Beyond Venture:
Space Needs a Complete Capital Stack

There will be unlimited upside potential for those who create the "idea-to-exit" financing vehicles for the most complex investment sector in history.

A White Paper By:
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The Next Space Inflection Point: Capital Structure

The space industry stands at an inflection point. You've heard this before. There was a launch inflection point, a constellation inflection point, a human spaceflight inflection point. But the inflection point that stands before us now is not technical; it's financial.

Many of the most capable companies driving the transformation of this industry are constrained not by engineering breakthroughs or talent, but by an immature capital structure. Early-stage venture rounds are now flowing freely, and a growing number of operators now have revenue-generating assets on orbit. But the leap to full-scale constellation deployment, ground-system expansion, or long-lead hardware production demands financing that traditional Venture Capital (VC) — with its high dilution costs and limited capital availability — is ill-equipped to provide at scale.

As a co-founder of SpaceFund, I have long recognized that space is fundamentally different from most VC investment sectors. It is capital-intensive, asset-heavy, and characterized by extended timelines — yet it is the only sector in human history with truly unlimited upside potential, bounded only by physics and imagination. This conviction drove me to pioneer early-stage venture investing in the new space ecosystem and architect two VC funds that have best-in-venture results. Today, it drives me further: I am deliberately building and activating the **complete capital stack** my portfolio companies require to transition from high-risk prototypes, to cash-flow-positive enterprises, to IPO, and eventually to long-term, revenue-generating healthy businesses.

In virtually every mature industry, healthy companies draw from a diverse river system of capital: equity as the high-velocity tributary for risk-taking, debt as the steady, lower-cost flow for growth and asset financing. The addition of smaller streams — preferred equity, mezzanine debt, project finance, leasing, receivables lines — creates a convergence that turns into a broad, resilient river, minimizing dilution and optimizing Weighted Average Cost of Capital (WACC) over the full company lifecycle.

Space has historically lacked most of these tributaries, especially on the debt side. High-risk VC funding has fueled ignition — the spark that propels vision into orbit — but it is among the most expensive forms of capital. Founders pay a substantial dilution premium to offset investor risk, a premium that **should** shrink as each successful launch and on-orbit milestone reduces uncertainty. As risk is reduced, other, lower-cost capital options **should** become available. Yet these other tributaries that contribute to a healthy capital stack are still woefully underrepresented in the space industry.

The Funding Gap

Venture capital excels at funding high-risk, high-reward ideas with the potential for 10x+ returns in 7–10 years. VC fueled SpaceX's earliest days, Rocket Lab's growth, and the first wave of constellation plays. But once a company has hardware in-orbit, generating real revenue, the risk profile changes dramatically. The founders no longer need "moonshot" equity at punishing terms. They need patient, non-dilutive capital that matches the asset-heavy, cash-flow-positive reality of their business.

Traditional lenders look at satellites, ground stations, or spacecraft manufacturing facilities and see unfamiliar collateral. Banks don't understand orbital depreciation schedules or the unique risks of operating space assets. Without affordable post-launch insurance to de-risk those assets, lenders stay on the sidelines entirely — creating a vicious cycle that blocks the very private credit the industry needs to scale.

This financing gap shows up in multiple ways. Companies building sophisticated spacecraft development labs spend millions per facility, yet many operate at low utilization while they wait months or years for testing slots, launch manifests, and on-orbit data to inform their next build. The industry's terrestrial geography — concentrated in places like Boca Chica, Texas, and Florida's Space Coast — amplifies the challenge. These hubs are launch powerhouses but infrastructure deserts, forcing startups to divert precious capital and management attention into real-estate development instead of core technology.

Startups should not have to watch their founders and early backers be diluted into irrelevance because credit facilities don't exist, they shouldn't have to self-insure their constellations, and they certainly shouldn't become amateur real-estate developers on top of everything else.

The Complete Capital Stack: Four Integrated Layers

I am treating the space economy as the integrated financial system it truly is. I don't just write early checks. I am building the financial and physical rails that let companies scale from prototype to first revenue to sustainable multi-billion-dollar operations.

Layer 1: Early-Stage Venture Capital
I continue to do what my colleagues and I at SpaceFund pioneered: backing pre-seed through Series B companies with breakthrough technology and ambitious visions. Since our founding in 2018, space-focused venture has proliferated – there are now dozens of VC firms funding this

early-stage market. This remains the high-risk, high-reward fuel that gets ideas off the ground, but until recently, this has been where the capital stack stopped.

Layer 2: Private Credit via Space Finance Company
Finally, debt facilities exist! As the space industry has become commoditized, and as more space hardware becomes 'software defined,' in-space assets now have 'repo value.' A satellite can now be repossessed by a lender, sold to a new owner, and with a simple software update, can be repurposed for a new use case. As we saw this change happening, SpaceFund became the lead investor in Space Finance Company (SFC), a specialized Space Structured Finance provider that delivers tailored, non-dilutive financing solutions (asset-finance and project-finance) for space assets and operations.

SFC offers a full suite of credit products, including: Pre-Delivery Payment (PDP) financing for manufacturers and launch providers, leases (including sale-leaseback structures), credit facilities such as purchase-order and receivables financing or launch-services-agreement financing, the Discounted Inventory Purchasing Program (DIPP) that converts finished spacecraft components into immediate cash while retaining upside, and the OEM partner program that helps manufacturers finance customer purchases at no cost to the OEM. These tools allow satellite operators, service providers, and manufacturers to fund constellation buildouts, capex, and working capital without surrendering additional equity — creating the critical bridge between early-stage venture capital and public markets that the industry has long lacked.

Layer 3: Infrastructure & Real Estate via SpacePort Fund
I am personally an investor in and acting as the interim CFO of Karman Line, the management company of the new SpacePort Fund. Across the SpaceFund portfolio, I've repeatedly seen the same pattern: vibrant but cash-strapped startups spending millions on spacecraft development labs that sit mostly empty. Testing facilities are chronically backlogged. Launch manifests are booked years out. And when hardware finally reaches orbit, the wait for results drags on. And in the meantime, these facilities, with their clean rooms and specialized hardware, sit empty. Wouldn't it be better for these facilities to be shared so they could be better utilized?

Meanwhile, the physical ecosystem around our busiest spaceports is woefully unprepared for growth. Florida's Space Coast launched a record 109 times in 2025 and is on track for similar or higher numbers in 2026 — accounting for the overwhelming majority of global payload mass to orbit. Yet workers and visiting teams struggle with housing shortages, long commutes, and nonexistent amenities. Business meetings often require navigating NASA/Space Force badging — a non-starter for many international partners and customers. Boca Chica / Starbase tells an even starker story. SpaceX has effectively built its own company town because virtually nothing existed: employees live in Airstream trailers and modular homes; basic services are limited; environmental and community tensions persist. SpaceX has had to become a de-facto real-estate developer and city builder.

SpacePort Fund exists precisely so companies do **not** have to repeat these experiences. We are investing in spaceport-adjacent real estate and infrastructure: workforce housing so engineers can live near their labs and launch sites; co-working and secure collaboration labs for spacecraft buildout; event and meeting spaces where business can happen without badging hurdles; and spaceport infrastructure such as refueling depots, hangars, payload processing facilities, and supporting amenities.

By treating ground infrastructure as investable, scalable assets — not a side project for cash-strapped startups — we de-risk the entire value chain. Companies can focus on spacecraft, not zoning permits and basic services. Regions around spaceports become vibrant, livable hubs that attract talent instead of repelling it. The flywheel accelerates: more launches, more activity, more economic multiplier effects for local communities.

Layer 4: Insurance Innovation — The Missing Enabler

You cannot get a mortgage without homeowner's insurance. You cannot finance a fleet of aircraft without aviation coverage. Yet a constellation operator with several revenue-generating satellites on orbit often cannot secure debt financing because the space insurance market — while mature for launch risk — remains fragmented, expensive, and structurally misaligned with the needs of post-launch, asset-backed lending. This is not a perception problem. It is a structural one — and it is one the broader insurance industry has been slow to confront.

Launch insurance is well-established and competitively priced. The problem begins the moment hardware reaches orbit and starts generating revenue — precisely the moment a company's risk profile most warrants lower-cost capital. At that inflection point, coverage options narrow, premiums become punishing, and lenders — who need insurable collateral to underwrite debt — walk away. The result is a vicious cycle: insurability gaps block private credit, which forces companies back into dilutive equity rounds, which slows constellation build-out, which delays the revenue scale that would make them creditworthy in the first place.

The coverage gaps are specific and well-documented. On-orbit servicing liability, rendezvous and proximity operations (RPOD), constellation-level aggregate loss structures, ground system cyber risk, and in-space manufacturing exposure are either uninsured, priced on speculation rather than performance data, or written on terms that no rational lender will accept as collateral support. Reinsurance capacity — the backbone that allows primary insurers to write policies at meaningful scale — remains thin outside a handful of specialist markets, further constraining what underwriters are willing to offer operators who have already proven their systems.

This gap is not inevitable. It is the product of an insurance industry that has not yet built the specialized expertise, carrier relationships, and underwriting frameworks required to serve a sector as technically complex and rapidly evolving as the space economy. Traditional brokers apply traditional frameworks to non-traditional risk — and the result is coverage that is either unavailable, mispriced, or structurally useless to a lender.

That is precisely the gap that Alera Group's Emerging Technologies Practice (ETP) was built to close. Alera Group is one of the largest independent insurance brokerages in the United States, and the Emerging Technologies Practice represents a deliberate strategic commitment to the frontier industries — including space systems, autonomous operations, minerals, digital infrastructure and assets, AI, and advanced manufacturing — that are defining the next economy. ETP was founded on a clear conviction: that the insurance industry's failure to keep pace with frontier technology is not just a coverage problem. It is a capital markets problem, an innovation problem, and ultimately a national competitiveness problem.

ETP's approach begins where traditional brokers stop. Rather than mapping new risks onto legacy policy forms, the practice works from the technology forward — understanding the actual risk architecture of space assets, the performance data that exists on orbit, and the coverage structures that lenders genuinely need to deploy private credit.

The goal of my partnership with Alera Group is not simply to place insurance. It is to make space assets financeable — transforming what lenders currently see as speculative collateral into insurable, bankable infrastructure.

A Holistic Approach

SpaceNews has rightly called the full capital stack a "massive opportunity." Other participants are touching pieces of the puzzle. But, as far as I know, no one is integrating early-stage VC, dedicated space credit, physical infrastructure investment, and tailored insurance under one strategic roof – explicitly built for the unique needs of the space economy. This is what my family office, Ramsey Financial Group, is now doing.

That integration is what matters. A company in our portfolio can raise a reasonable amount of equity from SpaceFund for its first technology demonstration milestone, secure credit through Space Finance Company to scale manufacturing or constellation build-out, insure its assets with Alera Group at rational rates, and locate operations in SpacePort Fund facilities with housing, labs, and amenities already in place. The entire journey becomes smoother, faster, less dilutive, and more predictable.

How Governments Can Fuel the Capital Stack

History shows that capital-intensive, strategically important industries do not mature on private capital alone. The U.S. government played a decisive role in building commercial aviation — acting as the first customer through airmail contracts, creating the Civil Aeronautics Board to stabilize routes and fares, providing loan guarantees, and supporting airport development through municipal bonds and federal grants. When the airline insurance market froze after 9/11, Congress stepped in with the Terrorism Risk Insurance Act (TRIA). When flood risk became uninsurable, the National Flood Insurance Program (NFIP) was created. The government supported these emerging markets by de-risking them so private capital could flow at scale.

Space is at a similar crossroads. Spaceport revenue bonds already exist in Florida, Texas, New Mexico, and elsewhere, yet many remain underutilized or are focused narrowly on launch pads rather than the full ecosystem of housing, labs, and support facilities our companies need. Launch insurance is mature and affordable, but other required space insurance coverage is not — leaving a critical gap that blocks private credit.

I, with the help of my esteemed colleagues, hope to help lead a national conversation about the gaps in advancing the strategic national priority that is the modern commercial space industry. We need an insurance backstop, modeled on TRIA and NFIP, that would make lenders comfortable and unlock billions in private debt. We need expanded loan guarantees for space assets (similar to those the Export-Import Bank already offers for aircraft). We need tax incentives for space manufacturing and in-space infrastructure analogous to those that built the semiconductor and renewable-energy industries. And we need continued first-customer leadership from NASA, the Department of Defense, and commercial arms like Space Systems Command — not just for technology demonstrations, but for operational services that prove revenue models and de-risk missions and assets for private lenders.

We are eager to engage with policymakers at every level — federal, state, and local — to help design these tools. The US government can create an enabling environment so the private sector can move at the speed this moment demands.

Accelerating the Entire Ecosystem

A mature capital stack does far more than help individual companies. It attracts the institutional capital that has largely remained on the sidelines because space felt too risky or illiquid. It lets founders retain meaningful ownership and focus on innovation rather than perpetual fundraising. It creates high-quality jobs in communities surrounding spaceports. It turns launch sites into true economic engines instead of isolated industrial zones.

We have seen analogous transitions in other capital-intensive sectors. Semiconductors required specialized equipment leasing and debt. Renewable energy needed project finance, tax equity, and infrastructure investment. Commercial aviation needed everything from aircraft leasing to airport development. Space is following the same path — only faster and at greater scale.

The window to shape this capital stack is now. Launch cadence is rising. Revenue-generating assets are proliferating. The in-space economy is no longer science fiction. The companies that are building it deserve financing tools as sophisticated as the technology they are creating.

Let’s Build the Next Chapter Together

My life’s mission has always been to back the entrepreneurs who will make humanity multi-planetary. I am expanding on that mission to ensure those entrepreneurs have every financial and physical tool required to succeed across the full company lifecycle — from the first prototype, to a thriving constellation, to sustainable, profitable operations that benefit Earth and open the frontier.

The complete capital stack described in this paper is not a theoretical framework. It is being assembled now. If you lead a space company with revenue-generating assets and growth plans constrained by capital structure rather than technology, we want to hear from you. If you are an investor, lender, or infrastructure partner who understands what a fully de-risked space economy unlocks, we want to partner. And if you are a policymaker who recognizes that the enabling frameworks for private capital in space need to be built deliberately, we are ready to engage.

The success of the space economy will not be written by venture capital alone. It will be written by those who build the complete capital stack — the equity that sparks ideas, the credit that scales them, the infrastructure that grounds them, and the insurance that de-risks them.

I intend to be the one who writes the next chapter — and the preferred equity purchase agreements, the loan documents, the insurance policies, and the blueprints for the facilities where it all comes together.

The Moment Is Now

Florida's Space Coast launched a record 109 times in 2025. That number is not a ceiling — it is a floor. Launch cadence is accelerating, revenue-generating assets are proliferating on orbit, and the in-space economy is no longer a projection on a slide deck. It is happening. And here is the uncomfortable truth: the financing gap is not shrinking as the industry scales – it is widening. Every new constellation deployment, every additional revenue-generating satellite, every new operator crossing the threshold from prototype to cash-flow-positive business, represents another company that has outgrown venture capital and has nowhere rational to turn.

The capital stack has not kept pace with the launch manifest — and the longer that gap persists, the more value is destroyed through unnecessary dilution, stalled build-outs, and institutional capital that stays on the sidelines because the risk architecture isn't there to invite it in.

The infrastructure is being built. The technology is proven. The revenue is real. What remains is the financial architecture to match it.

The frontier of space has never felt closer. Let's ensure that the capital, infrastructure, and enabling frameworks required to reach it stand ready — not merely as support, but as the very foundation upon which humanity's multi-planetary future will be built.

If you are ready to help me solve this problem, let's chat. You can find me online at: https://www.linkedin.com/in/meagan/