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THE NEXT LAUNCH WINDOW

AND WHAT IT MEANS FOR SATCOMS

MARCH 2025

INDUSTRY BRIEF – SPACE

Executive summary

In this Industry Brief, we examine impending transformations in the launch and satcom industries. We believe the most significant paradigm shift since Falcon 9's debut 15 years ago is brewing in launch technology. The brute force of super-heavy-lift launchers—Starship and New Glenn—could redefine launch economics and accelerate Starlink and Kuiper's satcom dominance. Meanwhile, in Europe, a new generation of launch startups is taking aim at the old guard. The countdown to disruption has begun.

The launch market is heading in two directions with Starship and New Glenn

We believe these gigantic super-heavy lift vehicles follow the same playbook as Falcon 9 and Starlink: an aggressive scale-up where apparent overcapacity and weak initial market fit ultimately reshape industry fundamentals through extreme economies of scale. However, in launch, while price is critical, mission flexibility holds value, and geopolitical fragmentation remains a structural constraint. This suggests a bifurcation: super heavy-lift launchers will underpin large-scale deployments (i.e. space exploration and gigaconstellations), while a growing ecosystem of agile launch platforms will serve smaller and sovereign payload segments. Competition in micro and medium launchers is intensifying, as they occupy a market sweet spot while avoiding direct confrontation with the largest vehicles. In Europe, a five-way race is underway to develop next-gen launchers, led by Isar Aerospace, MaiaSpace, Orbex, PLD Space, and RFA.

Can Trumponomics make European operators great again?

Our April 2024 report (*Satcoms' Muskonomics Challenge*) examined the risk of a Starlink-Kuiper duopoly. Starship and New Glenn could be another nail in the coffin, enabling gigaconstellations to scale at unprecedented volumes, further amplifying economies of scale and cost dominance. The competitive position of incumbent satellite operators remains precarious: as they retreat into niche markets to differentiate from gigaconstellations, their growth prospects look increasingly constrained. However, the Muskonomics threat may morph into a Trumponomics tailwind. Recent transatlantic frictions and Europe's renewed drive for sovereign defence capabilities could yield a captive market shielded from Starlink–Kuiper dominance. This would materially improve the commercial rationale for Iris² and strengthen the economic case for European operators—provided sovereign procurement scales accordingly.

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THE TWO LAUNCH PATHS

SUPER HEAVY LAUNCHERS VS. THE REST – AND EUROPE'S RACE TO CATCH UP

Even as their technical boldness redefines what's possible, the "gigantism " of Starship and New Glenn aligns more with the space ambitions of Musk and Bezos than with market needs. They may reset the cost floor for satellite payloads, but are likely to remain focused on high-volume, commoditised launches—primarily Starlink, Kuiper, and rideshares—akin to Falcon 9 today. The enduring need for sovereign and more flexible launch solutions ensures distinct market segments will continue to coexist. We view medium launchers as the optimal balance today between profitability and insulation from competition with super-heavy launchers. The race to dominate this category is intensifying, not only in the US but also in Europe, where several startups are nearing maiden flights. We expect a collective pivot towards medium launchers as they seek to displace the historical Ariane-Soyuz-Vega triad.

Super heavy-lift launchers are coming

We expect SpaceX's Starship and Blue Origin's New Glenn to be the primary disruptors in launch over the coming years. However, despite expected cost advantages, operational rigidity renders them oversized for most satellite missions, barring large-scale constellation deployments. Available evidence suggests these vehicles are optimised for Musk and Bezos' space aspirations rather than broad commercial use. In our view, they will remain largely confined to Starlink and Kuiper rollouts, with limited appeal for smaller payloads.

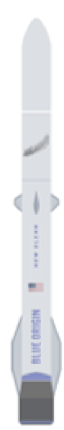
Our previous reports have tracked the rise of LEO megaconstellations and their impact on satcoms. Our core conclusion remains intact: economies of scale have profoundly altered the competitive landscape, affording giant constellations a cost advantage in a commoditised satellite broadband market. This trend led us (see *Satcoms' Muskonomics Challenge*) to contend that satcoms were consolidating into a Starlink-Kuiper duopoly, with smaller players retreating to niche markets in the hope that differentiation will shield them from price competition—though we deem such niches narrow.

In this report, we examine a parallel shift: the introduction of economies of scale in the launch sector. Whereas the deflationary effect on launch costs of Falcon 9's reusability is well-documented, the implications of "gigantism" in upcoming super heavy-lift launchers (>50 t to LEO) remain little discussed in our view. They grab headlines for their Mars dreams, yet their economic ramifications receive less scrutiny. However, we see Starship following the same Muskonomics playbook as Falcon 9 and Starlink: a race to scale where apparent lack of market fit, overcapacity in constrained space markets ultimately reshapes industry fundamentals.

By 2030, we expect SpaceX's Starship and Blue Origin's New Glenn to be the industry's key disrupters. At 100-150t to LEO for Starship and 45t to LEO for New Glenn, their lifting capability far exceeds that of Falcon 9 (17.4t to LEO when reused), leveraging economies of scale to drive costs per kilogram down significantly. Starship's sheer scale is unprecedented in the annals of rocketry, dwarfing predecessors like Saturn V. However, it is not just size that sets them apart but also the leap to full reusability and frequent flights, mirroring commercial aviation. Starship's fully reusable design, with both stages returning, and New Glenn's reusable first stage, aim for rapid turnaround akin to airliners. The full impact of reusability remains unclear but is likely less transformative for upper stages, given the complexity of recovery (higher orbits) and their lower cost relative to first stages. However, the greater advantage may lie elsewhere: forensic analysis of recovered hardware accelerates iterative design improvements, enhancing reliability and launch cadence. The full cost-benefit equation is still evolving.

Fig. 1 – How super-heavy and heavy launchers compare

	Super heavy-lift		Heavy-lift	
	Starship	**New Glenn**	**Falcon 9**	**Ariane 6-4**
Payload to LEO (reusable)	100-150t	45t	17.5t	-
Payload to LEO (expendable)	250t	-	22.8t	21.7t
Payload to GTO	-	13.6t (reu.)	5.8t (reu.)	11.5t (exp.)
Reusability	Fully reusable	First stage	First stage	Expandable
Total thrust	77.4 MN	18.3 MN	8.7 MN	13.8 MN
Height	123m	98m	70m	63m
Fairing diameter	9m	7m	5.2m	5.4m
Propellant (First stage)	Methane/LOX	Methane/LOX	RP-1/LOX	Hydrogen/LOX
Propellant (Second stage)	Methane/LOX	Hydrogen/LOX	RP-1/LOX	Hydrogen/LOX

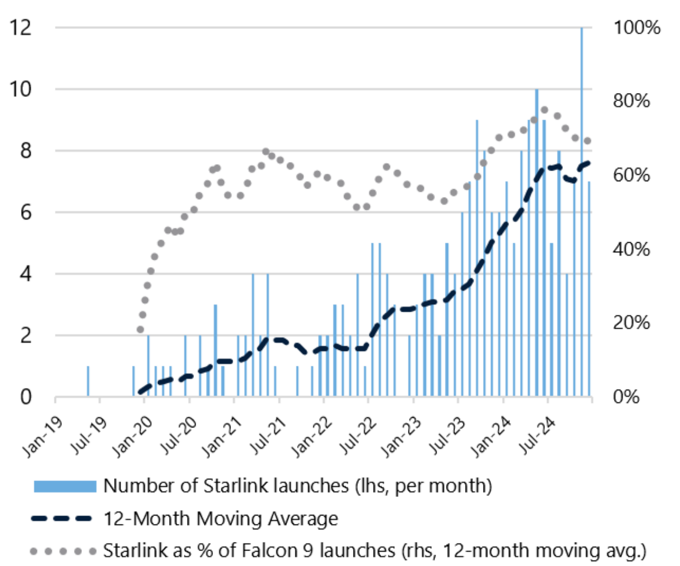


Source(s): Stifel*

We believe industry sentiment is turning more positive on the New Glenn and Starship timelines since Starship's first test flight in March 2023. Both vehicles still face unresolved technical challenges and considerable schedule risk—almost a tautology in an industry defined by delays. New Glenn's maiden flight in January 2025 successfully reached orbit, though its first-stage booster failed to land as planned. Starship has logged eight test flights over two years, demonstrating incremental progress. But the failure of its last test in March 2025 is widely seen as a material setback.

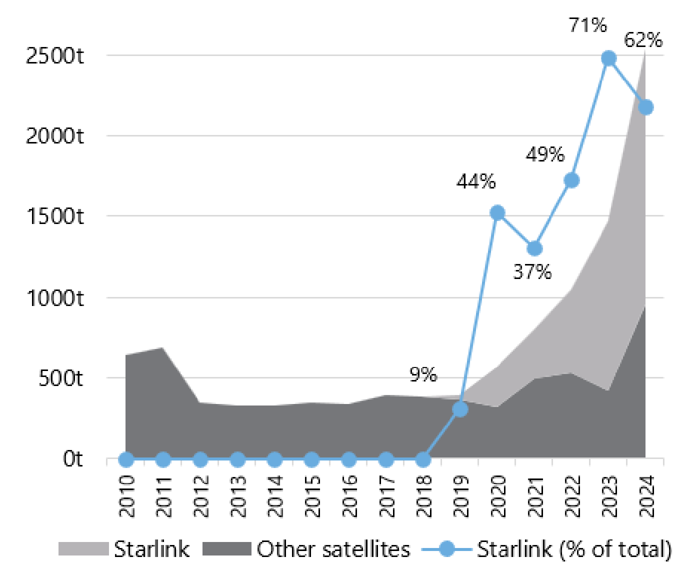
- **New Glenn – nearing operational status**: Blue Origin targets a second launch in late spring 2025, suggesting operational readiness by late 2025 or early 2026.
- **Starship – advancing, though with a timeline difficult to pin down**: we believe industry consensus is increasingly coalescing around an operational timeline by decade-end, potentially within the next two to three years. This view balances cautious optimism with recognition of the formidable hurdles that remain for the largest launcher ever developed. SpaceX's track record—Falcon 9's improbable ascent and Starlink's dominance—has ingrained a lesson in the industry: it has repeatedly defied sceptics. This fuels a structural reluctance to bet against the company, with an implicit "I don't want to be the one who doubted SpaceX" effect.

Fig. 2 – No deceleration in Starlink deployment rate



Source(s): Stifel, based on data from Jonathan McDowell*

Fig. 3 – Satellite Tonnage launched per year, 2010-2024



Source(s): Stifel, based on data from Jonathan McDowell*

The ambition driving these launchers is colossal, and will likely further accelerate the rapid growth in orbital mass delivery seen since the late 2010s. Our industry contacts indicate Blue Origin aims to ramp up toward an operational tempo for New Glenn of 24 to 36 flights per year. Elon Musk has articulated SpaceX's vision of a fleet of fully reusable Starships operating at a high cadence, with aspirations of surpassing thousands of launches annually. These claims obviously warrant scepticism as Musk's timelines often outstrip engineering and market realities—a familiar industry pattern. Despite the associated schedule risks, we consider this medium-term scenario: if just five Starships achieve five flights per year each, alongside New Glenn reaching 24 flights annually, the combined capacity could approach 5,000 metric tons to LEO annually. This would unlock to triple the ~2,500 metric tons of spacecraft launched globally in 2024. Given Starlink accounted for 71% of payload mass launched in 2023 and 62% in 2024, we do not see sufficient market demand for such large-scale launch capacity beyond extensive Starlink and Kuiper deployments. Assuming a five-year lifespan for Kuiper's satellites, we estimate an annual run-rate demand of approximately 500t.

However, Starship and New Glenn prioritise technical capabilities aligned with long-term space exploration—most notably the colonisation of Mars—over immediate market viability, raising questions about their short-term commercial potential. Their scale exceeds current demand, as smaller launchers suffice for satellite payloads. Prevailing market needs—dominated by 5–20-tonne LEO payloads—remain misaligned with their capacity, making them aspirational rather than optimised for present market realities. This deep-space focus is evident in their reliance on methane-liquid oxygen (methalox) propulsion. Methalox burns cleaner than RP-1, reduces engine degradation, and enhances reusability—critical for high-frequency Mars missions. The choice of methane also appears driven by its potential for in-situ production on Mars via the Sabatier reaction.

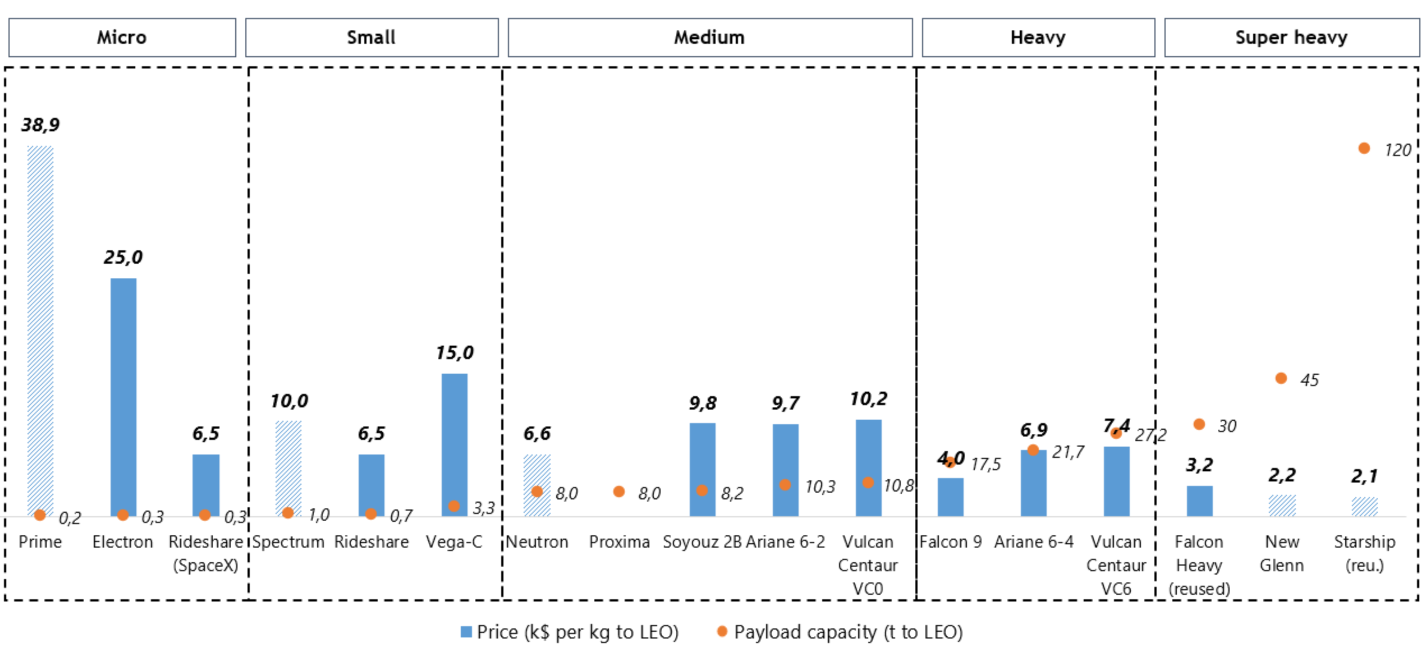
SpaceX's Starship and Blue Origin's New Glenn are oversized for most satellite launch requirements, their design ill-suited to applications beyond deep-space exploration or large-scale constellations. Both lack the modularity needed for mid-tier payloads or diverse orbits beyond LEO, as their engineering trades raw power for flexibility. Starship's fully reusable stainless-steel architecture and >100-ton LEO capacity optimize it for bulk cargo or crewed Mars missions, but its size and cost make it overkill for smaller, bespoke payloads. One Starship launch, for instance, could have single-handedly deployed OneWeb Gen-1 (~94t), still among the heaviest constellations outside Starlink. Moreover, mass-deploying constellations—offloading hundreds of satellites in a single launch—risks congestion at deployment and pushes rideshare logistics to operational limits. Without a more mature in-space transport ecosystem (e.g., orbital tugs) to redistribute payloads post-launch, these architectures stretch the practicality of shared missions too far.

We believe super-heavy launchers will establish a new cost floor but will primarily serve commoditised launches, much like the Falcon 9 today. The commercial pricing of Starship and New Glenn remains unknown. Elon Musk has previously suggested costs as low as USD100 per kg to LEO. However, whether this is realistic or not is largely irrelevant—we do not expect these launchers to be priced based on costs but rather on market pricing power. A range of USD2,000–3,000 per kg appears realistic. Rideshare pricing should be ~50-100% higher, as is the case with the Falcon 9 today. We do not foresee pervasive price deflation across the sector. Starship and New Glenn are likely to assume Falcon 9's current market positioning—offering the lowest-cost launches but with limited flexibility for smaller payloads. As such, we do not expect major disruptions for smaller launchers, given that Falcon 9 already caters to cost-sensitive customers, including for smaller payloads with rideshare pricing at USD6,500 per kg to LEO.

In the end, we believe the demand for reusable super heavy-lift launchers will be heavily skewed toward giga-constellations. We estimate that Starlink Gen-2 and Amazon Kuiper will have a combined mass of around 8,000t when fully deployed, though the designs may still change. With an average satellite lifespan of 5 years, about 1,600t would need to be launched annually to LEO to maintain these constellations. This would provide demand for about 10 Starship launches and 10 New Glenn launches per year. In our view, giga-constellations will scale further with heavier, bulkier satellites and potentially greater numbers.

Launch services are not mere commodities to be benchmarked solely on cost per kilogram to LEO—those prioritising the lowest price will opt for SpaceX regardless. Launcher pricing is highly complex, and premium pricing is viable, particularly in government markets. We believe medium launchers will coexist with super heavy-lift vehicles, offering greater flexibility at a price point that appears to be stabilising around USD6,000 per kg to LEO for next-generation systems. Micro-launchers will serve smaller payloads at significantly higher rates, well above USD10,000.

Fig. 4 – Cost per kg to LEO of various launch vehicles



Source(s): Stifel estimates as pricing information is typically unavailable publicly.*

Starship and New Glenn are crystallising the new "launch tech" paradigm, centred on reusability, vertical integration, and hydrocarbon fuel. While this paradigm was pioneered by Falcon 9, it has not been adopted by incumbents (e.g. ULA, ArianeGroup) nor systematically by NewSpace startups that sought to innovate through alternative launch designs and business models (e.g. Isar Aerospace's focus on mass production of reusable launcherss). We believe Starship and New Glenn will cement reusability and vertical integration as essential for any ambitious launch vehicle, having demonstrated their cost advantage beyond a certain launch cadence—Ariane’s failure to compete with SpaceX underscores this point. We expect future launcher providers to converge around the Falcon 9 model**.** More daring design choices are likely to come with an unfavorable risk/reward profile, as building failure-free launchers is difficult, and even more so with unproven technologies. It seems unlikely that full reusability will be as cost-effective or transformative as the reusability of the first stage. Having an in-house supply chain is crucial. One of the main advantages of NewSpace players compared to established companies is their lower dependency on suppliers, allowing for faster design iteration. By contrast, Europe’s geographic return system, forcing a complex supply chain, has been a structural disadvantage in this regard.

Regarding propellants, there is a technological shift favoring liquid propellants over solid ones, with a particular focus on hydrocarbons, especially kerosene and methalox. Originating from SpaceX (with the Starship) and Blue Origin, methalox (methane and liquid oxygen) could become the new industry standard. It offers better performance than kerosene and is easier to store than hydrogen. Methane also improves reusability, as it burns cleaner than RP-1, with no heavy hydrocarbons to produce engine-clogging soot. However, the performance difference between methalox and RP-1 appears to be small. It is possible that the shift to methalox was largely driven by the potential for Mars exploration, as it can be produced on the planet. Solid propulsion (used notably by boosters of Ariane and Vega) is often seen as a relic of the past originating from military missiles, where liquid propulsion was impractical due to storage challenges. Liquid propulsion is clearly more efficient when it comes to launchers, and this poses a major issue for Ariane and Vega, which will need to start from scratch to transition to liquid propulsion. Ariane's use of solid propulsion is said to be largely a legacy of the French military program, which required it for nuclear missiles. Hydrolox (a combination of liquid hydrogen and liquid oxygen) offers the best performance among liquid fuels, but it is more inconvenient due to the difficulty and danger of storage, as well as the complexity of the engines. As a result, newer rocket generations, such as Ariane 6, opt for simpler architectures that avoid using hydrolox. Hydrocarbon fuels, particularly RP-1 (kerosene), are becoming the new standard due to their use in the Falcon 9 and their proven safety, ease of use, and reliability as a technology.

Fig. 5 – The new launch tech paradigm

	Traditional Launch Paradigm	Post-Falcon 9 Launch Paradigm
Reusability and launch frequency	Expendable launchers operating on an infrequent schedule, with launches sometimes months or even years apart	Focus on full or partial reusability with high cadence, sometimes multiple launches per week
Launch Cost per kg	High as each vehicle is used once and discarded and a favor zero-risk process over cost control	Low, driven by economies of scale and a low-cost approach
Manufacturing	Fragmented supply chains with reliance on contractors with long production cycles	Vertical integration with launch providers designing, manufacturing, and launching in-house
Fuel Type	Focus on performance and reliability, including hydrolox, hypergolics, solid fuels	Focus on costs and reusability: liquid fuels, particularly hydrocarbons (Methane/LOX, RP-1/LOX)

*Source(s): Stifel**

Medium launch is emerging as the industry's sweet spot

Our analysis suggests medium launch is emerging as the best strategic bet for providers. Heavy launch (~60% of demand today) is dominated by Falcon 9, with Starship and New Glenn set to widen the gap, making direct competition unviable. Small launch remains constrained by a limited market and low entry barriers, though Rocket Lab's success is validating the long-debated role of micro launch. In contrast, medium launch stands out as the 'Goldilocks' segment—sufficient market scale with high entry barriers, ensuring sustainable economics, particularly amid Western supply constraints.

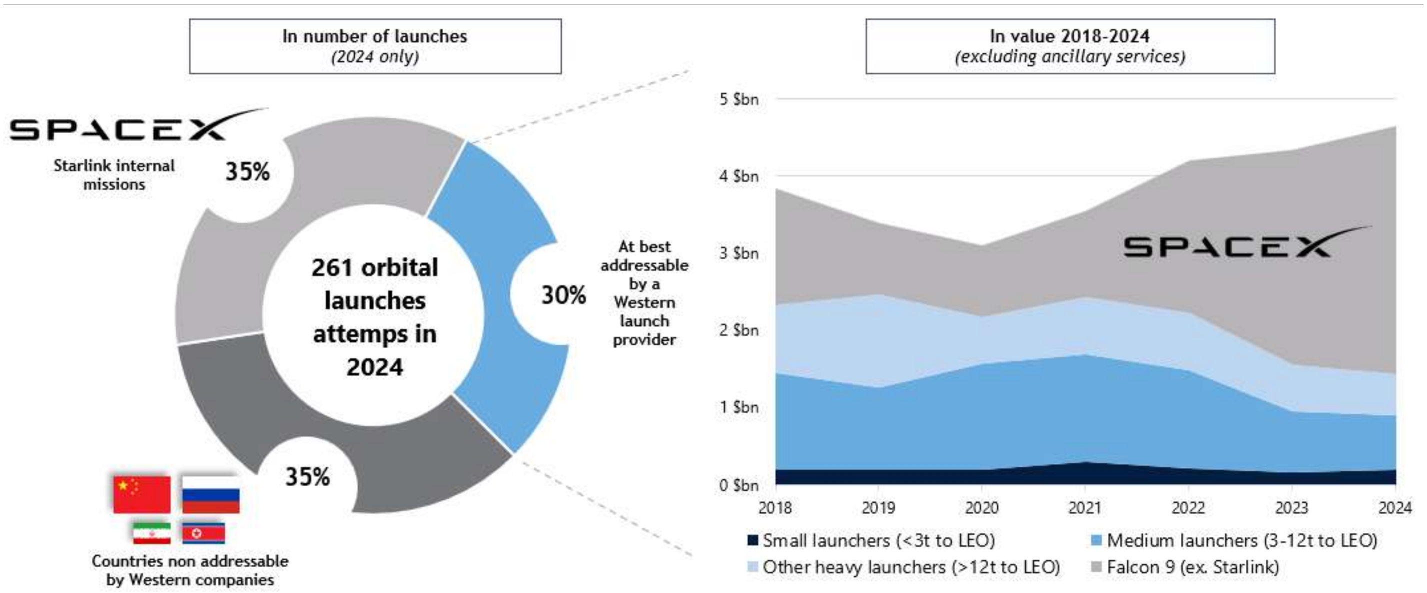
We remain cautious about overly optimistic narratives regarding the total addressable market and growth trajectory of the launch sector. We have long warned of inflated market size projections in the space industry. Reliable sources estimate the global launch market in 2023 at USD7bn–12bn. However, given the sector's fragmentation by geography and payload size, we believe the realistically addressable market for a single launch provider is likely only a few billion dollars once adjustments are made to:

- Exclude demand from China and Russia, as these markets are fully decoupled from Western operators.
- Remove internal Starlink launches, which constitute captive demand and do not reflect the addressable market.

Our analysis indicates an average market size of USD4.0bn per year between 2018 and 2024. We independently recalculated the market based on all recorded launches from 2018 to 2024, incorporating estimated launch costs. Out of ~165 launches annually over 2018–2024, only ~60 meet the defined criteria—excluding Starlink's internal demand as well as Russian and Chinese activity—representing roughly one-third of the market (with China and Russia accounting for another third and Starlink's internal demand comprising the remainder). However, our estimate reflects only the base launch cost with actual revenue potential likely falling within the USD5–7bn range when incorporating ancillary services, particularly those contracted by military clients.

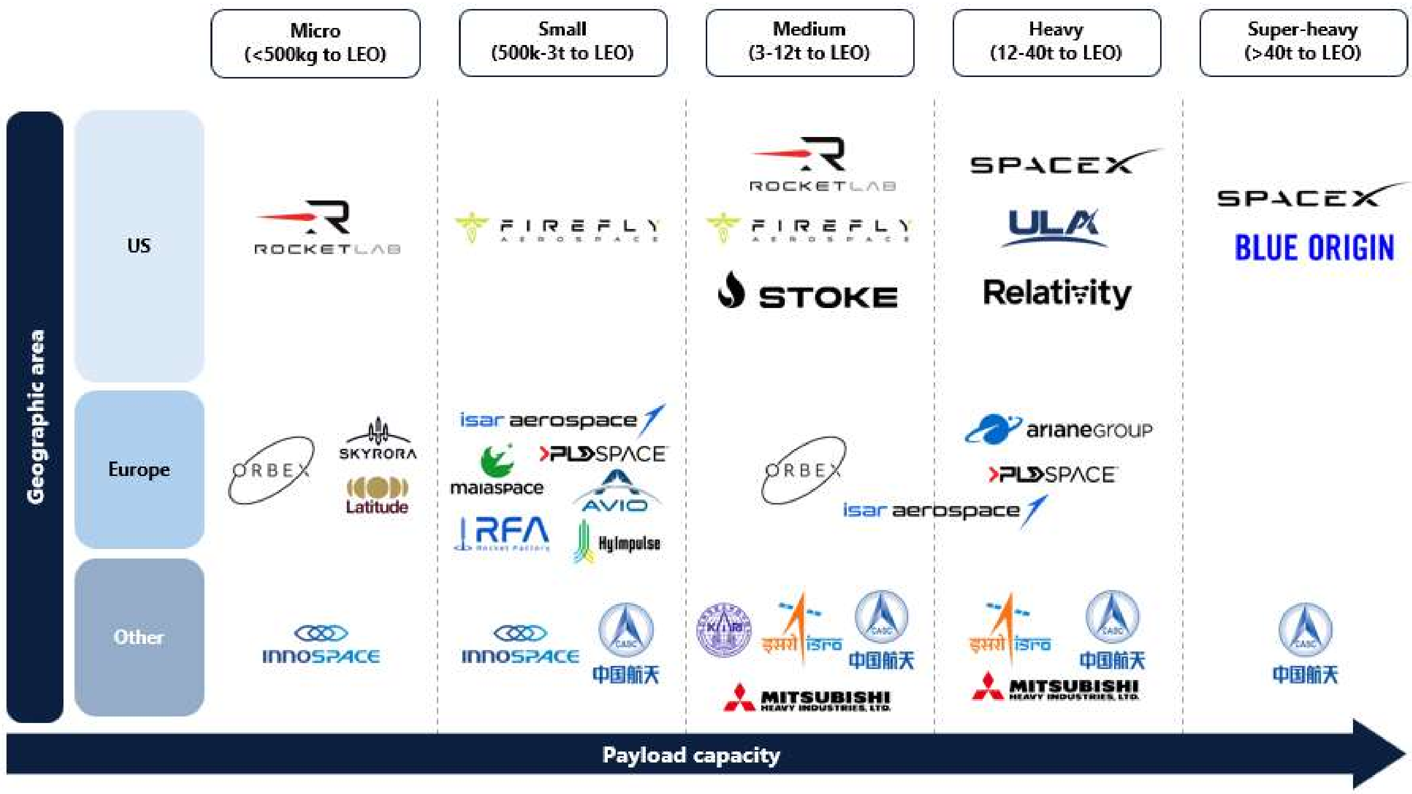
Heavy launchers (>12t to LEO) have accounted for an average of >60% of the market over the past six years. Medium launchers represent ~33% (~USD1.2bn, ex. additional services), while small launchers account for ~5% (~USD200m). The heavy segment's dominance also reflects its use for smaller payloads, including rideshares and dual-payload missions such as Ariane. Commercial heavy launch is effectively a SpaceX-led quasi-monopoly, with Falcon 9 commanding the segment. As previously noted, we expect super-heavy launchers to further consolidate market control among a few key players.

Fig. 6 – Launcher market size adjusted for non-Western demand and Starlink deployments



Source(s): Stifel*

Fig. 7 – Mapping the competitive landscape in launch services



*Source(s): Stifel**

Geopolitical fragmentation remains a key determinant in the launch market. China has long been isolated from Western markets, while the invasion of Ukraine has severed ties with Russia. We estimate that roughly half of the remaining USD3.9bn market is linked to US institutional demand, which remains largely inaccessible to European launch providers. The widening divide between the US and Europe reinforces our view that geopolitical fragmentation in the launch sector may deepen further within Western markets, potentially entrenching a structural segmentation between the two regions. While institutional demand has historically been divided along these lines, commercial demand has been less so. A purely European market is estimated at EUR1-2bn annually, having remained relatively stable except since 2022, when a persistent launcher shortage introduced further constraints.

Growth trends in the launch market remain opaque. Space activity, measured in mass, has accelerated over the past four years, with record satellite deployments since 2020. The >2,000t launched into orbit in 2023 far exceed the historical trend of ~400t annually in the 2000s and 2010s. However, the market's dollar value has likely risen only modestly due to two key factors. First, the advent of Falcon 9 has significantly reduced launch costs per kg, intensifying price competition and exerting a deflationary effect on the sector, curbing value growth. Second, the additional deployed mass is overwhelmingly attributable to Starlink. Stripping out Starlink, the Western world's annual space-bound mass shows only limited increases despite the exponential rise in satellite numbers.

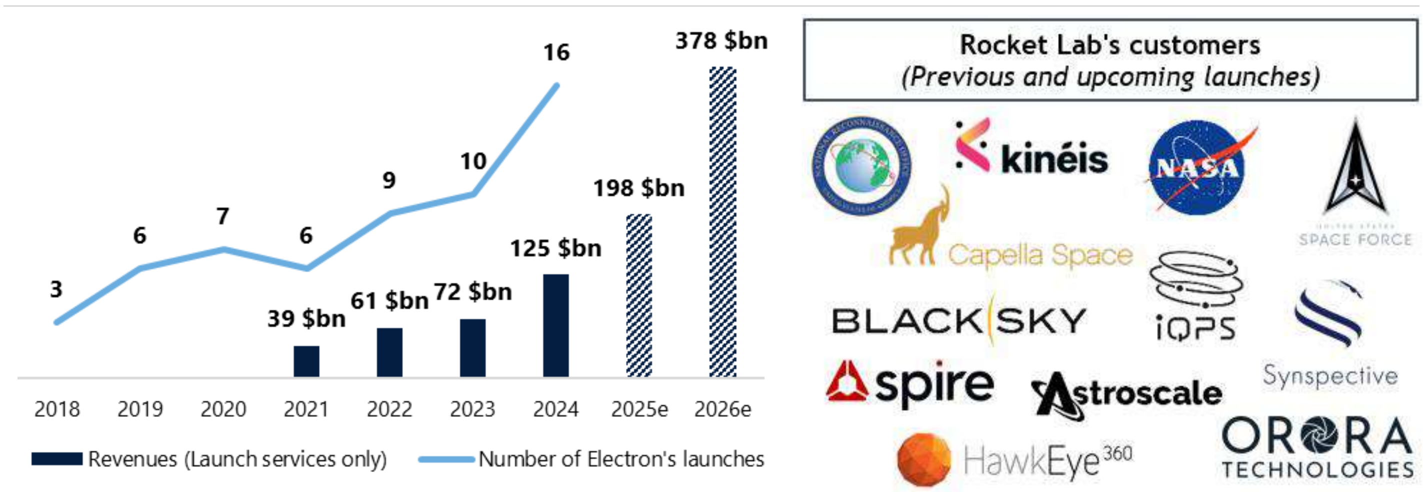
We expect market growth to accelerate in coming years, even adjusting for Starlink, as the current shortage eases. It remains unclear whether market elasticity is driving a self-reinforcing dynamic in which lower launch costs generate sufficient volume growth to sustain, or even strengthen, overall market value expansion. However, we believe the prevailing shortage of launch capacity has artificially constrained market size in recent years. A convergence of technical and logistical challenges has constrained supply just as demand for orbital access has surged, driven by satellite constellation deployment. Key factors include: (i) limited production capacity, given the long investment cycles required to scale launcher manufacturing (ii) delays in new systems such as Vulcan Centaur and Ariane 6 (iii) geopolitical constraints, notably the restricted availability of Russian Soyuz launchers following the Ukraine conflict (iv) supply chain bottlenecks for high-precision components.

Even as it commands the largest market share, we believe competing in the heavy launch segment (>15t to LEO) is economically unviable, given Falcon 9's dominance and the imminent entry of Starship and New Glenn. Falcon 9 holds an entrenched position in heavy launch, reinforced by economies of scale and an unmatched launch cadence (134 total Falcon flights in 2024). Starship and New Glenn are poised to replicate this strategy. While their designs align more with the spacefaring ambitions of Musk and Bezos than with market demand, they will leverage gigaconstellation-driven demand to achieve scale beyond the reach of competitors. Moreover, with GEO satcoms in decline, heavy launch demand will increasingly hinge on gigaconstellations (Starlink, Kuiper), effectively cementing SpaceX and New Glenn's market share. However, we see limited scope for these vehicles to drive significant price reductions in medium and small launch segments.

The relevance of micro launches (<500kg to LEO) has been decisively validated, with Rocket Lab's Electron achieving 60 successful launches. The microlauncher market has been a point of debate among investors for years, in our view, but Rocket Lab has built a strong base of blue-chip customers for its Electron microlauncher (320 kg to LEO). Moreover, military demand for 'strategic responsive launch' has been confirmed by industry insiders as a material and expanding area of interest. That said, the Western micro launch market remains relatively modest, despite expected growth—we estimate annual revenues should reach USD300m–500m by the end of the decade. Barriers to entry are lower than for heavier launch vehicles, and Rocket Lab has already established itself as a formidable competitor in both US and commercial markets.

- The main unknown regarding micro-launches remains the final size of the market, given that the cost per kg is high vs rideshares. A frequently cited advantage of micro-launches is their appeal to the military sector, where there's a greater need for responsive launches and prices are typically about twice as high. Most of our industry contacts confirmed that this demand is real and not exaggerated. Furthermore, while commercial use is limited due to competition from SpaceX' rideshares, it still exists. Indeed, Rocket Lab has carried out 10 commercial launches this year for clients such as Kineis, Spire, Synspective, and Astroscale—more than for institutional markets.
- So far, Rocket Lab has dominated the micro launcher market in the Western world with ~80% market share, averaging seven launches per year between 2018 and 2023. In 2024, it completed 16 launches (a 60% yoy increase). If this momentum continues, the market could expand to dozens of launches annually. At around USD8m per Electron launch, 25 launches a year would represent a USD200m market.
- Micro-launchers are seen as having lower barriers to entry as they are easier to develop than larger launchers. Beyond the numerous start-ups currently in the field, they could also become white elephants for small space powers. However, this is not entirely true at present, as there are relatively few companies, beyond the early-stage ones, that have made significant progress in developing micro-launchers. We believe it is important to highlight that the first launchers to reach the market will gain competitive advantages if they quickly secure substantial volumes, leading to the emergence of market leaders despite the potential abundance of micro-launchers.

Fig. 8 – Rocket Lab's steady ascent in the micro launch market, with Neutron as the next step



Source(s): Stifel, Stifel estimates*

We see the medium launch segment (~3–12t to LEO) as the market's financial sweet spot. Several factors align in support of this conclusion:

- The addressable market for medium launchers, while smaller than that of heavy launchers, remains material at c.33% of the total and significantly exceeds that of small launchers. TAM estimation is complicated by inconsistent segmentation across small, medium, and heavy classes. Nonetheless, medium-launch frequency is broadly in line with small launchers, but with per-launch pricing 2–10x higher, rendering the medium segment materially larger. Industry contacts indicate a more favourable capex-to-sales ratio for medium launchers versus smaller peers, supporting superior profitability. In addition, a limited supply of Western medium-launch capacity should underpin demand over the medium term.
- Medium launchers have the potential to offer significant versatility, supporting both small and large satellites, constellations, and single-payload missions across a range of orbits. For example, Rocket Lab's Neutron features a modular payload capacity under three operational modes, highlighting its flexible design: (i) up to 15t to LEO in expendable configuration; (ii) 13t to LEO with booster recovery on an offshore platform; (iii) up to 8.5t to LEO with first-stage return to the launch site.
- A key competitive advantage is the medium launch segment's positioning: it is less saturated than the small launcher sector, which tends to have lower barriers to entry, and faces no competition from the largest launchers, especially from SpaceX or Blue Origin.
- Industry trends reinforce this view. In the U.S., several small launcher firms (e.g., Rocket Lab, Firefly) are developing medium launch vehicles. In Europe, Ariane 6 represents a downsizing from Ariane 5, with two variants, including a smaller version (~10t to LEO vs. 20t for Ariane 5) as Ariane 5's dual-satellite model proved difficult to market, with either prolonged customer wait times or unprofitable single-satellite launches. Several leading European launch startups have now announced plans to develop larger launchers over the medium term (Orbex, PLD Space, Isar Aerospace).

Fig. 9 – Medium launcher announcements

ROCKETLAB	Neutron (US)	Rocket Lab is expanding beyond its small-payload Electron rocket with the Neutron, a medium-lift launcher. Neutron employs a partially reusable design, featuring a first stage powered by nine Archimedes engines—3D-printed, methalox. First launch is slated for H2 2025 from Wallops Island, Virginia.
FIREFLY AEROSPACE	MLV (US)	MLV is a launcher with a 16.3t LEO capacity and a reusable first stage, developed with Northrop Grumman. The project benefits from Firefly's role in producing the first stage of the Antares 300-series, but its execution faces scrutiny given the company's mixed track record—failed and partial launches from 2021 to 2023. The first orbital flight is planned for H2 2026.
STOKE	Nova (US)	Nova is a fully reusable medium-lift launch vehicle designed to deliver 3-5t to LEO. Likely the most technically ambitious—and thus operationally complex—design among current medium-launcher developments, it aims to materially lower launch costs through full reusability. Stoke targets a first orbital flight by late 2026 from Cape Canaveral.
ORBEX	Proxima (UK)	Orbex has announced plans to develop Proxima, a medium-lift launcher with a payload capacity of up to 8t to LEO, partial reusability, and multi-orbit capability, including LEO, GEO, MEO, and HEO. The company seeks to compete for the European Launcher Challenge (ELC). The development timeline targets an initial launch around 2030.

*Source(s): Stifel**

We believe the arrival of SpaceX's Starship and Blue Origin's New Glenn could mark a step-change in the development of the "in-space economy," significantly altering demand for launch services. By removing many of today's constraints on satellite deployment, super-heavy lift launchers are set to unlock a new paradigm in orbital infrastructure. This shift should pave the way for capabilities such as fuel depots, orbital tugs, and in-space assembly platforms—laying the groundwork for large-scale operations in satellite servicing, in-space manufacturing, and payload hosting. In our view, models like 'Space Infrastructure as a Service' (SIaaS), exemplified by Loft Orbital, alongside in-orbit service providers such as D-Orbit and Exotrail, and space exploration ventures like The Exploration Company, are likely to gain growing relevance in this emerging ecosystem.

Europe's transformation toward a new generation of launchers has begun

We believe Europe is seeking a privately developed successor to its incumbent launch vehicles. A competitive field is forming, with at least five startups targeting small-launcher debuts within a year, though we expect the core battle in medium-lift. In our view, the key contenders are Isar, MaiaSpace, Orbex, PLD, and RFA.

Europe's traditional launcher development model is struggling to keep pace with evolving demands, challenging the long-standing Vega-Soyuz-Ariane oligopoly. Concerns over European launchers are growing, alongside a push for reusability. The rising ambition of global competitors is reshaping the landscape, prompting expectations of a European response to break from its past attitude of not fully embrace the bold vision needed to thrive in the pace industry today. This view seems widely shared in the industry—what's less clear is the path forward.

- **Ariane:** Ariane's competitive edge has eroded under sustained pressure from SpaceX's pricing and execution. Falcon 9's USD60–70m launch cost halved demand for Ariane 5, decommissioned in July 2023. Its successor, Ariane 6, targeted cost parity but lacks reusability. Initially projected to lower launch costs to EUR70m, actual savings appear limited, with unit pricing reportedly near USD100m. Ariane Next, a partially reusable follow-on, is slated for the 2030s, but European political backing remains tepid. We believe Ariane's prospects are constrained, with a privately-led successor increasingly probable. In our view, its cost structure is widely deemed unsustainable, evidenced by ESA's 2023 decision to subsidise ~EUR340m annually beyond the 16th launch—highlighting fragile economics at prevailing price points. While Ariane 6's inaugural flights provided reassurance amid Europe's constrained sovereign launch capacity, we think it is broadly seen as a stopgap pending a next-gen platform in the early 2030s.
- **Soyouz**: the Russian-built launcher was key to Europe's launch sector, offering reliable, cost-effective option through Arianespace. Launched from French Guiana, it complemented Ariane for medium-lift missions. However, geopolitical tensions after the 2022 Ukraine conflict, ended this partnership, halting Soyuz launches in Europe.
- **Vega**: A small launcher developed by the Italian company Avio. The Vega programme has struggled to achieve price competitiveness and is often seen as a high-cost platform with limited commercial traction—arguably underpinned by strategic imperatives tied to maintaining a domestic solid propellant base for defence. Recent reliability setbacks have impacted its reputation. The shift to reusable Vega E could help, but development will be challenging.

Fig. 10 – Europe trifecta: Ariane – Soyouz – Vega

	Ariane 6-4 (Four P120 boosters)	Ariane 6-2 (Two P120 boosters)	Soyuz ST-A & ST-B	Vega C
Payload to LEO	21.7t	10.4t	-	-
Payload to SSO	15.5t	7.2t	4.2t (A) / 4.9t (B)	2.3t
Payload to GTO	11.5t	4.5t	2.8t (A) / 3.3t (B)	-
Reusability	Expendable	Expendable	Expendable	Expendable
Height	63m	63m	46m	35m
Fairing diameter	5.4m	5.4m	~3.5m	3.4m
Propellant (First stage)	Hydrogen/LOX	Hydrogen/LOX	LOX / RP-1	xxx
Propellant (Second stage)	Hydrogen/LOX	Hydrogen/LOX	LOX / RP-1	xxx
Propellant (Boosters)	Solid fuel (HTPB/AP/Al)	Solid fuel (HTPB/AP/Al)	LOX / RP-1	Solid fuel (HTPB/AP/Al)



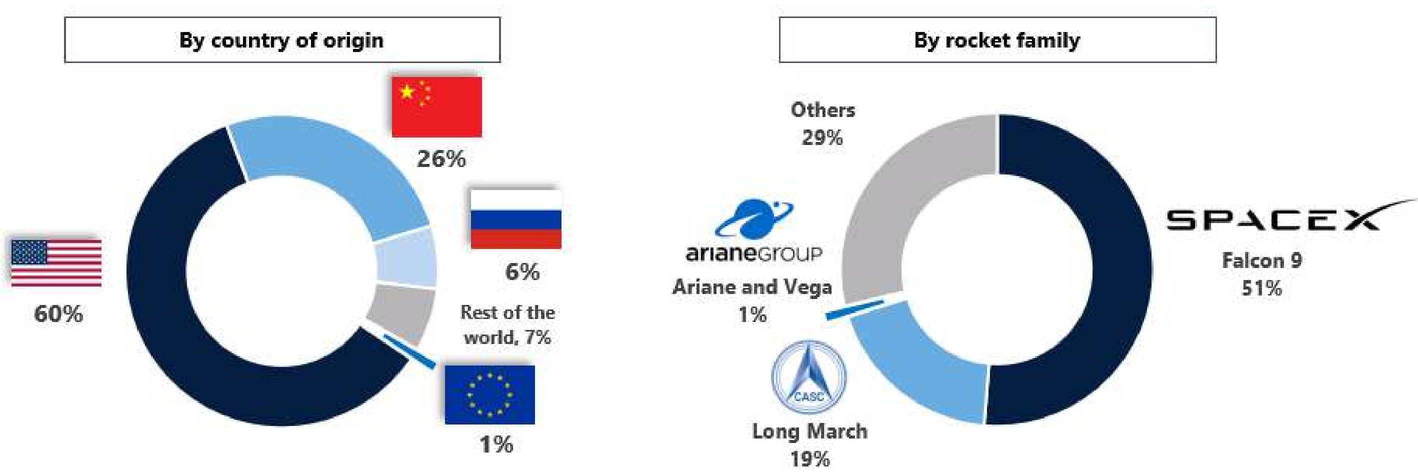

Source(s): Stifel*

The economics of reusability is complex but remains a structural shift for launchers with high-volume aspirations. The financial case for reusability remains contested, as reusable launchers incur efficiency losses and capacity penalties. However, SpaceX has demonstrated that beyond a certain launch cadence, reusability lowers costs and enhances operational efficiency. Reusability reinforces itself through both financial (fixed costs amortised over higher volumes) and operational (iterative learning, forensic diagnostics, and process refinement) mechanisms, enabling cost reductions alongside gains in reliability and launch frequency.

Europe, in our view, cannot indefinitely delay the transition. In Europe, the question is whether the market is large enough to justify having a reusable launcher. For any launcher aiming to dominate a significant market, such as the U.S., reusability is essential, as a reusable launcher gains a competitive edge over non-reusable ones as volumes grow. As previously discussed, we estimate Europe's addressable market for a launcher at EUR1–2bn at best—potentially too limited to sustain a large reusable launcher. However, volumes are likely to rise, and if Europe seeks to close the gap with the US, it will likely need to adopt a scale-driven paradigm, with larger constellations and higher launch frequencies. At some stage, this will necessitate the adoption of reusable launchers.

Full reusability appears unlikely to match the cost-effectiveness or transformative impact of first-stage recovery. The financial viability of fully reusable architectures—i.e., second-stage recovery—remains debated. The first stage accounts for ~60-70% of a launcher costs, driven by its primary engines, whereas the second stage consists largely of avionics, guidance systems, and smaller propulsion units. Recovery challenges are exacerbated by the second stage's higher-altitude trajectory, making retrieval significantly more complex.

Fig. 11 – 2024 orbital launches: a dire year for Europe at ~1% global share



*Source(s): Stifel**

Our first conviction is that the optimal launcher technology has already been demonstrated by SpaceX, leaving Europe with little choice but to follow the same blueprint. The Falcon 9 model is reusable, low-cost, vertically integrated and hydrocarbon-powered. It has set an industry standard that no credible alternative has yet displaced. We are wary of disruptive innovation in rocketry because building a functional launch is already so complex that bold changes introduce even greater risks, and potentially an unfavourable risk/reward ratio. While SpaceX thrives on disruption, it is a unique player in the market. Other launch providers may need to focus on catching up, especially if they lack the backing of wealthy founders.

Our second conviction is that, assuming alignment with Falcon 9's core design principles, competition among European players will be determined by execution. Industrial scaling, production efficiency, and cost discipline will be the real differentiators, rather than disruptive technological choices. First-mover advantage is critical, as one of the largest barriers to entry is the steep learning curve. From our discussions with industry insiders, a clear consensus emerged: "mastering rocket science is the easy part"—after all, physics textbooks are readily accessible. The true challenge lies in translating designs into reliable, failure-free launchers. Quality control and manufacturing are paramount. This will be even more evident in the race for medium launchers, where complexity scales exponentially with size. A recurring industry mantra encapsulates this reality: 'Small rockets, small problems. Big rockets, big problems.'

The European Launcher Challenge (ELC) is gaining in urgency as the continent seeks a successor to Ariane 6. Launched in November 2023, the initiative aims to support sovereign launch capabilities and, ultimately, a privately developed medium-lift launcher to replace Ariane 6. While the challenge's exact format remains unconfirmed, current plans indicate EUR150m in funding per successful bidder. The successor programme hinges on three technical imperatives: cost reduction, reusability to rival Starship's paradigm, and a modular architecture adaptable to small-to-heavy payloads. The ELC also serves as a mechanism to reform georeturn—a system that allocates ESA contracts to companies based on their member states' contributions—long criticised for its rigidity and competitive inefficiencies, particularly against the vertically integrated new-space model. However, the competition appears increasingly state-driven, with governments intensifying support for their respective national champions.

In Europe, we identify five standout new entrants: Isar, MaiaSpace, PLD, RFA, and Orbex. The remainder, in our view, trail materially in scale, funding, and launcher development, limiting their competitiveness.

- **Isar Aerospace** (Germany): As Europe's largest fundraiser (~EUR430m raised to date), Isar is widely regarded as a leading launch startup in Europe. The company is developing **Spectrum**, a two-stage launcher with a payload capacity of up to 700kg to SSO (1t to LEO), using LOX/propane as propellant. The initial strategy focused on mass manufacturing and vertical integration to drive down costs, following a model of small, mass-produced, expendable launchers. However, the stated target cost per kg (~USD10k/kg to LEO) reinforces our view that small launchers will struggle to compete with medium-class alternatives (~USD6k/kg). Isar is reportedly scaling production capacity to nearly 40 launchers per year. However, with larger constellations likely to favour more cost-efficient solutions, we see limited visibility on demand for such a high volume of small launchers. We understand Isar is now adjusting its strategy, planning a second, reusable version of Spectrum and developing a larger, fully reusable launcher.
- **Maiaspace** (France): Established in 2021 as a wholly owned subsidiary of ArianeGroup, Maiaspace secured a EUR125m funding commitment from its parent, although its capital is expected to be progressively opened to external investors. MaiaSpace was created to develop a reusable smallsat launcher powered by CNES's Prometheus methalox engine (developed since 2015) for the Themis programme. The company is developing **Maia**, a versatile launcher (500kg to LEO reused, 1.5t expanded, 2.5t with an extra stage) and appears intent on scaling towards a heavier-lift vehicle over time. In our view, its technological choices are well aligned with the SpaceX model—reusable architecture and hydrocarbon propulsion—an approach we believe offers a strong strategic positioning while mitigating execution risk through less disruptive design choices. Maiaspace is likely leveraging ArianeGroup's technical expertise, and the availability of Prometheus should support its highly ambitious timeline, targeting a first flight by end-2025. The company then aims to ramp up to a launch cadence of 1 to 1.5 per month within five years.

Fig. 12 – European launch companies targets for first flight

isar aerospace	2025	Isar's first launch was initially planned for 2022 from Andøya Spaceport in Norway, but delays pushed this to mid-2023, then late 2024, as the company appears to have prioritised exhaustive testing. A successful static fire test in February 2025 confirmed readiness, with the maiden flight now awaiting a launch license, likely targeting mid-2025.
maiaspace	Middle of 2026	Its first orbital launch is targeted for 2026 from the Guiana Space Centre. With development leveraging ESA's Prometheus and Themis programs, MaiaSpace has avoided major slips so far, steadily progressing toward its 2026 goal after beginning upper-stage testing in 2025.
ORBEX	Before the end of 2025	Originally slated for 2022 from Sutherland Spaceport, delays arose from funding challenges and a 2024 pivot to SaxaVord, abandoning Sutherland. The GBP20m UK government boost in 2025 should refocus efforts, aiming to meet the revised timeline.
RFA Rocket Factory	2025	Initially scheduled for summer 2024 from SaxaVord Spaceport, a first-stage explosion during a test in August 2024 destroyed the rocket, pushing the debut to at least mid-2025. RFA's iterative testing approach has caused multiple slips, but it remains a frontrunner among European startups.
PLD SPACE	2025	PLD Space targets its Miura 5 rocket's first orbital launch for late 2025 from the Guiana Space Centre. After a successful suborbital Miura 1 test in 2023, the orbital debut was delayed from 2024 due to launch pad construction setbacks. Steady progress and prior funding rounds keep PLD on track for its revised 2025 target.

*Source(s): Stifel**

- **Orbex** (UK): The company is developing **Prime**, a microlauncher (180kg to LEO) with a reusable first stage (ocean splashdown) powered by a bio-LPG and LOX engine and targets a launch cadence of at least one per month. It has also announced plans for a medium-class launcher, **Proxima**, with a payload capacity of up to 8t to LEO, offering sufficient versatility to support 2-3t missions to GEO/MEO/HEO and rideshare configurations. In our view, the two launchers represent a well-balanced portfolio, addressing a broad spectrum of commercial and sovereign requirements in Europe. Having secured over GBP100m in funding—including a GBP20m direct investment from the UK government as part of its January 2025 round—Orbex is indisputably the UK's leading launch contender. This marks a significant policy shift, with Britain previously opting out of Ariane 6 and Vega development. However, with design facilities in Denmark, Orbex also holds a strong pan-European positioning. Initial launch plans targeted 2022, but the maiden flight is now scheduled for 2025.
- **PLD Space** (Spain): among Europe's most advanced, with EUR163m raised to date. The successful October 2023 flight of **Miura 1** was primarily a prototype demonstration rather than a commercial milestone (100kg payload, suborbital only) as the vehicle is not intended for commercialisation. PLD is now focused on **Miura 5** (540kg to SSO, 1,080kg to 500km Equatorial Orbit), featuring a reusable first stage (ocean recovery, up to 30 launches per year) and LOX/Bio-Kerosene propulsion. First launch is targeted for 2025. PLD has also outlined a suite of larger launch vehicles: **Miura Next** (13t to LEO), **Miura Next Heavy** (36t to LEO), and **Miura Next Superheavy** (53t to LEO). These remain aspirational, in our view, given the substantial funding required. A key determinant for PLD could be support from Spain's space agency, established only in 2023. However, its budget and Spain's ESA contributions remain well below those of Germany, France, the UK, and Italy.
- **Rocket Factory Augsburg** (Germany): Founded in 2018 as an OHB spin-off, RFA has also secured EUR30m from KKR. The company is developing the **RFA One**, a smallsat launcher (payload capacity up to 1.3t to SSO) powered by RP-1/LOX, with a recoverable first stage. RFA is considered a leading European contender but has faced setbacks after losing a launcher during an August 2024 test. In January 2025, it obtained a UK launch licence and aims for a second launch attempt later in the year.

Fig. 13 – European launch market: top five new entrant competitors

		isar aerospace	maiaspace	ORBEX	PLD SPACE	RFA Rocket Factory
HQ						
Launcher name	Micro / Small	Spectrum	Maia	Prime	Miura 5	RFA One
Payload capacity to LEO (kg)	Micro / Small	1,000	500 to 1,500	150	540 (SSO)	1,300
Price / per kg to LEO	Micro / Small	$10m / $10,000	-	$7m/ $38,900	-	-
Reusability	Micro / Small	No	Yes	Yes	Yes	Yes
Propellants	Micro / Small	LOX / Propane	LOX / CH4	LOX / Bio-LPG	LOX / Bio-Kerosene	LOX / Kerosene
Launcher name	Medium	Unknown	No announcement	Proxima	Miura Next	No announcement
Payload capacity to LEO (t)	Medium	Unknown		Up to 8t 5.5t reusable	13.6t (exp.) 10,2t (reusable)	
Price / per kg to LEO	Medium	-		-	-	

Source(s): Stifel estimates*

02

SATCOMS IN TRANSITION

THE IMPACT OF MASSIVE LAUNCH CAPABILITIES AND THE TRUMPONOMICS OPPORTUNITY

If, as we expect, Starship and New Glenn ramp up launches of larger Starlink and Kuiper satellites, gigaconstellations' cost dominance will deepen by unlocking further economies of scale. What once seemed implausible for cash-generative, quasi-infrastructure firms is now unfolding: as profitability and capital efficiency deteriorate, satellite operator default risk is being progressively priced in. Yet recent US–Europe geopolitical divergence may offer European players a lifeline—a captive, strategic market shielded from Starlink and Kuiper: sovereign satcoms for defence and institutional needs. We continue to believe the satcoms sector is becoming a tale of two worlds—gigaconstellations with scale-led cost supremacy, and others confined to protected niches. But Europe's satcoms may finally find themselves in a world large enough to sustain them—if governments are willing to pay. We estimate only large-scale contracts would meaningfully offset deteriorating operator economics.

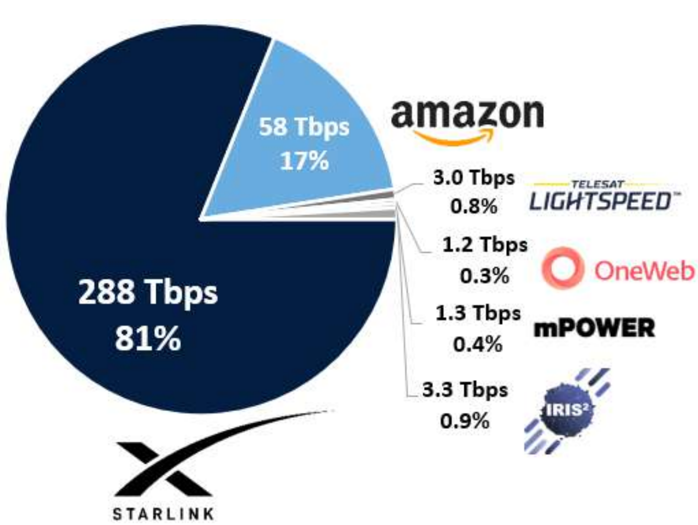
Starship and New Glenn will extend the gigaconstellations' lead

We view the Starship–New Glenn pair as the natural counterpart to Starlink–Kuiper. The primary advantage of these launchers for gigaconstellations may lie less in lower launch costs and more in their ability to sustain the relentless expansion of constellation scale, unlocking deeper economies of scale and entrenching cost leadership—already evident in SpaceX's roadmap for Starlink V3 satellites. Updating our capacity cost analysis, we estimate gigaconstellations will achieve infrastructure costs at least 50% lower than competitors.

We maintain our scenario of a fundamental shift in satcoms towards a Starlink-Kuiper quasi-duopoly, at least in commercial markets. Incumbent satellite operators remain under intense competitive and financial pressure, a challenge that has been consistently underestimated in our view. Starlink's cost advantage was initially overlooked, as early LEO-GEO debates centered on latency and assumed LEO would command premium pricing. Instead, Starlink disrupted the market with aggressive pricing, particularly competitive when adjusted for its typically superior bandwidth. Assumptions that Starlink would remain confined to B2C or struggle in high-value B2B and B2G segments have also faltered, as it gains traction across aviation, maritime, and military applications. Meanwhile, the belief that incumbents could defend market positioning through service quality (such as CIRs and SLAs, or sophisticated multi-orbit offerings) appears increasingly fragile. Our analysis remains anchored in the economies of scale driving this shift. Starlink and Kuiper's sheer size confers a structural cost advantage in what is ultimately a telecommunications service industry consumed largely as a commodity (competition is on throughput and price) outside military and government markets.

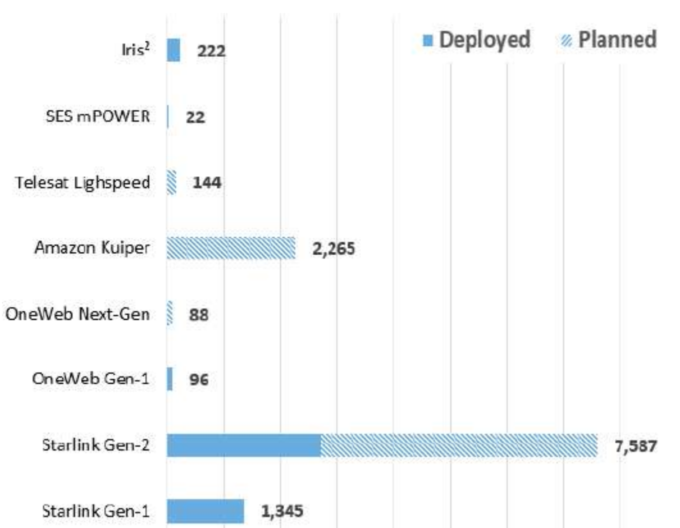
The scale gap between gigaconstellations (Starlink, Kuiper) and megaconstellations is widening, with the former projected to account for over 97% of commercially available broadband capacity by 2030e. We believe this gap is often underestimated despite exceeding an order of magnitude. By the late 2020s, we estimate Starlink and Kuiper will have launched over 20x the combined mass of OneWeb, mPOWER, Telesat Lightspeed, and Iris². In the past 12 months, SpaceX conducted 97 Starlink-only Falcon 9 launches, a 39% yoy increase, with no signs of deceleration. At this pace, SpaceX is deploying over 2,100 Starlink satellites annually, adding ~203Tbps of gross capacity to its network. We update our projections to reflect the optimisation of Starlink V2 satellites (see next page) and assume that by 2030, SpaceX will sustain its current launch run rate, maintaining a constellation of ~12,000 satellites (assuming a five-year satellite lifespan). In 2025, we forecast that SpaceX will be launching more capacity each week than the entire OneWeb Gen-1 constellation currently provides.

Fig. 14 – Sellable capacity of commercial NGSO constellations in 2030e



Source(s): Stifel estimates*

Fig. 15 – Total mass in orbit of planned broadband constellations (t)



Source(s): Stifel estimates*

Fig. 16 – Mark your calendars... in pencil – NGSO deployment timeline estimates

(1) "Proliferated Warfighter Space Architecture", the sovereign military constellation being deployed by the US DoD. Not all satellites are telecommunications satellites.

*Source(s): Stifel**

SpaceX's Starship and Blue Origin's New Glenn, alongside larger satellites such as Starlink V3, are set to widen the cost advantage of Starlink–Kuiper over other satellite constellations. We view the Starship–New Glenn pair as the natural counterpart to Starlink–Kuiper and, as discussed in Part 1, see a high likelihood that both launchers will primarily serve these large gigaconstellations rather than smaller satellites and constellations.

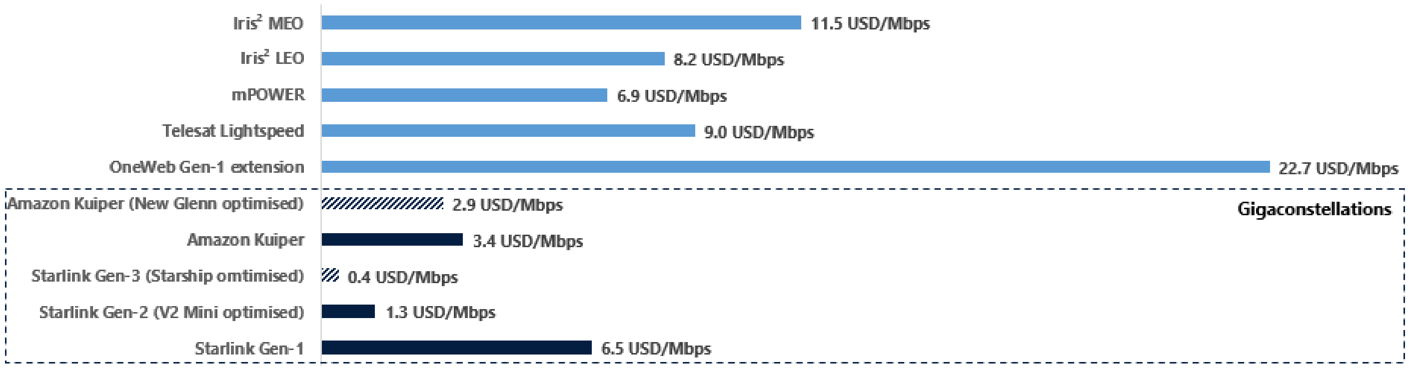
- The key benefit of super-heavy launchers for gigaconstellations may be less about slightly lower launch costs—which we believe are often overstated—and more about enabling rapid constellation expansion, boosting scale efficiencies and reinforcing cost leadership. If New Glenn launches at ~USD100m (slightly undercutting Falcon Heavy), we estimate a ~15% drop in Kuiper's infrastructure cost, all else equal. Likewise, if Starship halves per-kg launch costs vs. Falcon 9—suggesting an internal cost of ~USD100m per launch—we estimate a ~20% reduction. While significant, this may be no more transformative than the latest V2 Mini satellite optimisations.
- The ability to launch larger, heavier satellites in greater numbers seems most disruptive to us, as we believe broadband constellation cost advantages mainly come from scale. Starlink V3 satellites—engineered for Starship—mark a material design inflection. According to SpaceX's 2024 progress update, each unit delivers 1 Tbps of throughput, implying ~60 Tbps per Starship launch—over 20x the capacity of V2 Mini satellites launched via Falcon 9. That said, we wonder how satellite manufacturing costs will evolve, as capacity density (Mbps per kg) must rise by 200% versus the last V2 Mini version—a much faster improvement than in past iterations.

Fig. 17 – Starlink satellite iterations: V3's big leap with Starship optimisation

	Starlink V1.5	Starlink V2 Mini	Starlink V2 Mini Optimised	Starlink V3 (Optimised for Starship)
Satellite capacity and mass	**24 Gbps** ~300kg	**96 Gbps** ~700kg	**96 Gbps** 575kg	**1 Tbps** 1.9t
Mass and launch	Up to **56 per Falcon 9 launch** (= 1.3 Tbps per launch)	Up to **23 per Falcon 9 launch** (= 2.2 Tbps per launch)	Up to **29 per Falcon 9 launch** (= 2.8 Tbps per launch)	Up to **60 per Starship launch** (= 60 Tbps per launch)
Capacity density	80 Mbps per kg	137 Mbps per kg	167 Mbps per kg	526 Mbps per kg
Status	First launch in Sep. 2021 Last launch in July 2023	First launch in Feb. 2023	Introduced in late 2024	Under development

Source(s): Stifel, SpaceX*

Fig. 18 – Capacity cost analysis (Capex in USD per sellable Mbps per month)



Source(s): Stifel estimates*

Our updated proprietary cost analysis continues to indicate a significant cost advantage for gigaconstellations over competitors, with infrastructure costs 50–90% lower. As a reminder, our methodology (see detailed calculation below) determines the monthly capital expenditure required to deploy the space and ground infrastructure necessary for 1Mbps of sellable capacity, i.e. capacity with commercial potential, excluding regions such as China, deserts, or most oceanic areas).

- We attribute much of this advantage to the substantial economies of scale inherent in gigaconstellations, alongside vertical integration (Starlink benefits from structurally lower launch costs due to SpaceX's in-house capabilities).
- Infrastructure costs may ultimately not dictate pricing, particularly as constellations must navigate a complex yield management equation—capacity is relatively uniform globally, while demand is not. However, we believe this dynamic poses a greater risk to smaller operators, as gigaconstellations, scaled for high-volume B2C markets, have the pricing leverage to drive localised compression in lower-volume, high-value segments (notably mobility markets) given their excess capacity.

Fig. 19 – Detailed cost analysis

		Starlink Gen-1	Starlink Gen-2	Kuiper	OneWeb Gen-1 expansion	Telesat lightspeed	mPower (SES)	Iris² LEO commercial	Iris² MEO commercial
Deployment costs per satellite	Satellite mass	300 kg	575 kg	650 kg	-	750 kg	1700 kg	-	-
	Manufacturing costs per sat	USD 0.50m	USD 0.98m	USD 1.30m	-	USD 10.0m	USD 76m	-	-
	Manufacturing costs per kg	*1667 USD per kg*	*1700 USD per kg*	*2000 USD per kg*	-	*13380 USD per kg*	*44492 USD per kg*	-	-
	Launch costs per sat	USD 0.45m	USD 0.86m	USD 2.0m	-	USD 4.2m	USD 24.4m	USD 7.5m	USD 25.0m
	Launch costs per kg	*1515 USD per kg*	*1499 USD per kg*	*3077 USD per kg*	-	*5657 USD per kg*	*14332 USD per kg*	-	-
	Deployment costs per satellite	USD 0.95m	USD 1.8m	USD 3.3m	USD 4.4m	USD 14.3m	USD 100m	USD 8.2m	USD 108m
	Deployment costs per satellite per kg	*3182 USD per kg*	*3199 USD per kg*	*5077 USD per kg*	-	*19037 USD per kg*	*58824 USD per kg*	-	-
Constellation	Number of satellites	4408	7518	3236	440	198	13	264	18
	Total satellites deployment cost	USD 4.2bn	USD 13.8bn	USD 10.7bn	USD 1.9bn	USD 2.8bn	USD 1.3bn	USD 2.2bn	USD 1.9bn
	Space segment cost, % of constellation cost	*68%*	*82%*	*78%*	*85%*	*80%*	*72%*	*91%*	*90%*
	Other costs *(Gateways, R&D, insurance, etc…)*	USD 2.0bn	USD 3.0bn	USD 3.0bn	USD 0.3bn	USD 0.7bn	USD 0.5bn	USD 0.21bn	USD 0.21bn
	Total constellation capex	USD 6.2bn	USD 16.8bn	USD 13.7bn	USD 2.3bn	USD 3.5bn	USD 1.80bn	USD 2.37bn	USD 2.15bn
Gross capacity	Theoretical throughput per sat	15.0 Gbps	96.0 Gbps	50Gbps	10.0 Gbps	50.0 Gbps	200Gbps	25Gbps	103Gbps
	% functional satellites	89%	98%	98%	100%	100%	100%	100%	100%
	Total gross constellation throughput	59.1 Tbps	708 Tbps	158.6 Tbps	4.4 Tbps	9.9 Tbps	2.6 Tbps	6.7 Tbps	1.9 Tbps
	Gross capacity unit cost (USD/Mbps)	105 USD/Mbps	24 USD/Mbps	86 USD/Mbps	515 USD/Mbps	355 USD/Mbps	692 USD/Mbps	356 USD/Mbps	1160 USD/Mbps
Sellable capacity (adjustement)	Sellable capacity / gross capacity	27%	30%	30%	27%	30%	70%	30%	70%
	Adjusted constellation capacity	15.9 Tbps	212 Tbps	47.6 Tbps	1.2 Tbps	3.0 Tbps	1.8 Tbps	2.0 Tbps	1.3 Tbps
	Sellable capacity unit cost	389 USD/Mbps	79 USD/Mbps	288 USD/Mbps	1909 USD/Mbps	1182 USD/Mbps	989 USD/Mbps	1185 USD/Mbps	1657 USD/Mbps
Monthly Cost base	Satellite lifespan	5 years	5 years	7 years	7 years	11 years	12 years	12 years	12 years
	Sellable cost base *(capex in Mbps/month)*	6.5 USD/Mbps	1.3 USD/Mbps	3.4 USD/Mbps	22.7 USD/Mbps	9.0 USD/Mbps	6.9 USD/Mbps	8.2 USD/Mbps	11.5 USD/Mbps

*Source(s): Stifel**

European operators vs Starlink-Kuiper: Is Trumponomics the answer?

Incumbent satellite operators have long pinned hopes on broadband uptake offsetting the structural MSD decline of broadcast. However, excessive market share losses to gigaconstellations could skew the outlook negatively. Shifting Western geopolitical priorities may carve out a defensible segment—European sovereign demand—largely insulated from Starlink and Kuiper. Yet at this stage, we estimate only generous contracts would be sufficient to materially reverse the deteriorating economics of European operators.

We believe incumbents are trapped in a "Muskonomics" strategic deadlock, constrained by the overwhelming cost advantage of gigaconstellations. Operators are retreating to niche markets, seeking differentiation to avoid direct price competition against Starlink's excess low-cost capacity, soon to be reinforced by Amazon. Most have pivoted to high-value B2B and B2G segments, where service quality and sophisticated technical requirements may enable premium pricing via, for example, more robust SLAs with guaranteed bandwidth. However, these markets remain limited in scale and vulnerable to price pressure as gigaconstellations enhance their technology, progressively eroding the opportunity to differentiate. Ultimately, operators face a dilemma: either limit investment to preserve capital efficiency—risking stagnation and contraction—or deploy capital to chase growth, at the risk of value destruction.

The mounting competitive threat is translating into growing financial strain for European satellite operators with three interlinked consequences:

- **Negative organic growth:** Losing ground to Starlink and Kuiper poses an existential threat, as both Eutelsat and SES must accelerate connectivity growth to counter structural declines in broadcast. We estimate these legacy segments still account for ~50% of EBITDA but are eroding at an MSD pace, with no indication of bottoming out. Connectivity has yet to offset the drag, and group organic CAGR has remained negative over the past 7 years. Eutelsat's satellite internet division delivered a meagre +2.8% organic CAGR over seven years, even with OneWeb's support, while SES achieved +3.5% over eight years despite heavy investment in MEO constellations O3b and mPOWER. With Video contracting at -4.3% for Eutelsat and -5,5% for SES, overall organic growth remained negative at -1.1% and -2.2%.
- **Unfavourable mix shift towards lower-margin connectivity revenue has weighed on profitability**: The transition to connectivity has materially eroded satellite operators' margins and investment appeal. The dilution is largely structural, as connectivity often entails higher distribution costs (managed services) than video (capacity model).
- **Capital efficiency problem across the satellite operator industry, as operators continue to invest heavily**: The value creation issue is evident in deteriorating capital efficiency metrics, which we see as a major driver of the persistently low equity valuations of satellite operators. Market tensions are rising, exemplified by Appaloosa's pressure on SES to reconsider capital allocation—questioning "*whether shareholders will ever recapture capital trapped in a vicious cycle of poor investment*" due to a "*woeful record of deploying capital at sub-par returns*".

Fig. 20 – Organic growth per division: Eutelsat FY18-FY24

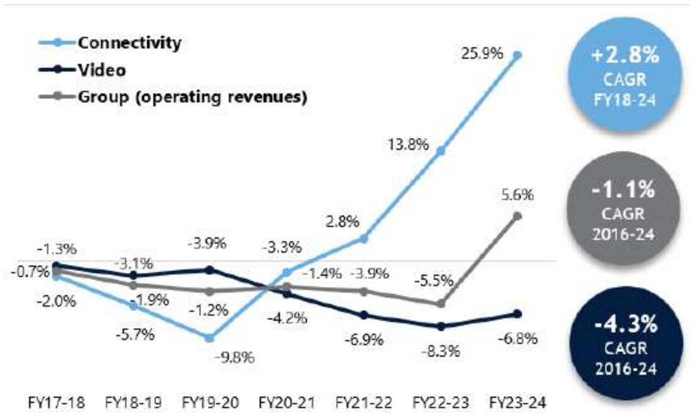
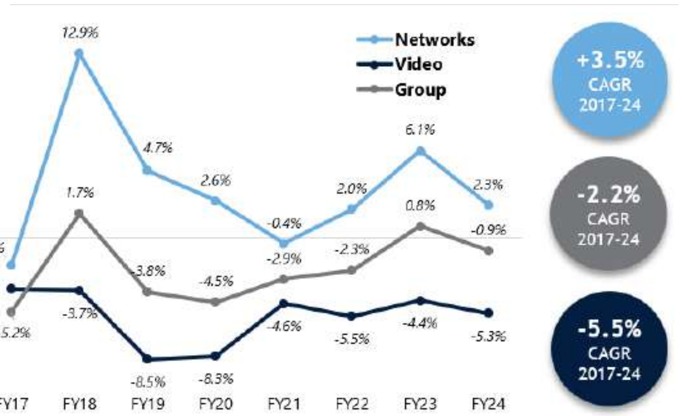
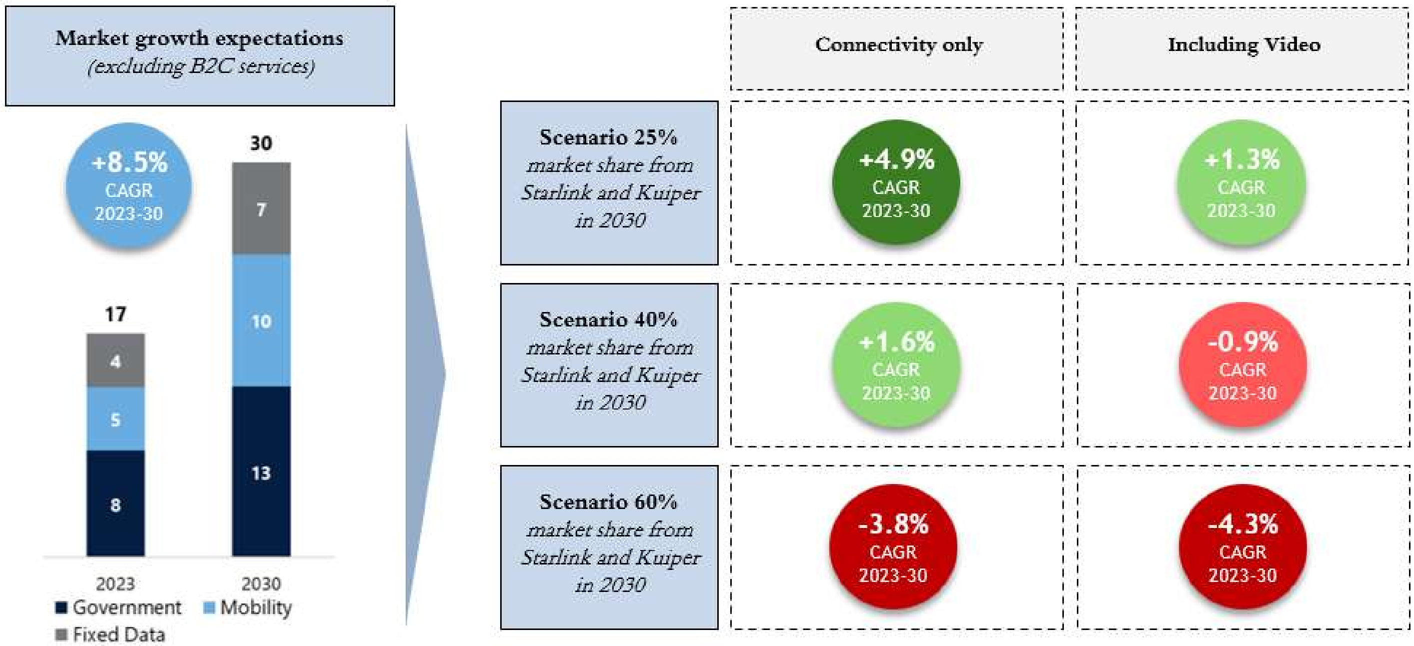


Fig. 21 – Organic growth per division: SES FY17-FY24



Source(s): Company data, Stifel* estimates

Fig. 22 – Starlink–Kuiper market share impact on incumbent B2B/B2G satcoms growth



Source(s): Stifel, SES, Euroconsult*

The main risk, in our view, is that European operators remain trapped in a structurally declining addressable market after adjustment for market share gains by Starlink and Kuiper. Satellite broadband markets are expected to grow at a high single-digit rate (excluding residential internet, now largely captured by Starlink) by space consulting firms. This should, in theory, offer sufficient growth to offset exposure to the declining Video market. However, assuming a hypothetical 25% market share shift to gigaconstellations, the 2023–30 CAGR drops to +4.9%, and to just +1.3% when including Video. At a 40% market share shift, growth slows to +1.6%, turning negative when Video is included (see Fig. 22). In addition, we believe the satcom industry has, over the past decade, consistently overestimated market growth—likely contributing to overcapacity and helping to explain the erosion of capital efficiency across the sector.

Europe's defence pivot may prove decisive for the strategic positioning of European operators, offering captive demand from governments prioritising sovereign solutions. In our view, this addresses their core challenge: securing markets insulated from price erosion driven by Starlink and Kuiper.

- **Eutelsat:** OneWeb remains the only viable LEO alternative to Starlink in Ukraine, where satellite connectivity has been mission-critical in recent years**.** This could prove a lifeline for a company in a strategically and financially precarious position, compounded by OneWeb's limited commercial traction. Near-term upside lies in displacing Starlink in Ukraine, unlocking rapidly monetisable contracts with European governments. Such military-driven cash flows may provide critical relief amid scarce organic deleveraging levers. This could help Eutelsat fund its EUR2.0–2.2bn OneWeb Gen1 renewal capex plan (FY24–25 to FY28–29) and its ~EUR2bn IRIS² commitment. We see potential for Eutelsat to become "too strategic to fail," which could alleviate financing constraints, notably on the bond markets.
- **SES:** The Luxembourg operator has garnered less attention than Eutelsat in the context of a potential Europe's push for satcoms autonomy. Yet it operates a sizeable government segment (we expect this to represent >50% of its non-broadcast revenue in FY25e) and unique MEO constellations (O3b and mPOWER), and has more than proven that it can meet military-grade communications requirements. In our view, the key constraint lies less in performance than in its limited capacity to replicate SpaceX's mass terminal deployment at scale—such as in Ukraine—as mPOWER is not engineered for high-volume use cases.

How big is the opportunity: could European operators become defence-first companies? At this stage, the potential revenue opportunity for European operators is difficult to quantify, as discussions remain preliminary and have yet to materialise into concrete contracts. We explore the possible size of this market on the next page, but the outcome ultimately hinges on Europe's willingness to pay premium rates for OneWeb's services and, in effect, displace the US—currently Starlink's main customer in Ukraine.

Starlink currently provides both B2C terminals and specialised B2G services in Ukraine, supplying connectivity for military (Ukrainian forces) and civilian applications (hospitals, enterprises, etc.), bridging gaps left by damaged infrastructure. According to the Kyiv Independent, at least 42,000 B2C terminals are in use, though the actual figure is likely higher given procurement via third countries, notably Poland. Pricing varies by source and over time, but SpaceX appears to charge at the upper end of its global range: ~USD100/month for basic service, and several hundred dollars for premium tiers. Per Ukrinform (a Ukrainian state agency), Poland is paying 5,500 UAH (USD132) for standard subscriptions and 14,000 UAH (USD337) for "special" access. We estimate this segment generates ~USD100m in annual subscription revenues, largely funded by the US DoD, allied governments (notably Poland), and civilian initiatives. In parallel, Starlink has deployed ~3,000 Starshield terminals (its militarised variant), each costing several thousand dollars per month, though detailed pricing remains undisclosed. SpaceX has agreements with the US DoD to provide Starshield access in Ukraine. In 2024, the US raised the ceiling of its pLEO (proliferated low Earth orbit) satellite services IDIQ contract to USD13bn. As of November 2024, SpaceX had secured a USD537m award under the pLEO programme for its services in Ukraine, with a >USD200m annualised run rate. However, we believe actual Ukraine-related military revenues are likely higher due to continued Starshield deployments and other programmes, potentially approaching USD1bn annually. For context, Starlink's total government and military revenue is estimated at ~USD2bn in 2024.

We see limited scope for European operators in replacing Starlink's B2C terminals in either Ukraine or Europe. In our view, OneWeb lacks the capacity to replace the >40k Starlink terminals deployed in Ukraine. Assuming 2Mbps per user, total bandwidth needs would approach ~80Gbps. Eutelsat discloses 1.3Tbps of sellable capacity for OneWeb Gen-1, but this is globally distributed, broadly proportional to landmass (with latitude also a key determinant). Ukraine's territory (~600k km²) accounts for <1% of the geographies typically addressable by Western satellite operators (excluding maritime zones, China, Russia, etc.). On this basis, we estimate OneWeb has at most 10–20Gbps over Ukraine — sufficient for only ~10k residential terminals. We believe that this implies B2C discussions may be pivoting to GEO-based Konnect VHTS, which offers higher throughput (500Gbps across Europe) and already supports Starlink-like residential internet services. Moreover, Eutelsat's wholesale model in B2C limits revenue capture, with a meaningful share accruing to distributors and CPE vendors. In Europe, Starlink is estimated to serve >500k subscribers, generating EUR300–500m in annual revenue (BGe). Even if EU sanctions were imposed on Starlink, we believe OneWeb lacks the broadband density to backfill its consumer footprint, leaving Konnect VHTS as the sole viable substitute. That said, we assign a very low probability to a sanctions-driven scenario in which Eutelsat displaces Starlink at scale. We do not view other European operators (SES, Hispasat) as credible alternatives either, as none possess the adapted fleet due to limited historical exposure to residential broadband markets.

The revenue opportunity from substituting Starlink's military services could prove materially larger, in Ukraine or across Europe. Ultimately, however, it hinges on European governments' willingness to underwrite B2G contracts with local operators—chiefly OneWeb—at structurally higher costs than commercial segments, mirroring the premium paid by the US government for Starlink's defence-related capabilities. Developments over the past fortnight have triggered a flurry of initiatives to curtail Europe's reliance on Starlink amid rising geopolitical risk. Discussions have reportedly taken place between EU institutions and domestic operators, notably Eutelsat, though no formal commitments have yet emerged, and the opportunity remains difficult to quantify. A potential inflection point may be Italy's decision to reassess its EUR1.5bn secure satcom contract with Starlink, driven by geopolitical unease and concern over dependence on a US entity closely associated with Donald Trump. Talks have stalled, with opposition parties citing national security risks, pushing Italy to consider alternatives such as Eutelsat, despite ongoing Starlink pilots in select embassies.

Absent sizeable military contracts, Eutelsat-OneWeb's medium-term financial outlook remains deeply concerning. In our view, a meaningful reset of OneWeb's unit economics would require securing an incremental ~EUR500m in annual government and defence revenues to approach ~EUR1bn in total revenue by 2030. This broadly aligns with post-merger targets and likely marks the threshold at which revenues begin to cover cost structures and enable value creation. We believe this would only be feasible if Europe were to designate Eutelsat-OneWeb as a strategic asset, with strong political will to provide sovereign backup in the event of a Starlink service disruption. A EUR500m annual contract would approximate current European payments to SpaceX, though OneWeb likely offers inferior capabilities relative to Starlink, which has demonstrated impressive operational scalability and resilience against Russian jamming, among other advantages.

IRIS²: sovereign vision, commercial question mark

IRIS² offers European operators a potential exit route from 2030. However, we see in the project the same unresolved strategic challenge already faced in commercial markets: the constellation will operate with materially lower capacity and a significantly higher cost base than Starlink or Kuiper.

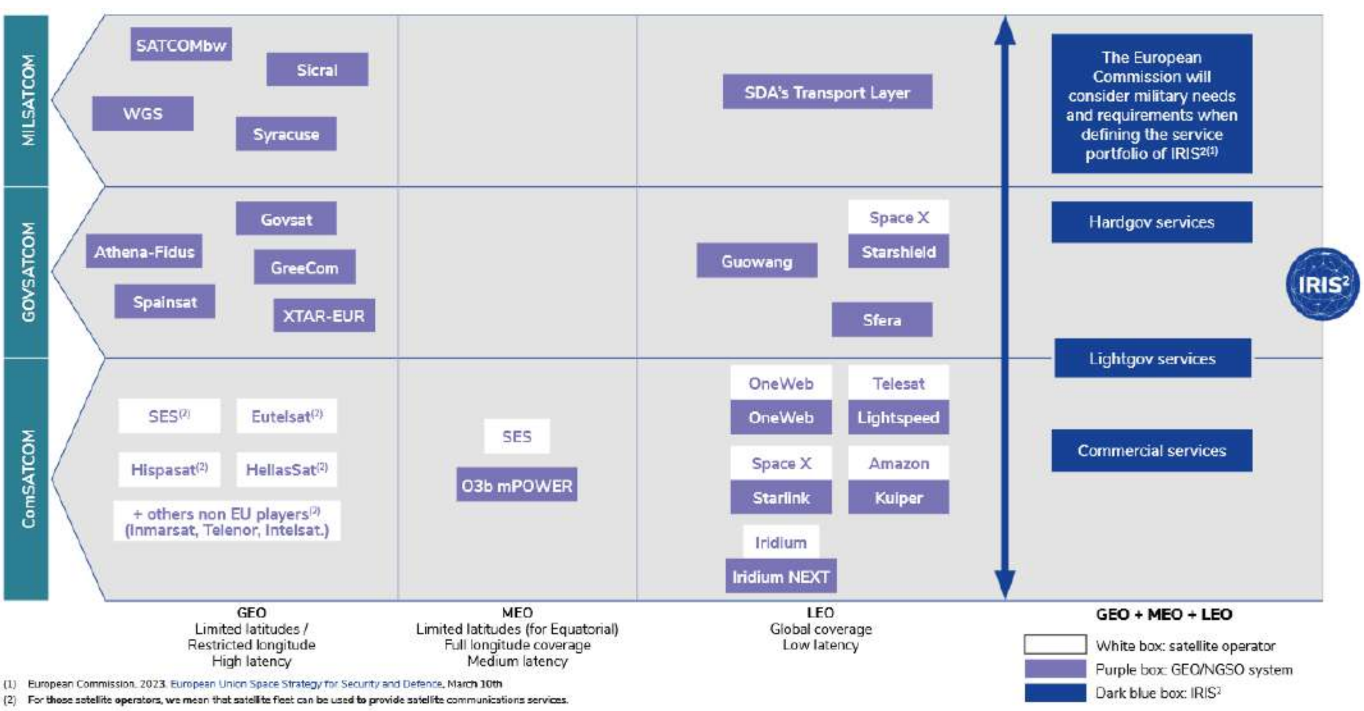
European satellite operators have committed EUR4.1bn to IRIS², accounting for 40% of the funding for the sovereign constellation. In December 2024, the European Commission, ESA, and the SpaceRISE consortium (Eutelsat, SES, and Hispasat) signed development contracts for IRIS².

- As anticipated, the programme will be executed under a Public-Private Partnership (PPP) model structured as a 12-year concession. The total project cost is estimated at EUR10.6bn, with c.60% publicly funded by the European Commission, EU Member States, and ESA. The remaining EUR4.1bn will be borne by the SpaceRISE consortium: SES plans to invest up to EUR1.8bn, Eutelsat about EUR2bn, and Hispasat up to EUR600m. Governmental services are expected to begin operating in 2030.
- IRIS² will comprise ~300 satellites: 264 in high LEO (~1,200km), 18 in MEO, and at least 10 in vLEO (400–750km). Primarily designed for governmental applications, IRIS² will also allocate commercial capacity to consortium members. Total addressable capacity across LEO and MEO is expected to reach 3.3Tbps.

We do not view IRIS² as meaningfully competing with Starlink or Kuiper. Primarily, we expect its targeted commercial capacity (3.3Tbps) to account for no more than 1% of that offered by gigaconstellations by 2030. In addition, we see the constellation as structurally non-competitive on cost (see Figs. 18 and 19) relative to the largest systems. Accordingly, we believe IRIS²'s commercial segment faces the same strategic bind as European operators today: it must find a path to differentiation versus Starlink or Kuiper.

European operators are assuming the commercial risk. Following the withdrawal of Airbus and Thales from the consortium, the remaining consortium leaders – SES, Eutelsat, and Hispasat – now bear the full risk associated with the constellation's commercialisation. SES has set a cumulative revenue target of EUR6bn over 12 years with a 55% EBITDA margin, while Eutelsat targets cumulative revenues of EUR6.5bn.

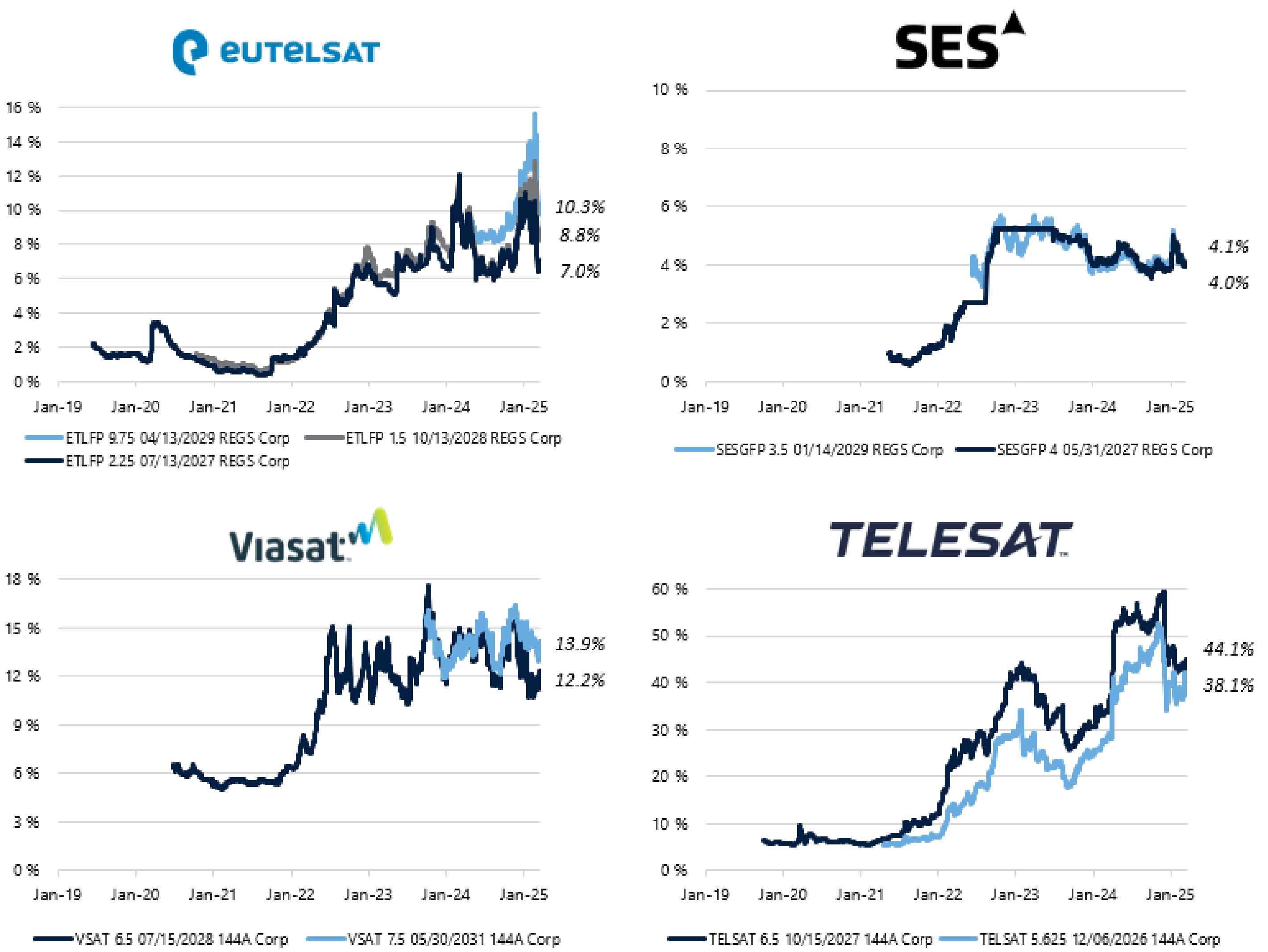
Fig. 23 – Market positioning of IRIS²



Source(s): USPA Secure SATCOM Market and User Technology Report

Another challenge for Eutelsat will be to meet its EUR2bn commitments under IRIS². Financing conditions for incumbent satellite operators remain tight, with bond yields still elevated. Eutelsat's financial stability remains strained—despite some relief in its traded bonds, which have partially rallied alongside the equity, yields remain high. Telesat's debt is clearly under pressure, as investors continue to price in substantial risks linked to Lightspeed. Viasat, having tapped the bond market to fund its Inmarsat acquisition—adding considerable leverage—is now contending with persistently high yields, with its 2031 bond trading at 13.9%. SES stands out as an exception, with YTMs near 4%; however, the operator faced a Moody's downgrade in February, shifting its outlook from stable to negative, with its rating still just one notch above junk.

Fig. 24 – Satellite operators - Bond Yield-to-maturity (%)



Source(s): Stifel, Bloomberg*

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  - Full suite of corporate and individual wealth management solutions
- Banking Services:
  - Bank and Trust with USD 31bn+ in assets(2)
  - Full suite of deposit and lending products and services

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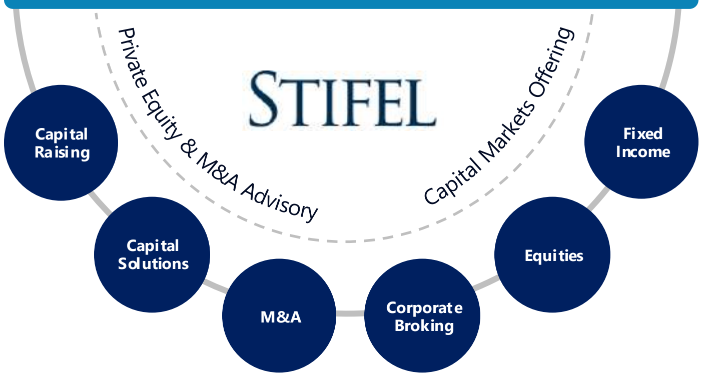

CORE SECTOR EXPERTISE


Diversified Industries


Healthcare


Natural Resources


FIG


Infrastructures


Real Estate


Technology

Note: (1) As at 02 February 2025; (2) as of 31 December 2024

AUTHOR

Antoine Lebourgeois, CFA

Analyst

M: +33 7 77 36 16 57

antoine.lebourgeois@stifel.com

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INTELLIGENCE • RESEARCH • INSIGHTS • SERVICE

London, United Kingdom

Stifel Nicolaus Europe Limited
150 Cheapside
London, EC2V 6ET
Tel: +44 20 7710 7600

Frankfurt, Germany

Stifel Europe AG
Kennedyallee 76
60596 Frankfurt am Main
Tel: +49 69 788080

London, United Kingdom

Bryan Garnier & Co Limited
Michelin House 81 Fulham Road
London, SW3 6RD
Tel: +44 20 7332 2500

Paris, France

Bryan Garnier Securities SAS
26 avenue des Champs-Elysées
75008 Paris
Tel: +33 1 56 68 75 00

Paris, France

Stifel Europe AG – Paris Branch
80 Avenue de la Grande Armée
75017 Paris
Tel: +33 1 7098 3940

Frankfurt, Germany

Stifel Europe Advisory GmbH
Bockenheimer Landstrasse 24
60323 Frankfurt am Main
Tel: +49 69 247 4140

Munich, Germany

Stifel Europe AG – Munich Branch
Maffeistrasse 4
80333 Munich
Tel: +49 89 9992 9820
Tel: +49 89 2154 6000

Munich, Germany

Bryan Garnier & Co GmbH
Königinstraße 9
80539 Munich
Tel: +49 89 242 262 11

Milan, Italy

Stifel Europe AG – Milan Branch
Via Privata Maria Teresa, 8
20123 Milan
Tel: +39 02 85465761

Oslo, Norway

Bryan Garnier & Co AS
Haakon VIIs Gate 1, 2nd Floor
0161 Oslo
Postbox: 0117 Oslo
Tel: +47 908 45 025

Zurich, Switzerland

Stifel Schweiz AG
Tessinerplatz 7
8002 Zurich
Tel: +41 43 888 6100

Geneva, Switzerland

Stifel Schweiz AG – Geneva Office
Place de la Fusterie 12
1204 Geneva
Tel: +41 22 994 0610