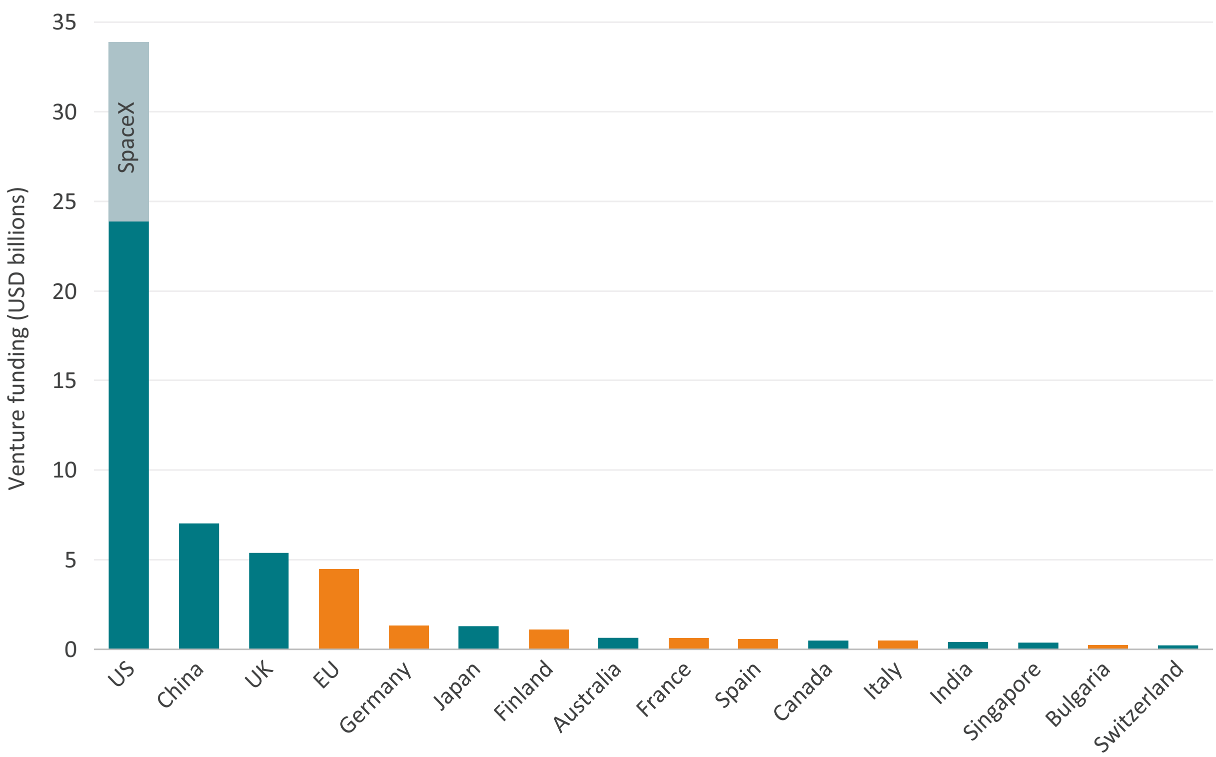
China ranks second, with a total of USD 7 billion in funding. While China's position as a significant player in the space tech economy is evident, it still lags far behind the US, even when excluding SpaceX.

The EU ranks fourth, with total funding of USD 4.5 billion, trailing behind the UK, which alone secured USD 5.4 billion. Most of the UK's funding comes from two startups – OneWeb and O3b Networks – which have since been acquired by established EU corporate players. Even so, with 92 leading space startups, the EU's comparatively poor performance in total space tech startup funding is particularly remarkable.

Put differently, if we calculate the average funding size of space startups across the three major space powers, the US leads with an average of nearly USD 317 million per startup. China follows with more than USD 195 million, while the EU lags significantly behind at just over USD 48 million on average per startup.

This disparity highlights a critical issue of scale within the European space startup ecosystem, with EU startups struggling to achieve the funding levels that their American and Chinese counterparts have attained. This lack of scale inevitably hampers the EU's capacity to innovate and make significant strides in the space industry.

FIGURE 5: TOTAL VENTURE FUNDING IN LEADING SPACE STARTUPS BY COUNTRY, AS OF FEBRUARY 2026 (USD BILLIONS, ORANGE = EU AND INDIVIDUAL EU MEMBER STATES)



Source: ECIPE Space Economy Database. Note: The figure includes both the EU as a whole and individual EU Member States. Only countries where space startups have collectively received at least USD 100 million in venture funding are represented in the chart. Funding for space startups that are no longer active as independent entities and have been acquired by other companies is also included. SpaceX is displayed separately within the US bar as it overwhelmingly dominates global space startup funding.

The sheer funding amounts can be misleading, as they may be influenced by the overall size of national economies. For this reason, it is equally important to assess space startup venture funding relative to domestic GDP. Figure 6 does precisely this, offering a more proportional comparison of national performance.

Strikingly, two smaller EU Member States, Finland and Bulgaria, occupy the top two positions. Bulgaria's ranking is largely driven by a single startup that raised substantial capital, combined with the country's relatively small GDP.

Finland, however, presents a more compelling case. The country hosts a concentrated ecosystem of seven leading space startups and SMEs, whose cumulative funding relative to GDP exceeds by far that of any other country worldwide. As we have previously shown at ECIPE, this strong performance aligns with Finland's broader leadership in other frontier technologies such as quantum, where the country also ranks first globally in venture funding as a share of GDP.[34] Viewed in this wider context, Finland suggests a distinctive national innovation model, one that warrants closer examination as a potential blueprint for the EU.

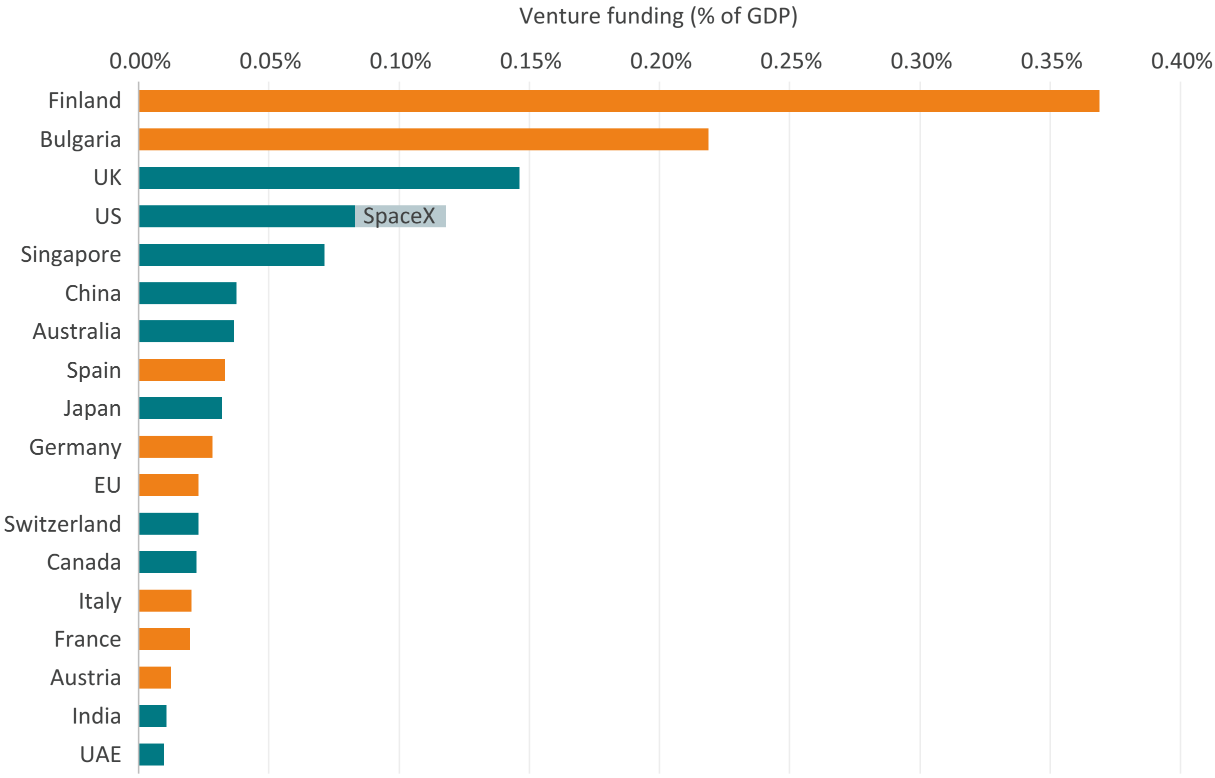
When measured against GDP, the UK and the US rank third and fourth globally, respectively. Importantly, even excluding SpaceX, the US would still retain fourth place, pointing to the depth of its space technology ecosystem in both absolute and relative terms.

China ranks sixth, with space tech venture funding relative to GDP approximately three times lower than that of the US. The EU as a whole performs significantly worse: its space venture funding as a share of GDP is more than five times lower than that of the US and roughly 1.5 times lower than China.

In short, even after controlling for economic size, the EU continues to lag behind both the US and China in space technology venture funding. This marks a structural competitiveness gap rather than one explained merely by differences in economic scale.

[34] Erixon, F., Dugo, A., Pandya, D. and du Roy, O. (2025, March). Benchmarking quantum technology performance: Governments, industry, academia and their role in shaping our technological future. ECIPE Policy Briefs. https://ecipe.org/publications/benchmarking-quantum-technology-performance/

FIGURE 6: TOTAL VENTURE FUNDING IN LEADING SPACE STARTUPS AS A SHARE OF GDP BY COUNTRY, FEBRUARY 2026 (ORANGE = EU AND INDIVIDUAL EU MEMBER STATES)



Source: ECIPE Space Economy Database. Note: The figure includes both the EU as a whole and individual EU Member States. Only countries where space startups have collectively received at least 0.01 per cent of GDP in venture funding are represented in the chart. Funding for space startups that are no longer active as independent entities and have been acquired by other companies is also included. SpaceX is displayed separately within the US bar as it overwhelmingly dominates global space startup funding.

To fully grasp the venture funding challenges faced by Europe's space sector, it is essential to examine the distribution of space startups by funding size categories.

Figure 7 does precisely this, illustrating the share of leading space startups that have raised total funding in four categories: under USD 10 million, between USD 10 million and USD 100 million, between USD 100 million and USD 1 billion, and over USD 1 billion, for the EU, the US, and China.

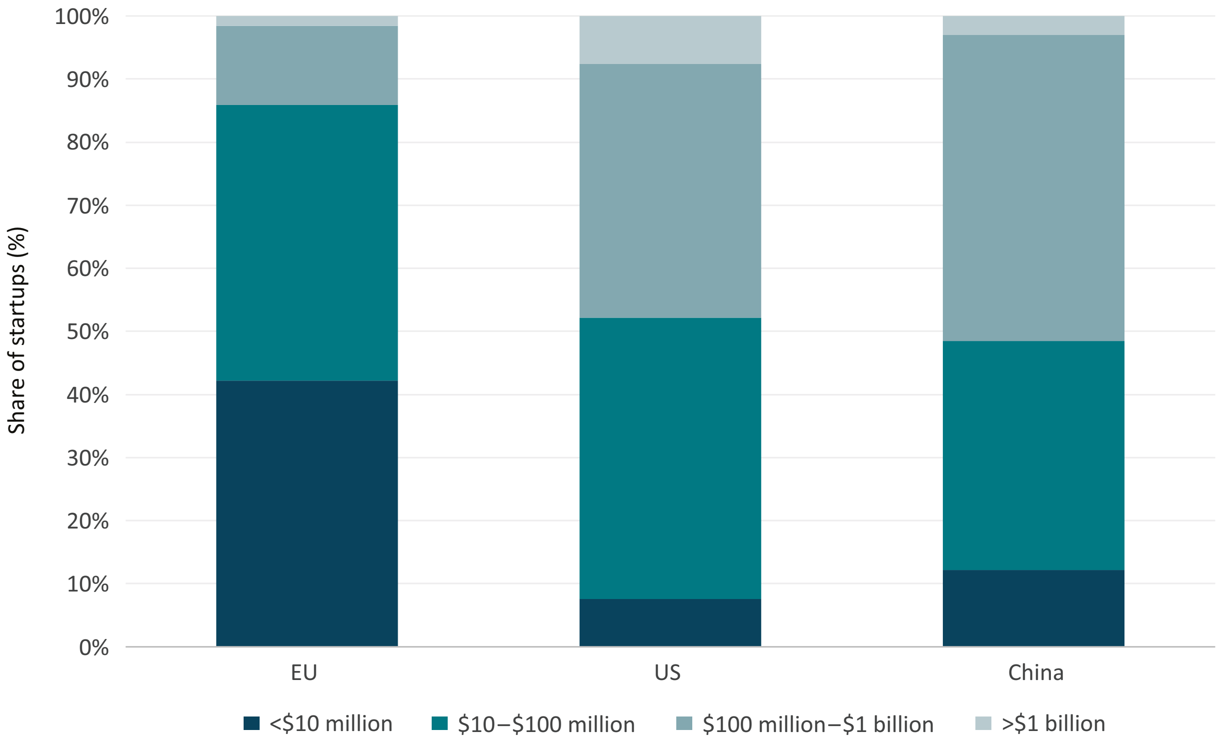
The stark contrast between the EU and both the US and China is immediately apparent. In the US and China, only 8 per cent and 12 per cent of leading space startups, respectively, have raised less than USD 10 million. In contrast, the EU has a striking 42 per cent in this category, meaning that almost half of its top space startups have raised minimal funding overall.

The proportion of startups with funding between USD 10 million and USD 100 million is relatively consistent across the three regions – 44 per cent in the EU, 45 per cent in the US, and 36 per cent in China. However, a crucial difference arises again in the funding category between USD 100 million and USD 1 billion. In the EU, only 13 per cent of startups fall into this bracket, compared to 40 per cent in the US and 48 per cent in China.

For startups with total funding exceeding USD 1 billion, the US leads with 8 per cent of startups, compared to 3 per cent in China and 2 per cent in the EU. This stark difference is primarily driven by the US's unparalleled ability to attract large-scale private investment, enabling its startups to grow bigger than those in Europe or China.

But the most critical takeaway is that in both the US and China, over 50 per cent of space startups have raised at least USD 100 million in total funding. In the EU, however, fewer than 15 per cent have reached this milestone. This reflects a persistent issue in Europe, where most private investment is directed towards early-stage companies that are far from commercialisation. Meanwhile, later-stage startups, which are ready to scale, face significant challenges in securing funding. This funding gap hampers their growth potential and limits their ability to drive innovation within the industry.[35]

FIGURE 7: DISTRIBUTION OF LEADING SPACE STARTUPS BY VENTURE FUNDING SIZE CATEGORY AND REGION, FEBRUARY 2026 (PERCENTAGE OF COMPANIES)



Source: ECIPE Space Economy Database.

The insufficient scale of venture capital investment in European startups remains a critical issue, extending far beyond the space industry and into other frontier technologies. At ECIPE, we have thoroughly explored how this challenge significantly hampers innovation and commercialisation,

[35] Gatto, G., Lavandier, H., Stöber, J., Ocejo, R. and Brukardt, R. (2025, November 24). Is Europe still on the launchpad? Reshaping its space ecosystem to lead. McKinsey & Company. https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/is-europe-still-on-the-launchpad-reshaping-its-space-ecosystem-to-lead#/

particularly within the quantum technologies sector.[36] Similarly, other studies have highlighted a comparable pattern in the AI industry.[37]

As numerous reports – including a recent ECIPE study[38] – indicate, the challenge is fundamentally rooted in Europe's capital markets. Both private and public capital markets in the region remain too small and insufficiently developed to enable startups to secure the capital they need to grow. The limited depth of venture capital and private equity, combined with underdeveloped junior and main stock markets, means that young high-growth firms often struggle to access early funding for commercialisation and subsequently lack viable pathways to scale or exit through public listings.[39]

The notion that the problem extends beyond a shortage of venture capital and also reflects weaknesses in public capital markets is particularly visible in the space sector. According to our ECIPE Space Economy Database, in the US, 14 of the 107 leading space startups – around 13 per cent – are publicly listed. In the EU, by contrast, only about 5 per cent trade on public stock markets, representing just 5 out of 92 leading space startups.

The downside of this capital markets issue is that it is structural in nature, meaning policies aimed solely at the space industry will have limited effectiveness in solving the problem. The upside, however, is that addressing it will create positive spillovers for numerous other high-tech sectors.

While we will not dive deep into the specific policies needed to expand national capital markets – numerous policy recommendations from ECIPE[40] and other stakeholders have already been detailed elsewhere – it is important to emphasise that this capital markets challenge severely undermines the EU's capacity to make a global impact on innovation in the space industry. Failing to address this issue will only further widen the competitiveness gap. Although recent signs from European political leaders indicate some recognition of the urgency[41], it is crucial to reiterate that addressing this issue must be made a policy priority.

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[36] Erixon, F., Dugo, A., Pandya, D. and Sisto, E. (2025). Quantum clusters: Ranking the world's deep-tech epicentres. ECIPE Occasional Papers. https://ecipe.org/publications/quantum-clusters-ranking-deep-tech-epicentres/

[37] European Commission. (2025, January 11). The EU invests in artificial intelligence only 4% of what the U.S. spends on it. https://ec.europa.eu/newsroom/eismea/items/864247/en#:~:text=While%20the%20EU%20is%20turning,Washington%20allocates%20to%20this%20technology

[38] Erixon, F., Abdi, I., Dugo, A., Guinea, O., Pandya, D. and du Roy, O. (2026). Boosting competitiveness: 10 actions for deeper and better capital markets in EU member states. ECIPE Occasional Papers. https://ecipe.org/publications/boosting-competitiveness-deeper-better-cmu/

[39] European Commission. (2025, May 28). The EU startup and scaleup strategy: Choose Europe to start and scale (COM(2025) 270 final). https://research-and-innovation.ec.europa.eu/document/download/2f76a0df-b09b-47c2-949c-800c30e4c530_en

[40] Erixon, F., Abdi, I., Dugo, A., Guinea, O., Pandya, D. and du Roy, O. (2026). Boosting competitiveness: 10 actions for deeper and better capital markets in EU member states. ECIPE Occasional Papers. https://ecipe.org/publications/boosting-competitiveness-deeper-better-cmu/

[41] European Commission. (2026, February 13). "The urgency could not be greater" to boost Europe's competitiveness, says President von der Leyen. https://ec.europa.eu/commission/presscorner/detail/en/ac_26_413

3.2 Insufficient and Fragmented Government Space Funding: A Barrier to Growth

As we have shown, the private sector is becoming an increasingly influential player in the global space industry. However, governments remain essential to driving development and innovation within the sector. Given its close ties to defence and national security, space is one of the industries where public sector involvement is not only vital but unavoidable.

Consider, for example, the evolution of space-sector R&D spending in the US between 2010 and 2020. During this period, the share of space R&D performed by private companies surged from around 10 per cent to nearly a third of the total. This shift highlights the growing role of private firms, particularly emerging ones, in the industry. Nevertheless, the US government still accounts for two-thirds of all space R&D[42] – remarkable when we consider that government-performed R&D across all sectors in the US represents less than 8 per cent of the total.[43]

Moreover, the government's role in the space sector extends far beyond direct innovation funding. It also involves substantial support for projects led by private companies, facilitated through public contracts and procurement. A recent report by The Washington Post revealed that, since 2003, Elon Musk's SpaceX has received more than USD 22 billion in funding from federal, state, and local agencies, with significant contributions from NASA and the Pentagon in the form of contracts, loans, subsidies, and tax credits. This figure is more than double SpaceX's total venture capital funding. As Amazon founder Jeff Bezos wryly noted, "Elon's real superpower is getting government money."[44]

The direct and indirect support provided by government authorities to the space industry is indispensable. Without it, many of the recent advancements would not have been possible. Therefore, assessing the government space expenditures of countries and regions is crucial for gauging another dimension of their competitiveness in the sector.

Figure 8 illustrates government space programme expenditures by country in 2024, with the EU and its individual Member States highlighted in orange. Consistent with trends in private sector investment, the US leads global government space spending, allocating nearly USD 80 billion in 2024. This accounts for almost 60 per cent of the total global expenditure of approximately USD 135 billion. The US figure is roughly four times China's and more than five times that of the EU, pointing to an unparalleled public sector commitment to space funding compared to other regions.

[42] Brukardt, R., Klempner, J. and Stokes, B. (2021, December 10). R&D for space: Who is actually funding it?. McKinsey & Company. https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/r-and-d-for-space-who-is-actually-funding-it

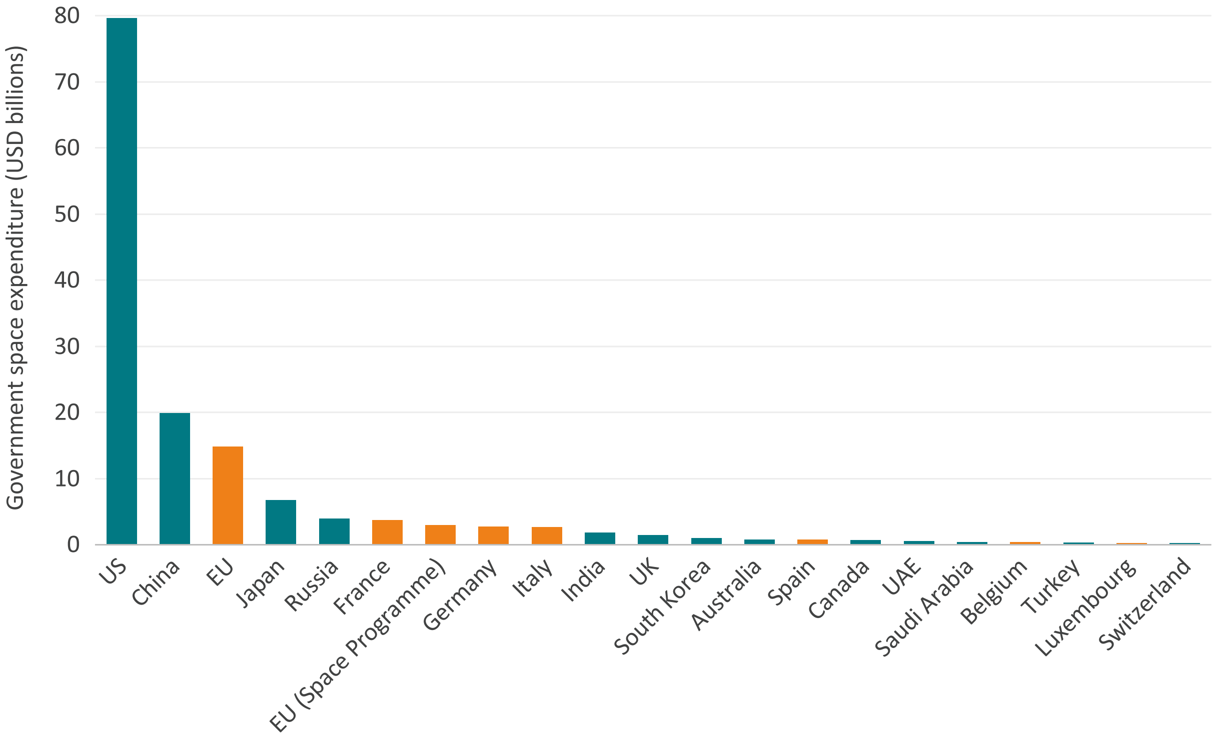
[43] National Science Board & National Science Foundation. (2025). Trends in U.S. R&D performance and funding (Science and Engineering Indicators NSB-2025-7). National Center for Science and Engineering Statistics. https://ncses.nsf.gov/pubs/nsb20257/trends-in-u-s-r-d-performance-and-funding

[44] Butler, D., Thadani, T., Martinez, E., Gregg, A., Melgar, L., O'Connell, J. and Keating, D. (2025, February 26). Elon Musk's business empire is built on $38 billion in government funding. The Washington Post. https://www.washingtonpost.com/technology/interactive/2025/elon-musk-business-government-contracts-funding/

China ranks second globally with just under USD 20 billion in government space spending, followed by the EU, which allocates USD 14.8 billion. The EU's total includes space investments from the national programmes of its Member States, contributions to joint EU space agencies, and funding for the flagship EU Space Programme, managed through the bloc's budget.

As with venture funding for space tech, the EU ranks third out of three in government space spending, trailing both China and, more significantly, the US. This gap further exacerbates the EU's competitiveness challenges in space, compounding the already evident struggles in the startup ecosystem.

FIGURE 8: GOVERNMENT SPACE PROGRAMME EXPENDITURES BY COUNTRY, 2024 (USD BILLIONS, ORANGE = EU AND INDIVIDUAL EU MEMBER STATES)



Source: ECIPE Space Economy Database. Note: The figure includes both the EU as a whole and individual EU Member States. Only countries with government space spending exceeding USD 250 million are represented in the chart.

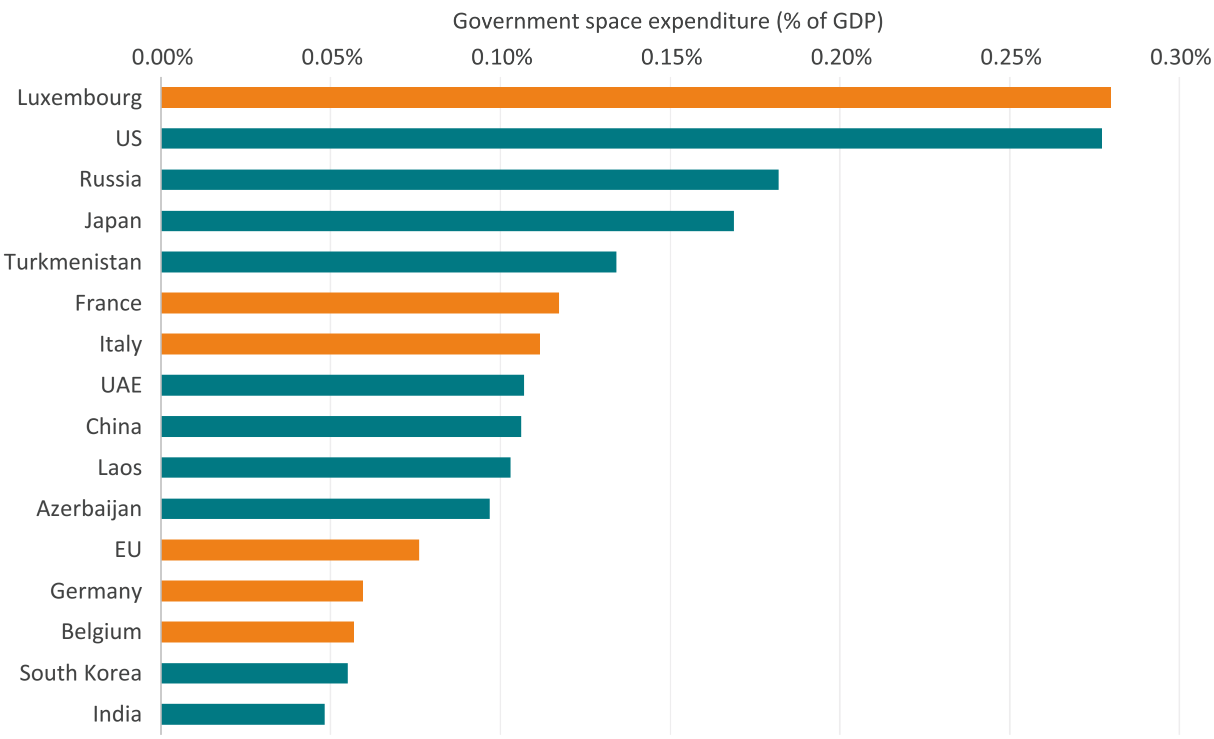
To gain a clearer perspective on countries' space efforts, it is useful to consider not only absolute spending figures but also their spending relative to national GDP. Figure 9 illustrates government space spending as a percentage of GDP by country for 2024.

Luxembourg takes the lead, primarily due to its small GDP, but also because of objectively high government space spending relative to its size. The US follows closely in second place, demonstrating exceptional performance both in absolute and relative terms.

Russia ranks third, with public space spending remaining competitive as a share of GDP. China ranks lower in 9th place globally, while the EU is even further down in 12th. Even in relative terms, China spends over 2.5 times less than the US, while the EU allocates only a quarter of the US's space budget relative to its GDP.

Larger EU countries and legacy space players such as France and Italy remain competitive on the global stage when government space spending is measured as a share of GDP, though their investments are less than half those of the US, even in relative terms. Overall, even when accounting for economic size, the EU ranks third among the three major space powers, in particular significantly behind the US.

FIGURE 9: GOVERNMENT SPACE PROGRAMME EXPENDITURE AS A SHARE OF GDP BY COUNTRY, 2024 (ORANGE = EU AND INDIVIDUAL EU MEMBER STATES)



Source: ECIPE Space Economy Database. Note: The figure includes both the EU as a whole and individual EU Member States. Only countries with government space spending exceeding 0.05 per cent of GDP are represented in the chart.

While having a static picture of current public sector spending in the space sector is useful, it is equally important to understand its trajectory, especially over the past decade when most progress has been concentrated. Table 1 and Figure 10 serve complementary purposes: the former highlights the scale and widening absolute gaps in spending, while the latter captures the divergence in growth trajectories over time.

Table 1 gives an overview of government space spending in the EU, US and China in three years, four years apart from one another: 2016, 2020 and 2024, together with relative growth rates. In

2016, the US was already by far the largest public space spender at USD 36 billion, four times the EU figure of USD 8.9 billion and more than seven times that of China.

By 2020, the EU figure had increased to USD 11.7 billion and the US figure to USD 47.7 billion, similar increases of 31 per cent and 33 per cent respectively with respect to 2016. In the meantime, China's public space spending rose to almost USD 9 billion, an impressive 82 per cent increase. Despite broadly comparable growth rates between the EU and the US up to 2020, the gap in absolute spending remained substantial, while China began to close the distance.

The post-2020 period marked a clearer shift in scale. EU public space funding reached USD 14.8 billion in 2024, a total increase of 66 per cent relative to 2016. Over the same period, the US space budget rose to almost USD 80 billion, more than doubling its 2016 level, while China quadrupled its spending to nearly USD 20 billion, surpassing the EU. As a result, the gap between the US and the EU widened further, with European spending falling to around one fifth of US levels, while China overtook the EU in absolute terms.

TABLE 1: GOVERNMENT SPACE PROGRAMME EXPENDITURES IN THE EU, US, AND CHINA, 2016, 2020, AND 2024 (USD BILLIONS)

Region	2016	2020	2024	Growth 2016–2024
EU	8.9	11.7	14.8	+66%
US	36	47.7	79.7	+121%
China	4.9	8.9	19.9	+306%

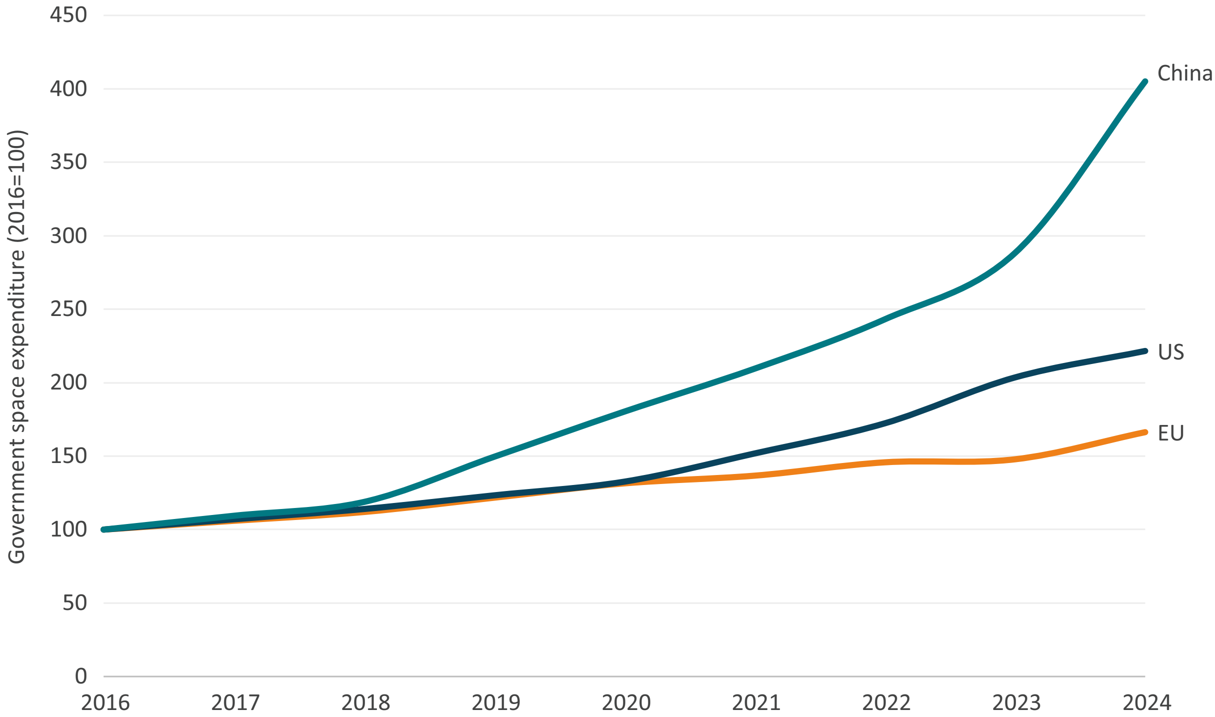
Source: ECIPE Space Economy Database.

While Table 1 highlights differences in scale, Figure 10 focuses on how spending trajectories evolved over time by setting 2016 as a baseline (100). This allows for a clearer comparison of growth dynamics across regions.

Up until 2018, government space spending in the EU, US, and China grew at nearly identical rates. However, from 2018 onwards, China's growth accelerated significantly compared to the other two, with a particularly sharp increase from 2023. Similarly, while EU and US spending followed comparable trajectories until 2020, US investment began to rise more rapidly thereafter, creating a widening divergence between the two.

Put differently, over the past decade, the EU not only failed to capitalise on the New Space revolution driven by private space startups but also struggled to keep pace with the acceleration in government space spending observed in the US and China. This has further expanded the gap with the US and eroded the EU's earlier advantage over China, marking another dimension of the EU's declining competitiveness in the space sector.

FIGURE 10: GROWTH IN GOVERNMENT SPACE EXPENDITURE IN THE EU, US, AND CHINA, 2016–2024 (2016=100)



Source: ECIPE Space Economy Database. Note: Due to the unavailability of data for 2017 and 2019, these values have been estimated using linear interpolation, drawing from the available data points for 2016, 2018, and 2020.

Increasing government space expenditures within the EU is critical if the bloc intends to close the growing competitiveness gap with China and, especially, the US.

Equally important as the quantity of European public space spending is its quality. Unlike the US and China, government space expenditures in the EU are particularly fragmented, leading to cost inefficiencies and spending redundancies. This fragmentation is twofold: spending occurs both at the national and EU levels with only limited coordination, and even at the Union level, multiple agencies are involved. These include the European Space Agency (ESA), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the EU Agency for the Space Programme (EUSPA), the Directorate-General for Defence Industry and Space (DG DEFIS) of the European Commission, and the European Defence Agency (EDA), each channelling funds in different directions.[45]

To address this, a consolidation of public spending is necessary, both between the national and Union levels and across agencies. Duplication and inefficiency push the EU's actual space spending well below its nominal figure. However, this consolidation must go hand in hand with a sustained increase in funding. Crucially, the challenge is as much political as it is technical:

[45] Gatto, G., Lavandier, H., Stöber, J., Ocejo, R. and Brukardt, R. (2025, November 24). Is Europe still on the launchpad? Reshaping its space ecosystem to lead. McKinsey & Company. https://www.mckinsey.com/industries/aerospace-and-defense/our-insights/is-europe-still-on-the-launchpad-reshaping-its-space-ecosystem-to-lead#/

in Member States with little or no domestic space industry, incentives to pool resources are weaker, complicating efforts to consolidate spending at the European level.

However, there are promising signs of progress. The 30 per cent increase in ESA's budget for 2026–2028, compared to 2023–2025, marks the first time in the agency's 50-year history that European countries have agreed to meet ESA's request for such a substantial rise.[46] Additionally, the boost in defence spending across EU Member States is expected to positively impact space funding.[47]

Despite these developments, continued progress is needed. As the gap with China and the US widens, both the expansion and consolidation of public space spending must be executed effectively to ensure the EU's competitiveness on the global stage.

4. UNPACKING EUROPE'S SPACE LAG: INDUSTRIAL POLICY AND MARKET STRUCTURE

While funding constitutes a major constraint, the challenge is not solely the volume of investment. Equally important is how resources are allocated within the European space ecosystem. Europe's current industrial policy framework tends to prioritise established incumbents, limiting the emergence of new high-growth companies that could drive the next phase of the space economy.

This incumbent-centred structure has historical roots. Although Europe has lost significant ground in the global space economy over the past decade, the European space sector was once a global commercial leader, largely built around what are today legacy players. Before SpaceX began eroding its market share through aggressive price competitiveness in the mid-2010s, Arianespace – the ESA-backed and world's first commercial launch service provider[48] – consistently commanded between 50 and 60 per cent of the global commercial launch market following its creation in 1980.[49]

Similarly, prior to the disruption introduced by Starlink, the traditional satellite communications market was long dominated by Luxembourg-based SES and Intelsat, later acquired by SES, together accounting for more than 40 per cent of global market share.[50]

However, the competitive landscape has now changed dramatically. Firms that were once uncontested global leaders now face intense competition from new entrants deploying different technological and business models. Yet their legacy continues to shape the structure of Europe's

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[46] Reuters. (2025, November 27). European nations agree 30% boost in three-year space budget. https://www.reuters.com/business/aerospace-defense/european-nations-agree-30-boost-three-year-space-budget-2025-11-27/

[47] Hitchens, T. (2025, December 31). Europe's time to shine in space? 2026 preview. Breaking Defense. https://breakingdefense.com/2025/12/europes-time-to-shine-in-space-2026-preview/

[48] Dugo, A. (2024, July). Europe vs United States – Boosting competition in space and the skies. ECIPE Insights. https://ecipe.org/insights/europe-vs-us-competition-space-skies/

[49] European Commission. (2016). Case M.7724 – Airbus Safran Launchers / Arianespace (Commission decision of 20 July 2016). https://ec.europa.eu/competition/mergers/cases/decisions/m7724_2310_7.pdf

[50] European Commission, Directorate-General for Competition. (2025). Competition merger brief (Issue 3/2025). https://competition-policy.ec.europa.eu/document/download/1c88aab0-9f7e-494c-8a05-5bf83495bd55_en?filename=kd0125018enn_merger_brief_2025-3.pdf

space industry. The sector remains largely centred around these established incumbents, leaving relatively limited room for new entrants associated with the New Space ecosystem. At the same time, industrial policy choices at both the Member State and EU levels often reinforce this structure, prioritising continuity and stability over the rapid scaling of younger, high-growth companies capable of challenging incumbent dominance.

4.1 The Continued Dominance of Legacy Players in the EU and Its Drawbacks

Before examining the policy mechanisms that contribute to maintaining this industrial structure, it is important to first assess the scale and influence of these legacy space corporations. To do this, in addition to tracking leading space startups, the ECIPE Space Economy Database also compiles data on the largest established companies active in the global space industry. In total, 51 major corporations are identified, including 15 headquartered in the US, 14 in the EU, 4 in China, and 18 in other regions.

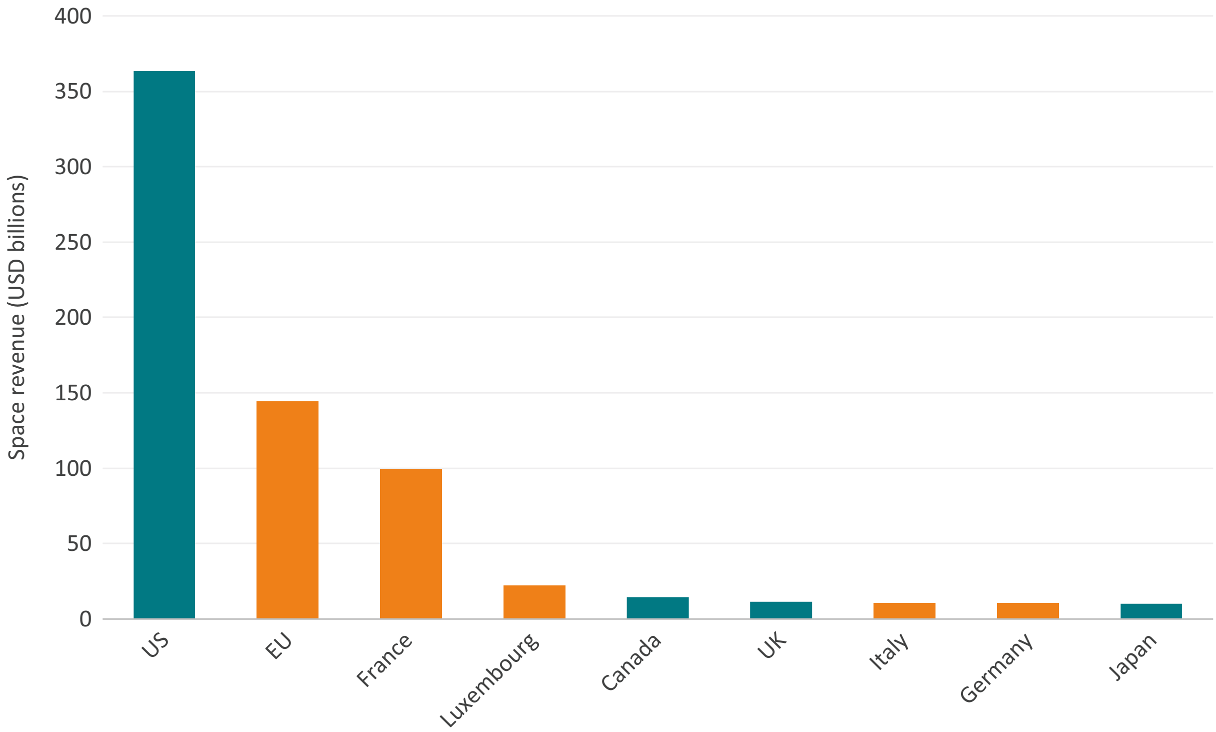
To illustrate the economic weight of these firms, Figure 11 reports the total space-related revenues generated by these companies by country of headquarters between 2015 and 2024. The chart includes both the EU as a whole and individual EU Member States, all represented in orange.

Because many of these incumbent corporations operate across multiple sectors, the ECIPE Space Economy Database isolates revenues derived specifically from space activities in order to provide a more accurate representation of the global space industry. For this reason, large Chinese and Russian corporate actors are not included in the chart. Although they are tracked in the database, it is not possible to consistently identify their space-related revenues or compile annual evidence across the full period due to significant data gaps and limited transparency.

Figure 11 highlights the continued importance of Europe's legacy space players. The US ranks first in terms of space-related corporate revenues, with just under USD 364 billion, while the EU follows with more than USD 144 billion. Although the gap remains significant, it is notably smaller than in other segments of the space economy. First, much of the US advantage reflects the scale of government procurement available to American firms. Second, US corporate space revenues are roughly 2.5 times higher than in the EU, compared with around five times higher government spending and an even larger gap of about 7.5 times in venture funding. In other words, when attention shifts to corporate activity alone, Europe's competitive position appears stronger.

Another striking feature is the concentration of revenues within the EU. France alone accounts for nearly 70 per cent of total EU corporate space revenues over the period. This reflects the enduring dominance of the country's established space champions, which continue to anchor Europe's corporate space ecosystem.

FIGURE 11: TOTAL SPACE-RELATED REVENUES OF LEADING LEGACY COMPANIES BY COUNTRY, 2015–2024 (USD BILLIONS, ORANGE = EU AND INDIVIDUAL EU MEMBER STATES)



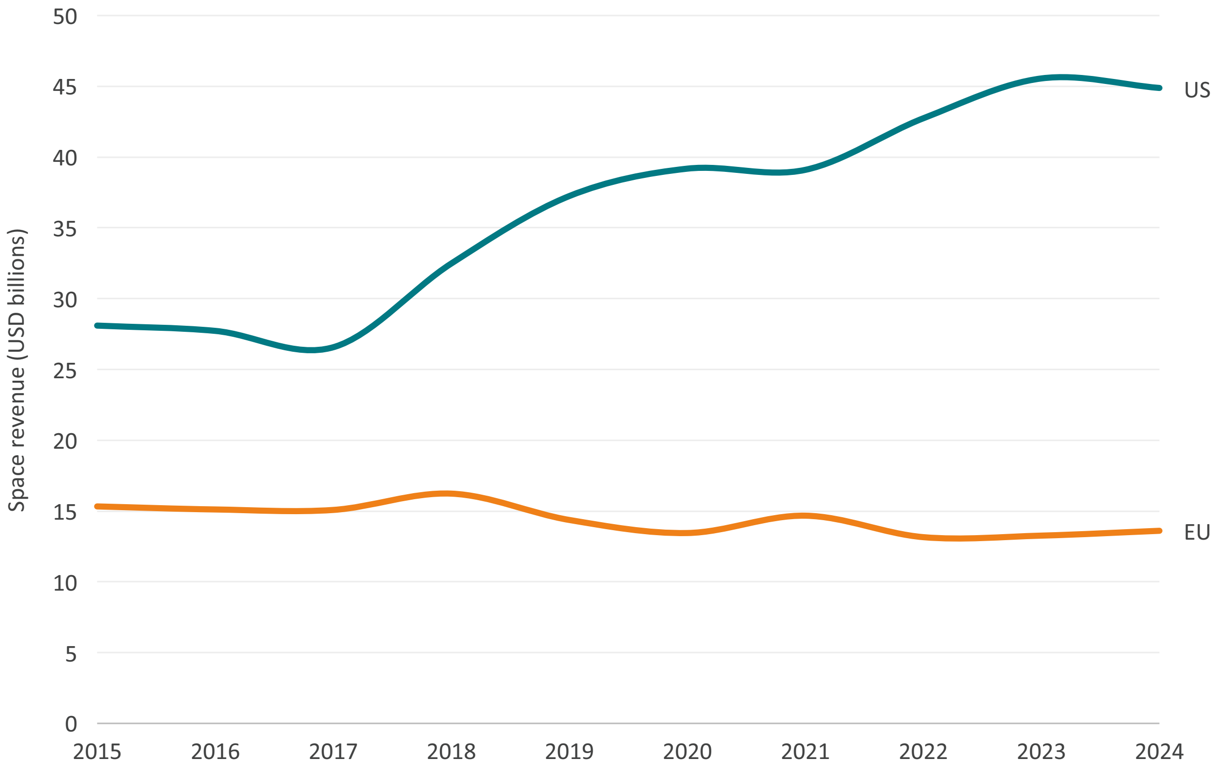
Source: ECIPE Space Economy Database. Note: The figure includes both the EU as a whole and individual EU Member States. Only countries with total corporate space revenues exceeding USD 10 billion are represented in the chart.

This relatively stronger position of European corporate players should not be interpreted with complacency. Figure 12 illustrates a critical trend. Over the 2015–2024 period, EU legacy space companies have in fact lost ground relative to their US counterparts. While corporate space revenues in the EU have broadly stagnated, they have expanded rapidly in the US.

In 2015, EU space-related corporate revenues stood at just over USD 15 billion, compared with slightly more than USD 28 billion in the US, less than twice as much. By 2024, EU revenues had declined to around USD 13.6 billion, while US revenues had climbed to almost USD 45 billion, more than three times higher.

In other words, even when focusing solely on corporate activity, Europe's competitive position in the space sector is deteriorating rather than improving.

FIGURE 12: ANNUAL SPACE-RELATED REVENUES OF LEADING LEGACY COMPANIES IN THE EU AND US, 2015–2024 (USD BILLIONS)



Source: ECIPE Space Economy Database.

The worsening competitive position of EU space giants relative to their US counterparts is partly a byproduct of the industrial structure of the leading legacy players in each region. Figure 13 illustrates this by comparing the top five corporate actors by space-related revenues in the US and the EU.

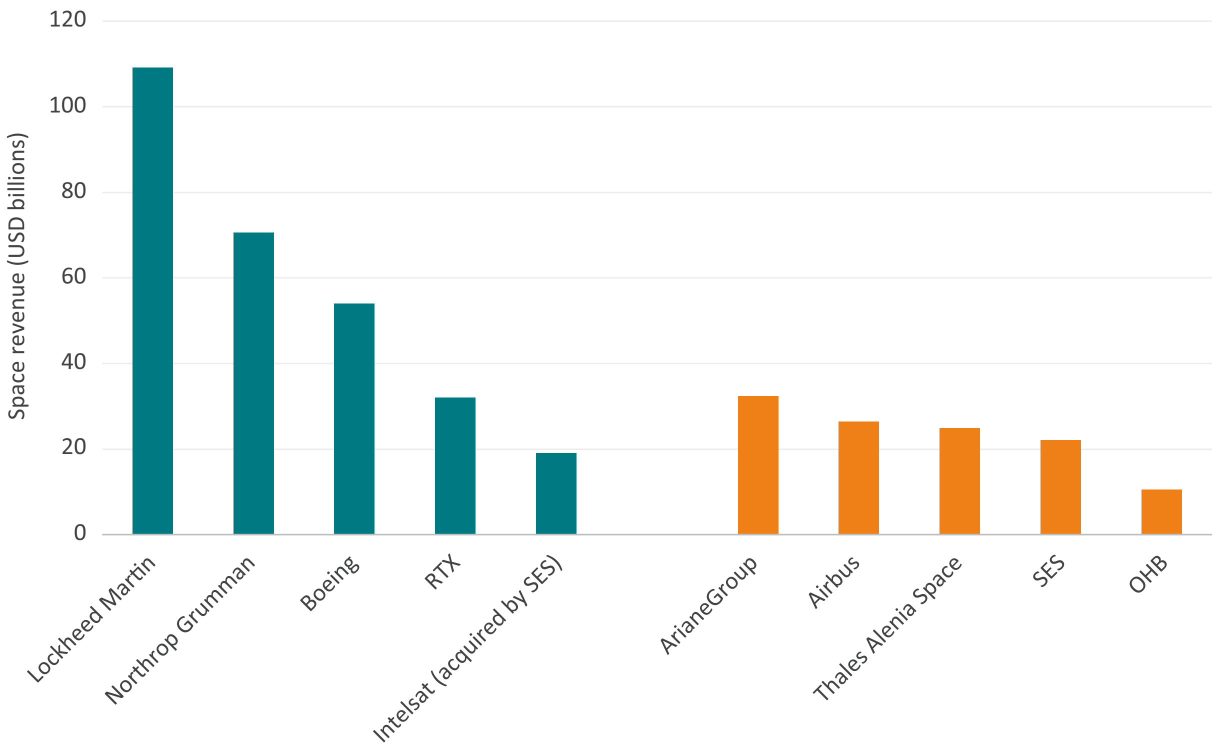
A first observation is the significantly larger revenues generated by US legacy players compared with their European counterparts. As noted earlier, this largely reflects the scale of government procurement available to US firms, particularly through contracts from NASA and the Department of Defense, which far exceed those available from European institutions.

However, an equally important factor lies in the sectoral composition of the leading firms. In the US, four of the five largest companies by space revenues – accounting for more than 70 per cent of total US corporate space revenues over the period – are defence contractors operating primarily in the upstream segment of the space economy, particularly satellite manufacturing and related hardware. The only exception is Intelsat, a Luxembourgish-American satellite communications operator later acquired by the Luxembourg-based company SES.

The European structure is more mixed. Airbus, Thales Alenia Space (a joint venture between Thales and Leonardo), and OHB operate mainly in satellite manufacturing. However, the largest revenue-generating player is ArianeGroup, the owner of Arianespace and a joint venture between Airbus and Safran, which is primarily active in launch services. The fourth largest firm is SES, focused on satellite communications in the downstream segment.

This difference is significant. In the US, the leading revenue-generating companies remain concentrated in upstream activities such as satellite manufacturing, a segment that continues to be dominated by large industrial actors. In contrast, two of the top five European firms operate in midstream launch services and downstream connectivity markets. These segments have been more heavily disrupted by new entrants, most notably SpaceX and its satellite communications network Starlink, but also a broader wave of emerging space companies. As a result, European incumbents are more exposed to competitive pressure in parts of the value chain undergoing the fastest structural change.

FIGURE 13: TOP FIVE LEGACY COMPANIES BY TOTAL SPACE-RELATED REVENUE IN THE US AND EU, 2015–2024 (USD BILLIONS)



Source: ECIPE Space Economy Database.

Direct revenue comparisons between Old Space incumbents and New Space firms are often difficult. Established aerospace companies are typically publicly listed and therefore publish detailed financial reports, while most space startups remain privately held and are not required to disclose revenue figures. Nevertheless, available estimates for some of these firms provide strong indications that young, fast-growing space companies have been particularly disruptive in the midstream and downstream segments of the space economy.

One way to illustrate this dynamic is to examine the evolution of the launch market over the past decade among its leading providers. Figure 14 tracks the launch revenues of three major players: ArianeGroup, the owner of Arianespace; SpaceX; and United Launch Alliance (ULA), a joint venture between Lockheed Martin and Boeing created in 2006 that held a monopoly on US government launches until SpaceX upended the market. Although SpaceX was privately held throughout this period and did not publicly disclose its revenues, industry estimates allow a reasonably accurate reconstruction of its launch revenues over time.[51]

The chart clearly illustrates the shift that took place during the decade. In 2015, when SpaceX was certified by NASA as a preferred launch provider[52] and by the US Air Force for national security space missions[53] – effectively breaking ULA's monopoly – the company generated less than USD 1 billion in launch revenues, roughly half that of ULA and only about one quarter of ArianeGroup's revenues. Over the following years, however, through an aggressive strategy focused on cost reduction and the development of reusable rockets, SpaceX steadily expanded its share of both government and commercial launches. By 2020 it had surpassed ULA in launch revenues, and by 2022 it had overtaken ArianeGroup. By 2024, SpaceX's launch revenues had reached around USD 4.2 billion, nearly three times those of ULA and about 60 per cent higher than ArianeGroup.

While the narrative of "SpaceX versus ArianeGroup" is often framed as a US-EU rivalry – even we at ECIPE have presented it this way[54] – the underlying story is more accurately one of Old Space versus New Space. Before surpassing ArianeGroup, SpaceX had already displaced its domestic incumbent, ULA. The real difference between the US and Europe therefore lies less in the performance of individual companies than in the dynamics of their respective ecosystems. The US space ecosystem has demonstrated a capacity for renewal by allowing a disruptive entrant such as SpaceX to challenge and ultimately displace an established incumbent. Europe, by contrast, has yet to produce a comparable SpaceX-like challenger.

Crucially, this divergence is not due to the absence of legacy players in the US. Firms such as Boeing and Lockheed Martin remained central. What changed was financing and procurement dynamics: US authorities redirected contracts and funding to support emerging actors like SpaceX, enabling scale and fostering competition between incumbents and new entrants.

Timing was also key. These shifts occurred early enough to scale the New Space ecosystem, whereas in Europe, slower and more fragmented adjustments have made it harder for new entrants to achieve comparable momentum.

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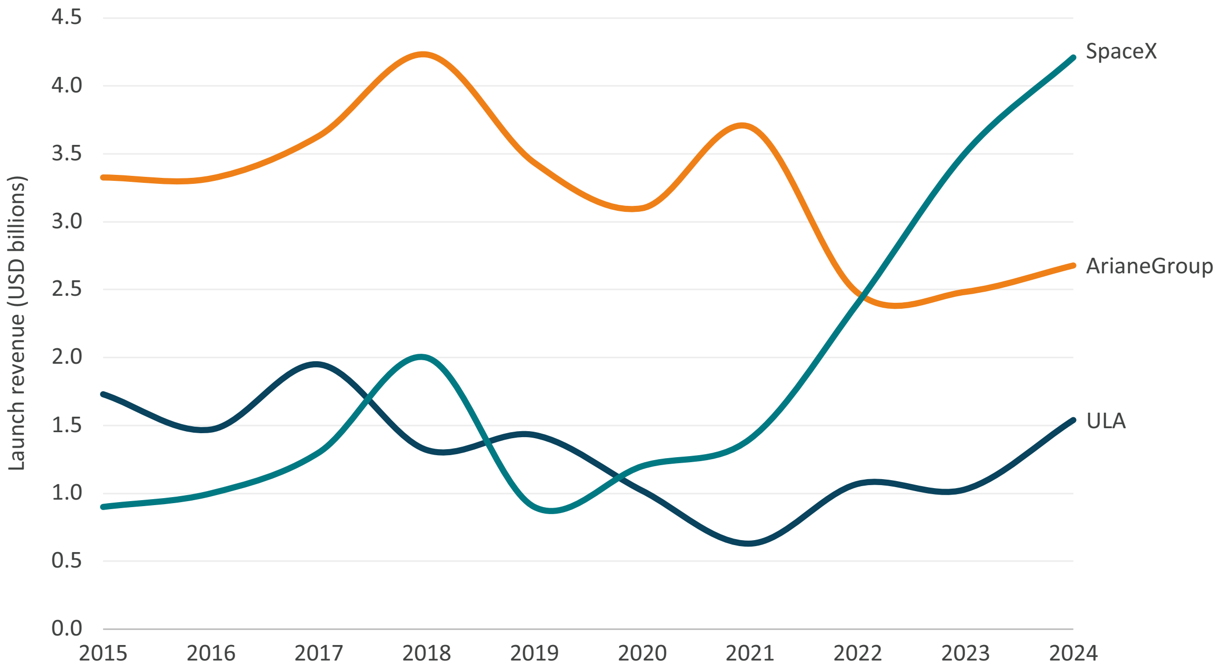
[51] SpaceX's annual revenue estimates are drawn from industry analyses and secondary sources: Trefis, What is driving SpaceX's revenues & valuation?, https://www.trefis.com/data/companies/SPACEX/no-login-required/yaQTBXoY/What-Is-Driving-SpaceX-s-Revenues-Valuation- ; Islam, M. (2023, March 2), Predicting SpaceX's 2023 revenue, Payload, https://payloadspace.com/predicting-spacexs-2023-revenue/ ; Kuhr, J. (2024, January 24), Estimating SpaceX's 2023 revenue, Payload, https://payloadspace.com/estimating-spacexs-2023-revenue/ ; Kuhr, J. (2025, January 29), Estimating SpaceX's 2024 revenue, Payload, https://payloadspace.com/estimating-spacexs-2024-revenue/

[52] Smith, R. (2015, May 23). U.S. Air Force prepares to send SpaceX stock into orbit. The Motley Fool. https://www.fool.com/investing/general/2015/05/23/us-air-force-prepares-to-send-spacex-stock-into-or.aspx

[53] U.S. Air Force. (2015, May 26). Air Force's Space and Missile Systems Center certifies SpaceX for national security space missions. https://www.af.mil/News/Article-Display/Article/589724/air-forces-space-and-missile-systems-center-certifies-spacex-for-national-secur/

[54] Dugo, A. (2024, July). Europe vs United States – Boosting competition in space and the skies. ECIPE Insights. https://ecipe.org/insights/europe-vs-us-competition-space-skies/

FIGURE 14: ANNUAL LAUNCH REVENUE OF SPACEX, ARIANEGROUP, AND ULA, 2015–2024 (USD BILLIONS)



Source: ECIPE Space Economy Database.

Much like in the launch market, similar dynamics are now unfolding in the downstream satellite connectivity segment. Starlink, the satellite constellation subsidiary of SpaceX, which today accounts for at least 60 per cent of the company's overall revenues[55], is rapidly reshaping this segment of the space economy as well.

The disruption stems primarily from the technological shift from traditional geostationary (GEO) satellites to large constellations of low-Earth-orbit (LEO) satellites. With thousands of satellites in orbit, Starlink is able to offer significantly lower latency and faster connectivity than legacy GEO operators. This has allowed it to capture market share in satellite broadband services, particularly in residential internet markets where US incumbents such as Viasat and EchoStar historically dominated.[56]

The impact extends well beyond residential broadband. Starlink has expanded aggressively into mobility and enterprise connectivity markets, including in-flight internet services, maritime communications and government connectivity contracts.[57]

Once again, the European response has been to rely on established legacy space players. The French government is promoting Eutelsat Communications, a satellite operator founded in 1977, as Europe's most credible challenger to Starlink. The company's acquisition of the British satellite

[55] Kuhr, J. (2025, January 29). Estimating SpaceX's 2024 revenue. Payload Space. https://payloadspace.com/estimating-spacexs-2024-revenue/

[56] S&P Global Ratings. (2024, November 7). Satellite providers pulled into Starlink's orbit. https://www.spglobal.com/ratings/en/regulatory/article/241107-satellite-providers-pulled-into-starlink-s-orbit-s13315383

[57] Rodriguez, M. (2025, November 6). The state of satellite connectivity (2025). S&P Global Market Intelligence.https://www.spglobal.com/market-intelligence/en/news-insights/research/2025/11/the-state-of-satellite-connectivity-2025

startup OneWeb in 2023 – operator of the only other large-scale low-Earth-orbit (LEO) satellite network – is widely presented as the cornerstone of Europe's competitive response. Reflecting this strategy, the French government led a EUR 1.5 billion capital injection into Eutelsat in 2025 to strengthen the company's position in the emerging LEO connectivity market.[58]

Yet this narrative overlooks several structural realities. Table 2 illustrates it clearly. While differences in time horizon and the scale of public support, particularly in the US, help explain part of the gap, they do not fully account for it. As of February 2026, the OneWeb constellation operated 651 active LEO satellites.[59] At the same time, SpaceX's Starlink constellation operated nearly 9,900 satellites – around 15 times more.[60] The divergence becomes even clearer when looking at deployment dynamics. Eutelsat launched 20 new satellites in 2024 and none in 2025 or early 2026. By contrast, Starlink added 1,962 satellites in 2024, 3,169 in 2025, and a further 595 in the first two months of 2026 alone. Ironically, the final batch of OneWeb satellites deployed in 2024 was launched aboard SpaceX rockets.[61]

Financial indicators point to a similarly wide gap. Eutelsat's LEO operations generated about EUR 187 million (roughly USD 210 million) in revenues in 2025.[62] By comparison, Starlink's revenues are estimated at around USD 10.4 billion, roughly 50 times larger.[63] The difference is even more pronounced in capital markets valuations. Eutelsat's market capitalisation stood at around USD 3 billion in early 2026[64], while SpaceX – preparing a public listing expected in mid-2026 – is reportedly targeting a valuation of approximately USD 1.75 trillion, more than 500 times more.[65]

Taken together, these figures reveal a profound structural gap between Europe's incumbent satellite operators and the scale achieved by new-generation space companies. They also call into question a strategy that continues to rely primarily on legacy players to restore Europe's role in the space economy, rather than enabling new entrants to scale independently.

58 Lo Nostro, G. (2026, February 13). France-backed Eutelsat reports stronger revenue in Starlink push. Reuters. https://www.reuters.com/business/media-telecom/france-backed-eutelsat-reports-stronger-revenue-starlink-push-2026-02-13/
59 McDowell, J. OneWeb launch statistics. Jonathan's Space Pages. https://planet4589.org/space/con/ow/stats.html
60 McDowell, J. Starlink launch statistics. Jonathan's Space Pages. https://planet4589.org/space/con/star/stats.html
61 Howell, E. (2024, October 19). SpaceX launches 20 Eutelsat OneWeb broadband satellites to orbit. Space.com. https://www.space.com/spacex-eutelsat-oneweb-satellite-launch-october-2024
62 Eutelsat Communications. (2025, August 5). Full year 2024–25 results. Press release. https://www.eutelsat.com/system/files/2025-08/DOC_Investors_PR-FY%202024_25-EN_050825.pdf
63 Communications Daily. (2026, January 16). Payload: SpaceX 2025 revenue hit $15B. https://communicationsdaily.com/news/2026/01/16/Payload-SpaceX-2025-Revenue-Hit-15B-2601150038
64 CompaniesMarketCap. Eutelsat market capitalization. https://companiesmarketcap.com/eutelsat/marketcap/
65 Davis, W. (2026, February 13). Elon Musk says "yes" to $1.75 trillion SpaceX IPO. Yahoo Finance. https://finance.yahoo.com/news/elon-musk-says-yes-1-123048291.html

TABLE 2: COMPARATIVE INDICATORS – EUTELSAT / ONEWEB VS. SPACEX / STARLINK

Indicator	Eutelsat / OneWeb	SpaceX / Starlink	Comparative Gap
Founding year	1977 (Eutelsat)	2002 (SpaceX)	–
Active LEO satellites (Feb 2026)	651 satellites	~9,900 satellites	~15× larger constellation
Satellites launched in 2024	20	1,962	~98× more launches
Satellites launched in 2025	0	3,169	Starlink only
Satellites launched in Jan–Feb 2026	0	595	Starlink only
Annual LEO revenue (2025)	~USD 210 million	~USD 10.4 billion	~50× larger revenue
Market cap / valuation (Feb 2026)	~USD 3 billion	~USD 1.75 trillion (IPO valuation)	>500× higher valuation

Source: ECIPE elaboration based on miscellaneous sources.

Beyond Eutelsat, other developments illustrate how deeply embedded this incumbent-first approach remains in Europe. Airbus, Leonardo and Thales recently signed a memorandum of understanding to combine their space activities into a new pan-European entity. The initiative has been explicitly framed as an effort to create a European "space champion" capable of responding to the rapid expansion of SpaceX and its Starlink satellite network.[66]

This strategy reflects yet another broader pattern in Europe's industrial response to the changing space economy: rather than fostering new high-growth entrants, Europeans are attempting to consolidate existing incumbents in order to achieve scale. While such consolidation may generate some industrial synergies, it is unlikely that combining legacy satellite and space-system businesses will match the pace of vertically integrated space companies such as SpaceX, whose rapid launch cadence and large-scale LEO constellation deployments are fundamentally reshaping the economics of the sector.

In stark contrast to Europe's response, China is adopting a more forward-looking approach to the emerging satellite economy. One of the country's most prominent challengers to Starlink is Spacesail, also known as Shanghai Spacecom Satellite Technology, a company founded in 2024. The startup has already raised more than USD 1 billion to develop its Thousand Sails LEO constellation, including funding for its satellite manufacturing subsidiary. Crucially, this financing has been supported by the venture capital arm of the Shanghai municipal government alongside other investors.[67]

[66] Hollinger, P. and Pfeifer, S. (2025, October 23). Airbus, Leonardo and Thales strike space deal to rival Musk's SpaceX. Financial Times. https://www.ft.com/content/a490b870-66b0-4745-be21-23f42057462d

[67] Jones, A. (2024, February 2). Shanghai firm behind G60 megaconstellation raises $943 million. SpaceNews. https://spacenews.com/shanghai-firm-behind-g60-megaconstellation-raises-943-million/

Critics often highlight the role of state support in China's space sector. Yet such arguments overlook that government backing is also common in Western space ecosystems. As we have remarked earlier, France is the largest shareholder in Eutelsat, while SpaceX itself has benefited from substantial US government contracts and funding. Moreover, recent research shows that China's space sector has become increasingly commercial over the past decade, with a growing share of activity carried out by private and venture-backed firms rather than traditional state-owned enterprises.[68]

The case of Spacesail is particularly instructive. In several respects, China's strategy in the space sector now resembles that of the US more closely than that of Europe does. Rather than relying primarily on its established GEO satellite operator China Satcom, Chinese policymakers have allowed a new entrant to emerge and channelled support towards it.

To date, Spacesail has fallen short of its early deployment targets. While the company initially aimed to launch around 650 satellites by the end of 2025, only slightly more than 100 have been deployed so far. A major constraint is that reusable launch vehicles are not yet widely operational in China's launch sector, limiting deployment speed. Nevertheless, the scale of China's long-term ambitions remains striking, albeit uncertain. Spacesail plans to deploy around 15,000 satellites by 2030, though such targets – common among state-backed ventures – have often been revised over time.

Additional constellations are being developed by the state-owned China Aerospace Science and Industry Corporation (CASIC) and by several private companies, which together could add tens of thousands more satellites. In total, China's planned LEO constellations could exceed 50,000 satellites by the end of the decade[69] – potentially surpassing the roughly 42,000 satellites SpaceX aims to operate by that time[70] – though these projections should be interpreted with caution.

Whether these plans ultimately materialise remains uncertain, but the strategic direction is clear: China is seeking to compete in the New Space economy by backing high-growth entrants such as Spacesail rather than consolidating legacy operators like China Satcom.

On the contrary, the incumbent-first mindset remains a defining feature of Europe's space industry. Figure 15 summarises the central structural asymmetry between the European and US space ecosystems by comparing total corporate space revenues and space startup venture funding – proxies for Old Space and New Space – across the value chain in the US and France. While other European countries, including Germany and Italy, also have significant space industries, France is used here as a proxy given its dominant role, accounting for almost 70 per cent of EU corporate space turnover.

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68 Lin, D. and Chen, E. (2025). China's space cowboys: Meet the leaders shaping Beijing's commercial space frontier. Special Competitive Studies Project (SCSP). https://www.scsp.ai/wp-content/uploads/2025/12/Chinas-Space-Cowboys-Report.pdf

69 Junusova, A., Arcesati, R. and Hmaidi, A. (2026, February 11). Orbital geopolitics: China's dual-use space internet. Mercator Institute for China Studies (MERICS). https://merics.org/en/report/orbital-geopolitics-chinas-dual-use-space-internet

70 Bhattacharjee, N., Baptista, E., Paraguassu, L. and Brito, R. (2025, February 24). Chinese rivals to Musk's Starlink accelerate race to dominate satellite internet. Reuters. https://www.reuters.com/technology/musks-starlink-races-with-chinese-rivals-dominate-satellite-internet-2025-02-24/

In terms of corporate space revenues, France remains highly competitive relative to the US. Over the past decade, the weight of corporate space revenues in the French economy has been roughly 2.5 times higher than in the US, reflecting the strength of Europe's established space incumbents. The picture changes dramatically, however, when looking at startup financing. In venture capital investment into space startups, the US outpaces France by roughly a factor of six, highlighting the far deeper pool of private capital available to emerging space companies in the American ecosystem.

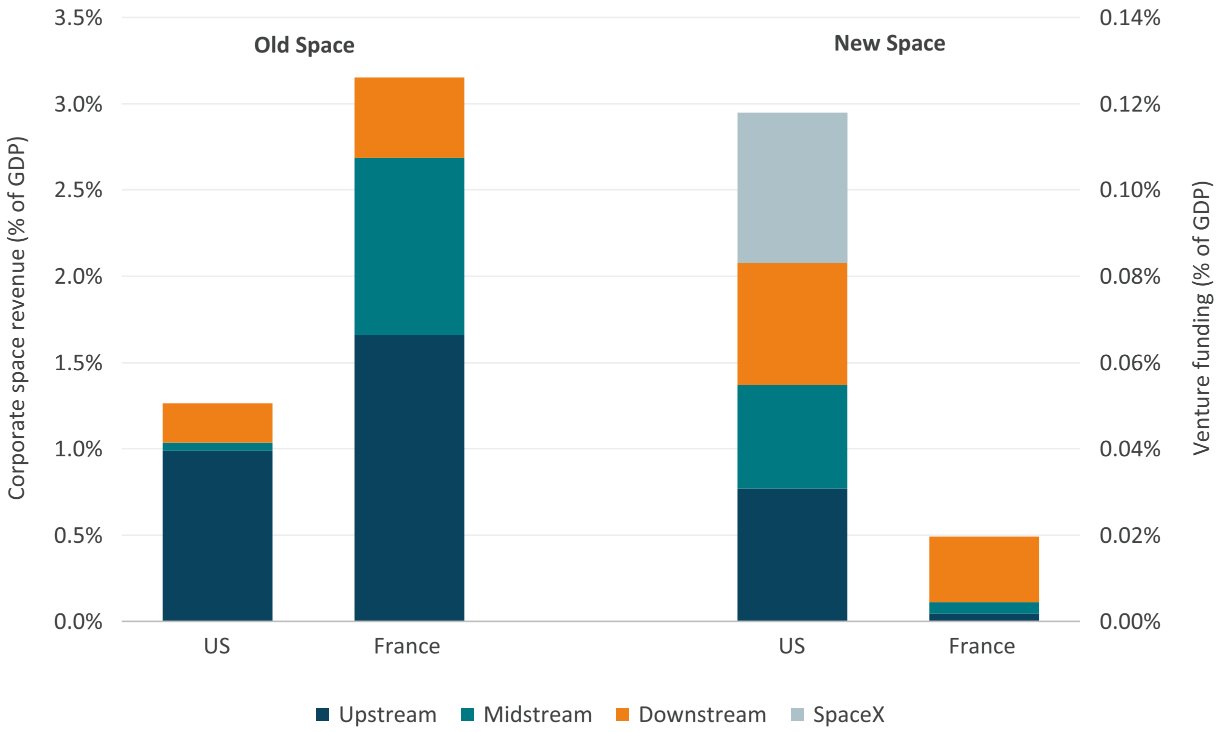
The chart also reveals important differences in how legacy space revenues are distributed across the value chain. In the US, corporate space revenues remain heavily concentrated in the upstream segment, particularly satellite manufacturing and related hardware activities dominated by large aerospace and defence contractors. In France, by contrast, nearly half of legacy corporate activity still extends into the midstream and downstream segments, including launch services and satellite communications. This reflects the structure of Europe's traditional space ecosystem, where incumbents such as ArianeGroup and Eutelsat continue to play central roles across multiple layers of the value chain.

A different pattern emerges when examining New Space activity. In both the US and France, startup investment is primarily directed towards the downstream and midstream segments of the space economy. These areas – including launch services, satellite constellations and connectivity platforms – have been more open to disruption, allowing new entrants to scale rapidly through new technologies and service-based business models. SpaceX illustrates this dynamic clearly: although the company vertically integrates also upstream capabilities through its own manufacturing of rockets and satellites, the bulk of its revenues today derives from launch services and, increasingly, downstream connectivity through Starlink.

Taken together, Figure 15 illustrates an increasingly unbalanced ecosystem in Europe. The continent continues to generate substantial corporate revenues through its established space firms, yet it lacks the comparable flow of venture capital needed to sustain the emergence of disruptive New Space companies. The US, by contrast, has developed an ecosystem where a strong base of legacy aerospace contractors coexists with well-funded startups capable of reshaping the fastest-growing segments of the space economy.

This is the core challenge facing Europe's space sector. The continent retains considerable industrial capabilities, but it lacks the financial and entrepreneurial dynamism required to renew its industrial structure and enable new entrants to challenge incumbents and drive the next wave of innovation in the space economy.

FIGURE 15: CORPORATE SPACE REVENUES (2015–2024) AND SPACE STARTUP VENTURE FUNDING (AS OF FEBRUARY 2026) BY VALUE CHAIN LAYER IN THE US AND FRANCE (PERCENTAGE OF GDP)



Source: ECIPE Space Economy Database.

4.2 The EU's Space Industrial Policy Challenges

While the weaknesses highlighted in the previous sections are often framed as market failures – particularly the persistent gap in venture and scale-up financing – they are also closely linked to the design of Europe's industrial policy framework. The structural constraints shaping Europe's response to the New Space era are therefore not solely the result of market dynamics, but are also reproduced through the policy architecture governing the sector.

This problem operates at three compounding levels across the space value chain. First, the geo-return principle continues to shape the allocation of industrial contracts within the European space sector. Second, the EU Space Act now introduces regulatory frameworks governing environmental compliance, launch operations, and satellite authorisation. Third, the Digital Networks Act (DNA) will govern satellite spectrum rights and the commercial framework for the EU's Infrastructure for Resilience, Interconnectivity and Security by Satellite ($IRIS^2$) programme. Together, these instruments form the principal legislative architecture shaping the competitive environment for European space operators across the upstream, midstream, and downstream segments of the value chain.

4.2.1 The Geographical Return Principle: Sovereignty Over Competitiveness

The foundational distortion begins with ESA's geographical return principle, more prominently for the upstream sector, which distributes industrial contracts among Member States in proportion to their financial contributions to ESA programmes. In practice, this means that France and Germany, as the largest contributors, consistently receive the largest share of design and manufacturing work, allocated to firms already embedded in those national industrial ecosystems. It also explains why the Germany Space Agency was quick to hit out at Draghi's suggestion on abandoning the geographic principle.[71]

The principle was designed to ensure that every Member State sees tangible economic return from its investment. What it produces, instead, is a procurement logic that rewards geography over capability, and continuity over competition. The companies best positioned to win ESA contracts may not necessarily be the most technically advanced or commercially proficient in the New Space era but they are the ones with the longest institutional relationships and the largest national backing. This structurally forecloses the natural selection process through which competitive industries renew themselves.

There has been staunch criticism of the geo-return principle, especially from the head of France's space agency, CNES, Philipp Baptiste. He argues that awarding contracts to countries in proportion to their investments in individual programmes means that Europe will struggle to develop a competitive, sovereign launch capability in the New Space era. The policy favours nationality over competitiveness and has been a root cause of delays and cost overruns for Ariane 6, which, as noted earlier, was delayed by four years. Baptiste points out that the number of warehouses and production sites for Ariane 6 is substantial across Europe, with many companies working on the same product.[72]

However, one could also argue that France's reform efforts come under the pretext of rescuing its own national champions from the inefficiencies that geo-return has created. Thus, while Germany defends the principle to secure contracts for its own national champions, France is ultimately aiming to do the same. Geo-return, as a whole, is being pushed in ways that prioritise national champions.

This contradiction is sharp when set against ESA's own convention. Article VII(2)–(3) mandates that ESA improve the "world-wide competitiveness of European industry" by encouraging an industrial structure "appropriate to market requirements," and that all Member States be given the maximum opportunity to participate in work of technological interest. The geo-return principle nominally satisfies the second obligation – broad participation – but systematically defeats the first. By guaranteeing contracts which end up going to established national primes

[71] Holliger, P. (2024, October 16). German space chief defends Europe investment model against Mario Draghi's proposal. Financial Times. https://www.ft.com/content/95752afd-18db-4b26-a0ef-297b2d68c32a

[72] Hollinger, P. (2024, May 26). French space chief calls for end to European agency's investment model. Financial Times. https://www.ft.com/content/4d6ec96e-9ce9-4d61-9c84-1a1210dd738a?syn-25a6b1a6=1

regardless of competitive merit, it produces an industrial structure calibrated to political geography, not market requirements.

Draghi's 2024 competitiveness report identified this directly, recommending the principle be scrapped entirely.[73] The report argues that ESA's procurement rules should reflect the outcomes of industrial competition and the selection of the best providers, and that resources should be concentrated on projects that demonstrate strong scientific or technological potential, regardless of the location of the entities.

This can be illustrated by Phase 2 of ESA's LEO Cargo Return Service initiative, which reflects a shift away from strict geo-return logic.[74] Under this model, ESA procures a service rather than allocating industrial contracts according to national contributions, thereby allowing firms greater flexibility to pursue technically efficient solutions. The pan-European space startup The Exploration Company exemplifies this emerging approach within the European space sector. Its integrated cross-border industrial structure reflects a form of specialisation that contrasts with the fragmentation historically reinforced by the geo-return principle.

However, despite their potential, governments and public agencies often do view startups with suspicion, as they are institutionally unfamiliar and perceived as insufficiently proven for public procurement.[75] The language of "maximum opportunity to participate" in Article VII therefore does not effectively extend to them. However, it remains to be seen how the future of the geo-return principle will evolve.

In this context, ESA's proposal to adjust the geo-return principle would allow prime contractors to choose their own suppliers, after which governments would contribute funding in proportion to the contracts awarded to their national industries under a "fair return" approach. However, this reform remains problematic because political considerations and national interests continue to influence funding decisions. Even under the fair return model, Member States still expect their national companies to secure contracts, limiting genuine competition. This dynamic can result in fragmented production, higher costs, and less efficient programmes as occurred with Ariane 6.

4.2.2 The EU Space Act: Harmonisation in Form, Incumbency in Practice

The EU Space Act[76] presents itself as a harmonising instrument designed to create a single market for space activities, making it easier for companies, particularly startups and SMEs, to grow and operate across borders. The stated ambition is broadly welcome. The structural reality of the Act's provisions, however, tells a different story, as it may construct barriers at

[73] Draghi, M. (2024). The future of European competitiveness: A competitiveness strategy for Europe. European Commission. https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

[74] Parsonson, A. (2025, April 2). ESA LEO Cargo Return Phase 2 to Proceed Without Geo-Return Constraints. European Space Flight. https://europeanspaceflight.com/esa-leo-cargo-return-phase-2-to-proceed-without-geo-return-constraints/ ; also see: The Exploration Company. (2025, April 22). Building Europe's Space Future at The Exploration Company. Available at: https://www.exploration.space/blog/building-europes-space-future-at-the-exploration-company

[75] Brull, R. (2025 February 3). Will ESA's 'fair contribution' reinvigorate Europe's space ambitions? No, it won't. SpaceNews. https://spacenews.com/will-esas-fair-contribution-reinvigorate-europes-space-ambitions-no-it-wont/

[76] European Commission. (2025, June 25). Proposal for a regulation of the European Parliament and of the Council on the safety, resilience and sustainability of space activities in the Union (EU Space Act), COM(2025) 335 final.

the upstream and midstream layers that new entrants must navigate in an already difficult environment, before they can ever reach the downstream market competitively.

At the upstream level, the Act's debris prevention and environmental compliance framework maps spacecraft lifecycle management onto a governance logic similar to that of the Waste Framework Directive (Recital 58) – a compliance paradigm historically developed for large integrated manufacturers. Such actors possess the institutional capacity to absorb extensive monitoring, reporting, and lifecycle management obligations.

For startups assembling satellites from commercial off-the-shelf components on rapid, iterative development cycles, the fixed compliance costs imposed by the Act may become disproportionate, and the resulting standards risk being misaligned with their development model. The Qualified Technical Bodies (QTB) framework compounds this dynamic: by restricting QTB designation primarily to public institutions under Articles 8 and 32–39, technical assessment authority defaults to established organisations such as ESA, European Cooperation for Space Standardisation (ECSS), German Aerospace Center (DLR), and French National Centre for Space Studies (CNES), among others. These institutions historically developed certification practices around satellite programmes led by legacy aerospace primes. As a result, the standards embedded in the compliance process may align more closely with the engineering and risk models of incumbent contractors than with the modular, rapid development practices characteristic of New Space startups.

At the midstream level, the Act's treatment of launch traffic and its interaction with the Single European Sky framework (Recital 55) may expand the role of air-traffic management actors in coordinating launch operations. As space transport becomes increasingly integrated with European airspace governance through organisations such as Eurocontrol and national air navigation service providers, launch operators may face additional requirements related to trajectory planning, temporary airspace restrictions, and operational coordination. These requirements may fall disproportionately on emerging high-cadence launch startups whose business models depend on frequent launches from mainland European spaceports.

By contrast, legacy launch providers such as ArianeGroup typically operate infrequent missions from the Guiana Space Centre, along trajectories that largely avoid European airspace management constraints. As a result, the regulatory interaction between launch operations and the Single European Sky framework is likely to affect the emerging high-cadence launch model in Europe more strongly than the legacy launch architecture around which the continent's space transport system was originally organised.

The mandatory collision-avoidance service requirement under Recitals 59 and 60 may add yet another layer of institutional concentration by effectively positioning the EU Space Surveillance and Tracking Partnership as the central provider of collision-avoidance services. Because EU-SST operates as a Member State consortium built largely on existing defence and civil surveillance infrastructure, this arrangement risks foreclosing a nascent commercial market in which private space situational awareness providers have begun to emerge.

The Single Authorisation provision under Article 9 can further complicate the picture. The simplified constellation licensing pathway is available only where satellites are identical and launched from the same vehicle and launch site, conditions that mirror the batch manufacturing and deployment models historically used by legacy satellite primes. Operators following build-test-learn development cycles, in which spacecraft are modified across successive launches, fall outside this pathway and must instead pursue individual authorisations. The result is a regulatory structure that raises entry costs for the very operators most likely to drive midstream innovation.

The two segment constraints are not limited to either, but operate entirely through the space segment layers, reflecting the broader institutional dynamics within the European space sector. Article 108 of the proposed EU Space Act explicitly anticipates a cooperation agreement between the EU and the ESA under which ESA may conduct technical assessments of Union space systems and contribute to the development of technical specifications and standards. While this reflects ESA's longstanding technical expertise, it also re-integrates the Agency within the regulatory architecture of the new framework. As ESA's certification practices evolved around large institutional satellite programmes, the standards informing regulatory compliance may align more closely with the engineering models of incumbent contractors than with the rapid development cycles typical of New Space startups. In practice, this risks carrying forward the same institutional governance structures that have historically shaped Europe's space sector into the EU's emerging regulatory regime.

Moreover, some of the institutional features also risk further deepening transatlantic divisions. In particular, they may introduce economic distortions by disproportionately affecting foreign, especially US-based large constellation operators through regulatory and registration requirements. While Member States are required to adopt common standards prescribed by the Act, they retain significant discretion in how technical assessments are implemented (Article 8), allowing for variation in enforcement.[77] This creates a twofold challenge. On the one hand, European startups are not necessarily advantaged, as structural and financial constraints continue to limit their competitiveness. On the other hand, regulatory pressures may indirectly disadvantage foreign competitors, not by explicit exclusion, but through increased compliance burdens that shape market access.

Across the upstream and midstream, the cost structure introduced by the Act further reinforces these dynamics. The proposed mandatory binding framework (Option 2+ as pointed in the impact assessment) is expected to impose additional costs on the space industry, with satellite manufacturing costs estimated to increase by 3 to 10 per cent, particularly problematic in a sector where cost reduction remains critical. These compliance costs function as sunk, fixed entry barriers, disproportionately affecting new entrants and smaller firms seeking to access the EU market. Although the total estimated costs (EUR 322.8 million annually) are projected to be offset by operational benefits (EUR 1,000.8 million annually), suggesting a net positive

[77] Stout, K. and Fruits, E. (2025). ICLE Comments on the Proposed EU Space Act. ICLE. https://laweconcenter.org/resources/icle-comments-on-the-proposed-eu-space-act/

outcome, the distribution of these costs is uneven, raising concerns about their implications for competition, market accessibility, and the broader objective of fostering a dynamic and competitive European space sector.

4.2.3 The Digital Networks Act: Spectrum, IRIS², and Regulatory Capture

If the Space Act may create barriers for the upstream and midstream segments of space sector, the Digital Networks Act (DNA)[78] may restrict the downstream. Satellite connectivity and service-based business models are among the fastest-growing segments of the space economy, and precisely those where new entrants would need to compete most to build sustainable businesses. The DNA governs this space in ways that structurally favour incumbents at every decision point.

The spectrum authorisation framework grants the Commission sole authority over licensing, condition-setting, enforcement, and fines, while simultaneously serving as the political sponsor of IRIS².[79] Article 41(4)(b) requires commercial operators holding a Union authorisation to avoid harmful interference with Union-funded satellite systems, effectively prioritising those systems within the regulatory hierarchy. The comparative selection criteria under Article 39(3) further reinforce this dynamic by favouring operators that advance strategic autonomy and integrate European technologies, criteria that consortium members embedded in established European industrial supply chains are structurally better positioned to satisfy than independent commercial entrants. For startups, which often rely on globally sourced components and operate outside legacy institutional procurement networks, these requirements raise the threshold for participation. The renewal provisions under Article 25(1) compound the asymmetry by establishing a strong presumption of licence continuation, making new competitive allocation dependent on demonstrating alternative demand using information largely controlled by existing operators.

Moreover, the introduction of a Union-wide authorisation regime for satellite networks, while intended to simplify market access across Member States, will rely heavily on coordination with national spectrum authorities and the Radio Spectrum Policy Board (RSPB). Recital 128 of the proposal highlights that authorisation conditions should be developed through implementing acts in close cooperation with Member States and the RSPB, reflecting the "vast experience of national spectrum authorities in satellite authorisation."

While such harmonisation may streamline regulatory procedures, it also reinforces a governance framework centred on institutional and legacy actors. Recent EU space infrastructure initiatives illustrate this dynamic. Under the IRIS² programme, the European Commission awarded a 12-year

[78] European Commission. (2026, January 21). Proposal for a regulation of the European Parliament and of the Council on digital networks amending Regulation (EU) 2015/2120, Directive 2002/58/EC and Decision No 676/2002/EC and repealing Regulation (EU) 2018/1971, Directive (EU) 2018/1972 and Decision No 243/2012/EU (Digital Networks Act), COM 2026/0013 final.

[79] IRIS² is the EU's third flagship satellite programme, following Galileo and Copernicus. It forms part of a next-generation European system-of-systems centred on a sovereign satellite constellation designed to deliver secure and cost-effective connectivity across Europe and beyond.

concession to the SpaceRISE consortium,[80] composed of established operators SES, Eutelsat and Hispasat. While this structure provides the scale, financial guarantees, and operational reliability required for a major infrastructure project, it also highlights the difficulty of reconciling these requirements with the objective of enabling new market entrants. The structure of the concession, centred on long-term infrastructure delivery and operational guarantees, favoured experienced operators capable of managing large satellite systems, while smaller or emerging LEO ventures were more likely to participate indirectly through subcontracting or supply-chain roles, representing participation within an incumbent-led ecosystem rather than independent market entry.

Both the Space Act and the DNA appear to be designed within an institutional logic that treats the existing industrial ecosystem as the baseline, with innovation expected to adapt to that structure rather than reshape it. This framing helps explain a broader tension in the EU's strategic discourse on space: while policy documents showcase an ambitious vision for the future European space economy, they often provide limited mechanisms capable of enabling the disruptive industrial transformation such a vision would require.

4.2.4 The Vision for the European Space Economy: Ambition Without Mechanism

In 2025, alongside the Space Act, the Commission published the Vision for the European Space Economy.[81] The Vision sets out six strategic building blocks outlining the actions required to strengthen Europe's position in the global space sector. These include, among others, the creation of a "Space Team Europe" coordination forum, dedicated monitoring of EU competitiveness in the space sector, and, crucially, measures to support investment and provide anchor customer contracts for new entrants. While the Vision recognises many of the structural challenges identified above, a disconnect remains between its ambitions and the mechanisms proposed to address them.

On the capital markets problem, the Vision correctly identifies a "clear funding gap at the scale-up stage" for high-risk, capital-intensive technologies requiring investments exceeding EUR 100 million, and proposes a CASSINI 2.0 programme to address it. However, CASSINI 1.0 supported only five dedicated space-focused venture capital funds, most of which invest primarily at the seed and Series A stages. As a result, the programme strengthened early-stage financing but did little to address the scale-up funding gap faced by capital-intensive space technologies. It remains to be seen whether CASSINI 2.0 will resolve this gap, given persistent structural constraints in the European venture capital ecosystem, including limited risk appetite, weak institutional capital participation, and insufficient industrial demand.

[80] European Commission. (2024, November 7). IRIS² – the European Commission awards the concession contract to SpaceRISE consortium. https://digital-strategy.ec.europa.eu/en/news/iris2-european-commission-awards-concession-contract-spacerise-consortium

[81] European Commission. (2025, June 25). A vision for the European space economy (COM(2025) 336 final). Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52025DC0336

The underlying problem is that the CASSINI initiative is conceived as a response to Europe's private capital markets gap through the provision of a public fund. Yet the core constraint in this case is not necessarily a lack of public financing. Europe does face shortages of public funding, but these primarily affect procurement capacity and demand signalling rather than the functioning of capital markets themselves. The challenge here is fundamentally a private capital market one: structural barriers continue to prevent private capital from flowing into high-growth ventures. Addressing this primarily through public intervention therefore risks targeting the wrong constraint. Evidence also suggests that public venture funding schemes can crowd out private investment, reducing incentives for private investors to enter the market.[82] If the objective is to strengthen the EU's space startup ecosystem, the priority should be to deepen private capital rather than expand existing public funding mechanisms.

The relationship between public funding and private funding may not inherently be that of crowding out or crowding in – that depends on the structure of public intervention. In the case of SpaceX, public funding catalysed private capital when it was structured as fixed price service contracts with co-investment requirements, open competition, and retention of commercial IP by the company. NASA's Commercial Cargo program, for instance, leveraged approximately USD 1.40 in private investment for every USD 1 of public funding.[83]

By contrast, in the EU, public funding typically takes the form of grants, geo-return-allocated contracts, and political sustainment of non-viable firms, creating what is termed as "zombie companies" that survive on subsidies without achieving commercial viability. This structure signals to private investors that markets are not meritocratic and that political connections, not performance, determine success. The crowding-out effect in Europe is therefore not a function of public funding per se, but of its design: it sustains incumbents regardless of performance and discourages the very risk-taking that private capital seeks to reward.[84]

This structural issue extends beyond financing mechanisms to the broader industrial policy framework. The Vision prioritises the coordination of fragmented efforts among established institutional actors. However, this risks reproducing existing governance dynamics rather than opening procurement and industrial opportunities to new entrants. The proposed "forum" approach reflects a familiar consensus-seeking logic among large stakeholders, which has historically favoured incumbent aerospace firms. In the absence of substantive reform to procurement architecture, this approach remains problematic.

The Vision also reveals a policy tension. While the Commission proposes more "innovative and business-friendly procurement methods" intended to encourage competition and enable new entrants, the document simultaneously emphasises that the operational launchers developed within ESA-Ariane 6 and Vega-C will continue to play a central role. This risks predetermining

82 Arnold, N., Clavares, G., and Frie, J. (2024). Stepping Up Venture Capital to Finance Innovation in Europe. IMF. https://www.imf.org/en/-/media/files/publications/wp/2024/english/wpiea2024146-print-pdf.pdf

83 Huby, H. (2025, November 5). A European Commercial Space Model. The Exploration Company. Available at: https://www.exploration.space/blog/a-european-commercial-space-model; also see: Zapata, E. (2017). An Assessment of Cost Improvements in the NASA COTS/CRS Program and Implications for Future NASA Missions. Presented at The American Institute of Aeronautics & Astronautics Space 2017 Forum. Available at: https://ntrs.nasa.gov/api/citations/20170008894/downloads/20170008894.pdf

84 EnduroSat. (2025, November 24). What's holding EU's space ecosystem back? https://www.endurosat.com/podcast/whats-holding-europe-space-economy-back/

market outcomes in favour of existing institutional launch systems. In practice, continued reliance on these legacy launchers may limit opportunities for emerging commercial launch providers and weaken the competitive dynamics the Vision seeks to foster.

Moreover, the Vision emphasises strengthening the EU's upstream and midstream space sectors in order to ensure continuity and maximise the economic value generated by space services across other industries. These segments of the space value chain have traditionally been dominated by large aerospace incumbents rather than venture-backed startups. However, this focus raises two challenges. First, Europe faces growing competitive pressure in upstream activities such as launch services and commercially driven space innovation, where global competitors, particularly in the US have advanced more rapidly. Second, Europe's transition to the "New Space" model, characterised by venture-backed and commercially oriented space companies, has been comparatively slow. Consequently, the strategic emphasis of the Vision may reinforce Europe's existing industrial strengths while paying less attention to the structural barriers that continue to constrain emerging space startups.

On the legislative framework, the Vision was published alongside the Space Act. However, the underlying emphasis on maintaining existing launch infrastructure places additional pressure on emerging space startups without clearly demonstrating how the policy environment, both in terms of capital markets and industrial policy, will support their growth. Much of the existing framework remains politically influenced and oriented towards legacy actors.

While the Vision acknowledges that new space transportation solutions under development could reinforce European access to space and potentially reduce launch costs, the broader policy environment continues to limit the ability of such companies to scale commercially. As discussed earlier, constraints in financing, procurement architecture, and institutional demand make it difficult for startups to translate technological capability into sustained market growth.

Although the Commission has indicated that institutional launch services will be procured through competitive processes, structural advantages for existing launch systems remain significant. As a result, many European space startups increasingly look and may continue to look towards the US for capital and market opportunities. One industry founder summarised this dynamic bluntly: "The pull to move to the US as a UK/European space startup is constant. The only thing that gets funded here is somebody copying what SpaceX was doing 15 years ago."[85]

In short, the EU remains largely focused on diagnosing structural problems rather than implementing the reforms required to resolve them. Ultimately, ambition without mechanism risks becoming the defining characteristic of European space policy in the New Space era. The Vision, along with the Space Act and the DNA, may therefore become the latest iterations of this pattern unless the Commission addresses not only what it wants Europe's space sector to achieve, but also implements the institutional and market mechanisms required to make it possible.

[85] Pultarova, T. (2026, February 16). Stopping the European Space Startup Exodus. Supercluster. Available at: https://www.supercluster.com/editorial/stopping-the-european-space-startup-exodus ; European space companies have already begun expanding operations in the US to secure access to government contracts and investment capital, with firms such as D-Orbit, AerospaceLab, and EnduroSat establishing a stronger presence in the US market. See: Kriezis, A., and Kuhr, J. (2025, March 19). US Space Companies Make a Run at Europe. Payload. Available at: https://payloadspace.com/us-space-businesses-make-a-run-at-europe/

5. CONCLUSION

The New Space era will continue to evolve and intensify, driven by rapid technological advancements. This study highlights a critical implication: although Europe was once a leader with deep capabilities across the space value chain, it now risks structural marginalisation. This relative decline is not incidental; rather, it is driven by three mutually reinforcing challenges: a capital markets gap, insufficient and fragmented public investment, and an industrial policy framework rooted in the Old Space paradigm that continues to favour legacy incumbents over emerging high-growth firms.

Building on this diagnosis, this study emphasises that policy choices in the US have favoured competition and fostered an environment in which private firms are able to scale, while the public sector continues to play an enabling role. Similarly, China has pursued a comparable approach, combining strong state direction with the active cultivation of private actors. By contrast, Europe's institutional frameworks have largely failed to transition from the Old Space paradigm to the New Space era, resulting in a widening gap in commercial dynamism over time. The quantitative analyses presented in this study consistently reinforce this conclusion.

Drawing on our ECIPE Space Economy Database, this paper finds that the growth of European space startups is constrained by insufficient access to scale-up financing. While the number of startups in Europe is comparable to that of the US and exceeds that of China, funding gaps persist and continue to widen at later stages of development. This limits the ability of European firms to scale effectively and compete in the New Space era, where Europe is already at a relative disadvantage. These findings reflect a broader capital markets problem, characterised by limited venture capital availability and underdeveloped public equity markets – structural issues that have persisted over time.

While constraints in private financing are significant, they cannot be understood in isolation, particularly in a strategic sector such as space, where public investment plays a foundational role. Beyond direct funding, the public sector is critical in creating reliable demand through effective procurement strategies and long-term contracts, which in turn shape the incentives for private capital to enter and scale.

In Europe, the problem is twofold: both the scale of public spending – significantly lower than in the US and now surpassed by China – and its fragmentation across multiple agencies and national programmes. As a result, Europe fails to provide the strong and credible demand signals needed to crowd in private capital and enable emerging firms to grow. Limited access to scale-up financing is therefore not merely a market outcome, but also a direct consequence of insufficient and fragmented public investment, reinforcing the broader capital markets gap identified in this study.

These dynamics are closely tied to the shortcomings of Europe's industrial policy framework, which remains largely anchored in the Old Space paradigm. Designed for an era dominated by a defined set of established firms, this model prioritised stability over competition. While effective in its time, it is increasingly ill-suited to the New Space era, where firms must adapt rapidly to declining launch costs and integrate space technologies with emerging innovations across multiple segments. Current policies and legislative initiatives continue to build upon this legacy framework rather than fundamentally transforming it.

The geo-return principle remains widely criticised for prioritising allocation to national contributors over competitiveness. Similarly, recent initiatives such as the Space Act and the Digital Networks Act contain provisions that risk reinforcing reliance on legacy champions. This tendency is also evident in the 2025 Vision document. While it acknowledges many of the structural challenges identified in this study, it continues to reflect a disconnect between stated ambitions and the mechanisms required to achieve them.

Taken together, these shortcomings contribute to an increasingly unbalanced ecosystem. This study represents the first in a series of papers that will further analyse the European space economy, particularly in relation to its interaction with emerging technologies and the location of Europe's comparative strengths across both segments and Member States. This paper argues that a fundamental reassessment is needed, one that rethinks the relationship between public policy, private capital, and industrial strategy. As the global space sector continues to evolve at pace, Europe must recognise the scale of this transformation and respond accordingly. This requires policy priorities that are not only ambitious, but sufficiently adaptive to enable a decisive shift towards the New Space era.

ANNEX 1: ECIPE SPACE ECONOMY DATABASE METHODOLOGY

This annex describes the methodology used to construct the ECIPE Space Economy Database, which underpins much of the empirical analysis presented in this paper. The database was designed to capture the structure of the global space ecosystem by identifying leading actors across the value chain and compiling comparable indicators on funding, revenues, and technological activity. As explained in the main text, the dataset was developed using publicly available sources and focuses on both startups and established corporate actors in the space sector.

Identification of companies

The list of companies included in the database was compiled from multiple official and industry sources, including space agency records, industry reports, venture capital databases, and official company disclosures (see References). These sources were cross-referenced and carefully filtered to remove duplicates and entities with only marginal activity in the space sector.

The final dataset includes only those companies that play a significant role in the space economy across different segments of the value chain. Only active companies were retained in the database. Firms that had previously raised funding but were subsequently acquired or integrated into larger corporate groups were kept in the dataset if they remained operational as subsidiaries. Importantly, the notion of "leading" companies in the space sector was not determined through a single quantitative metric such as revenue or funding levels. Instead, companies were included when they were consistently identified as key actors across multiple industry and institutional sources. This cross-referencing approach ensures that the dataset reflects a broad industry consensus regarding the main participants in the space economy.

Company classification

Companies were classified into two main categories:

- **Startups and SMEs:** Firms identified as startups or small and medium-sized enterprises in official or industry lists, or companies employing fewer than 500 employees, unless specific circumstances justified a different classification.

- **Corporate incumbents:** Established industry players, defined as firms with more than 500 employees or joint ventures of larger corporate groups.

This classification allows the database to distinguish between New Space actors, typically startups and scaleups driving innovation and new business models, and Old Space actors, namely legacy incumbents that have historically dominated the traditional segments of the space economy.

Funding data

Private funding data for space startups and SMEs were compiled from publicly available company disclosures, venture capital databases, and industry reporting. Funding figures reflect publicly announced investment rounds, including seed, venture, and later-stage financing. When a startup was acquired or became part of a larger corporate group, funding raised prior to the acquisition was retained in the dataset in order to capture both the financing trajectory of the firm and broader patterns in the startup ecosystem.

For corporate players, revenue data were obtained primarily from publicly available annual reports and, where necessary, from other official financial disclosures and databases. Because our database focuses specifically on the space economy, we isolated space-related revenues even where companies operate across multiple sectors. Where such information was unavailable, the company was excluded from revenue-based comparisons. In cases where only partial information was disclosed, estimates of space-related revenues were constructed using company reports and other official documentation. Specifically, where space activities were embedded within broader business divisions, we derived space revenues by applying documented or inferred segment shares to the relevant divisional revenue totals reported in annual reports. These shares were taken from investor presentations, segment breakdowns, or other official disclosures, and where only ranges were available, midpoint values were applied to ensure internally consistent estimates across years.

Data on government space spending were primarily sourced from Novaspace (formerly Euroconsult) press releases. For years where direct data were unavailable, values were estimated using interpolation based on the available Novaspace data points, ensuring consistency across the time series.

Value chain classification

Descriptions of company activities were drawn from industry reporting and company websites. These descriptions were then mapped onto the value chain framework developed by Deloitte, which provides a widely used classification of space-sector activities. Each company in the dataset was assigned to a space value chain layer – upstream, midstream, or downstream – as well as to a segment and subsegment, based on the nature of its core activities. This approach ensures consistency across companies operating in different parts of the space ecosystem while enabling comparability across countries and regions.

Data validation

To ensure accuracy and consistency, the compiled data were subject to several verification steps:

- Cross-checking company information across multiple sources;
- Verifying funding announcements against company statements and industry databases;
- Confirming operational status at the time of data collection;
- Reviewing company classifications within the value chain framework.

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