INDUSTRY REPORT

Trends in Defense Tech

Capital Flows, Contract Structures, and the Rise of the Neo-Primes

BY THE ROBOT BOOK CLUB

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For the operators bridging the gap between the cap table and the program of record.

EXECUTIVE SUMMARY

The 2026 State of Play

> In May 2026, Anduril locked down a $5 billion Series H to hit a $61 billion valuation. That single megaround definitively ended the debate over whether venture-backed defense tech could scale. The ecosystem is no longer a speculative bet on dual-use prototyping; it is a fully capitalized industrial base. Defense tech is not trying to disrupt the primes anymore—it is replacing them.

The Capital Supercycle

Venture funding for defense has aggressively concentrated into late-stage megarounds designed to buy supply chain resilience and manufacturing scale. After a record-breaking $49.9 billion deployed across 966 deals in 2025, the momentum hasn't snapped back. First-half 2026 alone already crossed $28.4 billion in committed capital.

Generalist funds have stopped testing the waters and are underwriting pure industrial execution. Kleiner Perkins led a $1.75 billion Series D into Saronic to crank out autonomous ships, while Advent International and JPMorgan dropped $2 billion into Shield AI. Investors are no longer funding science projects; they are financing hyperscale production lines.

The Neo-Primes Take Ground

The "Valley of Death" is effectively closed for market leaders. A distinct class of verticalized, commercial-first Neo-Primes are now winning the programs of record once monopolized by legacy aerospace conglomerates. Anduril doubled its 2025 revenue to $2.2 billion, spinning up Arsenal-1—a 5-million-square-foot hyperscale factory in Ohio—and securing a 10-year Army contract for its Lattice OS with a ceiling of up to $20 billion.

Palantir is commanding a market cap near $180 billion by physically delivering AI-defined TITAN ground systems to the Army. Shield AI generated an estimated $300 million in 2025 revenue on the back of its V-BAT drones and Hivemind autonomy software, securing critical integration into the Air Force’s Collaborative Combat Aircraft (CCA) program. These companies are winning by shipping software-defined architectures at commercial speeds.

Rewiring the DoD

Washington is actively bypassing its own legacy procurement framework. The Department of Defense has recognized that the Federal Acquisition Regulation (FAR) is too slow for great-power competition. Instead, the Pentagon is weaponizing Other Transaction Authorities (OTAs) and newly empowered innovation hubs to buy commercial tech immediately.

The Defense Innovation Unit (DIU) is now a central contracting authority, armed with a focused $983 million FY2024 budget to force outcomes. Replicator is the battering ram: Tranche 1 is currently fielding thousands of attritable autonomous systems, and Tranche 2 is backed by a $3.187 billion FY2026 budget specifically for counter-drone networks. When the Navy needs autonomous prototype delivery in three to six months, they don't issue a multi-year RFP—they use OTAs like the MATAC consortium to buy direct.

The End of Exquisite Platforms

The structural shift from $80 million manned platforms to $1 million attritable drones is not a cost-saving measure; it is a desperate necessity. The U.S. faces a terminal mass asymmetry against China's industrial base. To restore deterrence in the Indo-Pacific, the Pentagon must rely on "intelligent mass"—thousands of expendable, autonomous systems networked together to overwhelm peer adversaries.

Hardware is now just an edge node for software-defined warfare. The real battlespace advantage lies in AI operating systems—like Anduril's Lattice and Shield AI's Hivemind—which fuse multi-domain sensor data, coordinate drone swarms, and adapt to electronic warfare at machine speed. In 2026, the foundational metric of national security is how fast a provider can iterate software and print autonomous hardware.

CHAPTER 1

1

Recent Trends in Defense Technology (2016–2026)

Capital found defense, the rules of entry changed, and a class of neo-primes appeared from nothing.

CHAPTER 1

ANALYSIS

Recent Trends in Defense Technology (2016–2026)

A historic supercycle of late-stage venture capital converged with aggressive Department of Defense procurement reforms, elevating a cohort of software-defined neo-primes capable of manufacturing autonomous mass.

The Capital Supercycle and Late-Stage Concentration

The venture timeline bifurcated in 2024. Narrow defense-tech funding hovered around $3 billion annually through the early 2020s before surging. PitchBook recorded $49.1 billion across broad dual-use investments in 2025, and Q1 2026 alone captured a record $19.8 billion. Pure-play defense equity followed the exact same trajectory, pulling $14.6 billion in just the first five months of 2026.

The shape of this capital is violently top-heavy. Investors abandoned early-stage, spray-and-pray strategies, directing 94% of all defense capital through May 2026 into Series B and later rounds. Deal counts stagnated at roughly two dozen pure-play deals annually, but the average round size surged to $225 million, inflated by Anduril's $1.5 billion Series F.

This extreme concentration crowns Anduril, Shield AI, and Saronic while hollowing out the middle market. In year-to-date 2026, the top ten funding rounds consumed 95% of available sector capital. First-time financings represented 30% of total deals but only 2% of total deployed capital. Venture funds no longer finance proof-of-concept software; they underwrite mass manufacturing and multi-year enterprise contracts.

Bypassing the Valley of Death via OTAs and the DIU

Startups are scaling because the Department of Defense rebuilt its acquisition architecture. Congress elevated the Defense Innovation Unit (DIU) to report directly to the Secretary of Defense, expanding its FY24 budget to $983 million. The DIU's Commercial Solutions Opening (CSO) framework strips years off the procurement timeline. Companies pitch and secure prototype contracts fast enough to keep venture-backed runways solvent.

Other Transaction Authority (OTA) contracting broke the final contracting bottleneck. Designed explicitly to bypass rigid Federal Acquisition Regulation (FAR) cost-accounting and intellectual property restrictions, OTA obligations reached $18.03 billion in FY24 across 7,409 actions. Ninety-three percent of those obligations involved significant participation by non-traditional defense contractors, allowing follow-on contracts to move prototypes directly to scaled production.

Programs like Replicator—backed by $500 million in FY24 and requesting $500 million annually for FY25 and FY26—force the rapid fielding of autonomous systems within 18 to 24 months. Combined with AFWERX STRATFI matching grants of up to $15 million for private capital commitments, the DoD aligned its procurement cycles with venture capital liquidity timelines.

Software Multiples and the Neo-Prime Cohort

Agile DoD acquisition and massive late-stage capital birthed the neo-prime. These firms operate like hyper-growth software companies but compete directly for Tier 1 defense programs. Anduril leads the cohort, raising a $5 billion Series H in May 2026 at a $61 billion valuation. Backed by Founders Fund and a16z, Anduril captured a $22 billion IVAS contract ceiling and the Air Force's Collaborative Combat Aircraft (CCA) program, trading at a 27.7x multiple on its $2.2 billion 2025 revenue.

Palantir monopolizes the DoD's data infrastructure. At a $330 billion market cap, the company locked in a $10 billion Army data platform ceiling and secured formal program-of-record status for Project Maven, a $1.3 billion AI targeting architecture that embeds the company directly into the multi-year budget cycle through 2029.

Public and private markets price these firms on their software architecture, not their sheet metal. Where legacy hardware primes historically trade between 1.6x and 2.7x revenue, neo-primes command multiples exceeding 20x. Their core operating systems—Anduril's Lattice OS and Palantir's AIP—allow them to ingest hardware from secondary vendors and orchestrate it through proprietary, high-margin software.

Capital Architectures Built for Manufacturing Scale

Valuations above $10 billion require wartime manufacturing capacity, forcing neo-primes to structure complex capital stacks to fund physical infrastructure. Shield AI reached a $12.7 billion valuation in March 2026 by layering a $1.5 billion equity raise with $500 million in preferred equity and debt facilities managed by Blackstone. They used these proceeds to acquire Aechelon Technology, vertically integrating synthetic training environments for their Hivemind autonomy platform.

Saronic applied this capitalized manufacturing model to the maritime domain. After executing a $392 million production OTA for its Corsair surface vessels, the company raised a $1.75 billion Series D led by Kleiner Perkins at a $9.25 billion valuation. Saronic is sinking this capital into Port Alpha, a Louisiana and Texas shipyard designed to mass-produce 100 autonomous vessels per month.

Agile contracting now routinely moves these stockpiles to the front lines. Skydio, valued at $4.4 billion after a $110 million Series F paired with $3.5 billion in off-balance-sheet manufacturing commitments, secured a $52 million U.S. Army order for 3,000 X10D drones. Using an Atlantic Diving Supply contracting vehicle, Skydio moved from bid to award in under 72 hours. Across domains, including Epirus and its $1 billion-plus valuation for Leonidas high-power microwave systems, the ultimate discriminator is the physical ability to build and ship at scale.

94%

The share of all defense tech capital captured by Series B and later megarounds through May 2026, leaving only 6% for early-stage Seed and Series A startups.

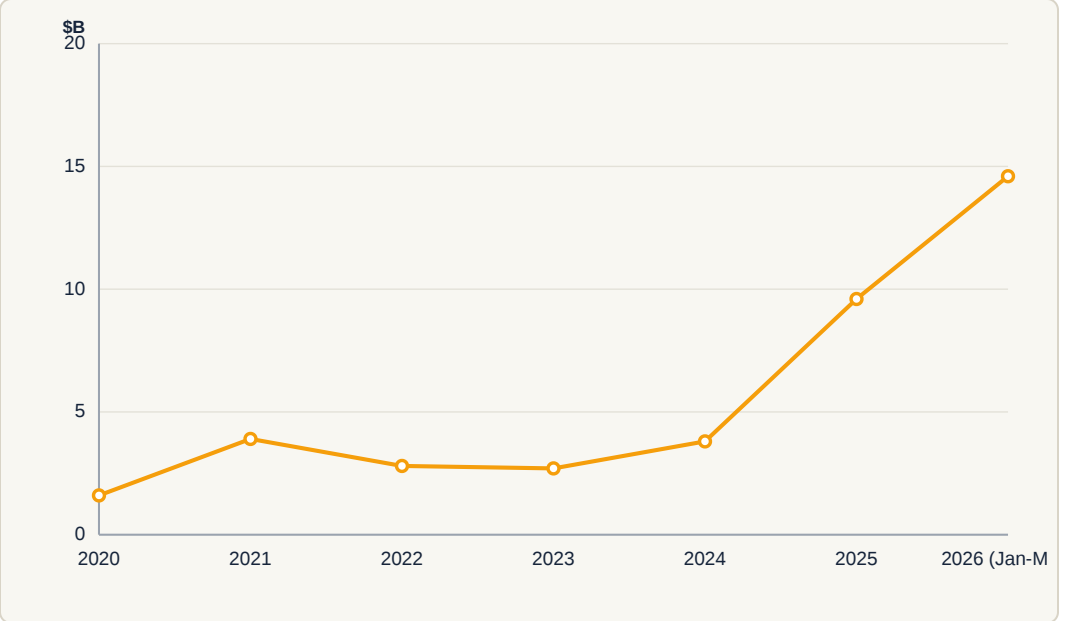
MANUFACTURING SCALE IS THE NEW MOAT

Investors are no longer writing large checks for proof-of-concept software. Capital is now aggressively flowing to companies with active government contracts and a credible path to wartime manufacturing volumes.

$5B

The size of Anduril's Series H megaround in May 2026, which elevated its post-money valuation to $61 billion.

The Defense Tech Supercycle: Pure-play funding goes vertical



Strict military and national security venture funding accelerated massively in 2025 and 2026, defying the broader global VC downturn. Source: Crunchbase.

The Neo-Primes, Ranked by Last Valuation

COMPANY	CORE PRODUCT	VALUATION	MARQUEE PROGRAM
Palantir Technologies	Foundry, Gotham, AIP	$322B+	Project Maven ($1.3B)
Anduril Industries	Lattice OS & Autonomous UAS	$61B	IVAS ($22B ceiling)
Shield AI	Hivemind AI Pilot & V-BAT	$12.7B	Coast Guard ISR ($198M)
Saronic Technologies	Autonomous Surface Vessels	$9.25B	Navy Corsair OTA ($392M)
Skydio	X10D Autonomous Drones	$4.4B	Army SRR ($52M)
Epirus	Leonidas EMP Weapon	$1B+	Army IFPC-HPM ($66.1M)

Venture-backed defense firms are commanding hyper-growth software multiples based on multi-year, multi-billion-dollar DoD programs of record.

Palmer Luckey

FOUNDER, ANDURIL

Pioneered the defense neo-prime model with Anduril, proving that venture-backed hardware firms could bypass legacy incumbents and secure enterprise DoD contracts.

Brian Schimpf

CO-FOUNDER, ANDURIL

Co-founded Anduril and led the strategic development of Lattice OS, the AI-powered operational backbone driving their massive multi-billion dollar procurements.

Saronic's 24-foot Corsair vessel secured a landmark $392M Navy production contract, signaling a definitive shift toward uncrewed maritime fleets.

Shield AI's V-BAT vertical take-off drone powers the firm's $198M Coast Guard intelligence contract, utilizing the Hivemind autonomous pilot.

Epirus's Leonidas system uses solid-state electromagnetic pulses to disable entire drone swarms simultaneously, bypassing the prohibitive cost of kinetic interceptors.

CHAPTER 2

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Targeted Domains and Product Categories

Some domains are already a knife fight; the money and the white space have moved elsewhere.

CHAPTER 2 ANALYSIS

Targeted Domains and Product Categories

While generalist capital severely oversaturated the small drone hardware market, lucrative white-space opportunities have migrated to vertically integrated maritime autonomy, software-defined AI piloting, contested logistics, and space-based sensor fusion.

The Group 1 and 2 Drone Market is a Commodity Trap

The $125 billion invested in defense tech since 2019 masked a severe clustering effect. Driven by combat realities in Ukraine, nearly 60 percent of all defense venture funding in 2022 flowed into drone hardware startups. The result is an oversaturated market for Group 1 and 2 unmanned aerial systems. Basic Intelligence, Surveillance, and Reconnaissance (ISR) quadcopters are heavily commoditized. Startups pitching generic hardware face an execution graveyard where legacy players like Skydio, Edge Autonomy, and Aeryon already lock down the Blue UAS procurement lists.

Generalist investors herded into premium hardware just as military doctrine shifted toward radical affordability. Modern electronic warfare means drones die fast; Ukraine loses 10,000 systems per month. The Department of Defense does not want exquisite, multi-million-dollar interceptors or expensive quadcopters. They demand attritable mass—platforms engineered to be deployed widely and replaced instantly at fixed price points.

Procurement money is shifting to meet this demand. The $1.1 billion Drone Dominance Program bypasses traditional acquisition to buy 200,000 small, lethal systems by 2027. The baseline for the modern neo-prime is the LUCAS kamikaze drone, averaging $35,000 per unit to offset the $2.5 million cost of a Block V Tomahawk. If a startup cannot hit that cost parity and industrial manufacturing scale, its product is irrelevant to future battle networks.

Maritime Autonomy Requires Vertical Shipyard Integration

Maritime autonomy presents an open market because software alone cannot solve a broken physical industrial base. The U.S. Navy lacks the domestic shipbuilding capacity to match near-peer adversaries across the Indo-Pacific. The market in autonomous surface vessels (ASVs) belongs entirely to firms that bypass legacy prime contractors and vertically integrate their naval architecture, software design, and physical hull manufacturing.

Saronic Technologies exemplifies this brute-force approach. After raising a $1.75 billion Series C in 2024 at a $9.25 billion valuation, Saronic acquired the Franklin shipyard in Louisiana to own its production lines outright. Their fleet scales from the 6-foot Spyglass drone to the 150-foot Marauder, which carries 150 metric tons over 5,400 nautical miles at speeds exceeding 25 knots. By pairing in-house autonomy with its own shipyards, Saronic moved the Marauder from design to on-water trials in under a year.

The Department of Defense rewards physical scale. In late 2025, Saronic secured a $392 million production contract focused on its 24-foot Corsair platform. Startups attempting to sell pure autonomy software without the physical capacity to bend steel and deliver hulls will lose to shipbuilders that deliver finished hulls running proprietary software.

Software-Defined AI Pilots Decouple the Brain from the Airframe

Standard waypoint navigation is dead on arrival in heavily contested electromagnetic environments. Air superiority requires edge computing—embedding AI processors directly on the platform to operate without GPS or continuous satellite links. The highest margins in defense aviation come from decoupling the autonomous pilot from proprietary hardware, treating airframes as swappable peripherals directed by a universal AI brain.

Shield AI dominates this category, backed by a $12.7 billion valuation after its 2024 Series F. Their Hivemind autonomy stack uses real-time sensor fusion to dynamically reroute and execute complex tactics offline. Shield AI is expanding beyond quadcopters to heavy strike platforms, developing the X-BAT—the world’s first AI-piloted VTOL fighter jet, slated for initial test flights in 2026.

The Pentagon committed $850 million in its 2025 budget to procure this decoupled architecture. In May 2026, the Department of Defense selected Shield AI to integrate Hivemind directly onto swarms of LUCAS kamikaze drones. Software developers that build interoperable, hardware-agnostic tactical AI will win the prime software contracts for the Defense Department's Replicator initiative, turning cheap mass into intelligent, coordinated strike packages.

Contested Logistics and Expeditionary Manufacturing Win Frontline Contracts

Combatant commanders demand contested logistics over pure strike platforms. The Indo-Pacific theater fractures legacy, spreadsheet-based supply chains optimized for counter-insurgency. Supply lines spanning thousands of ocean miles invite kinetic interdiction. Startups that route cargo around missile ranges translate stealth launches into immediate defense contracts.

Rune Technologies built TyrOS to manage logistics at the tactical edge. The software uses offline mesh networks to route supplies around contested zones without server connectivity. Gallatin AI raised a $15 million seed round to integrate algorithms that calculate ammo burn rates and reroute fuel directly into the Army's Palantir Foundry backbone.

Physical supply chains are migrating to the tactical edge via expeditionary manufacturing. Firestorm Labs builds the xCell, a containerized 3D-printing factory powered by off-grid generators. The system manufactures Tempest drone airframes on the front lines within 24 hours, bypassing trans-Pacific shipping bottlenecks entirely. Contracts will go to startups enabling decentralized production and resilient supply routing in GPS-denied environments.

Space ISR Shifts to Commercial Sensor Fusion and Quantum Security

The proliferation of low-Earth orbit constellations has saturated the satellite bus manufacturing market. Capital is now flowing to persistent analytics, sensor fusion, and data security. The Joint All-Domain Command and Control (JADC2) network demands algorithms that stitch raw commercial space data directly into the tactical kill chain. This reduces the sensor-to-shooter timeline from minutes to seconds.

HawkEye 360 mapped over 80 million RF emitter geolocations, piping targeting data directly to Lockheed Martin systems to expose adversary radar and jammers in all weather conditions. This operational maturity landed them a $75 million Polish Ministry of National Defence contract in 2025. Military buyers refuse raw imagery. They want processed targeting coordinates beamed down from in-orbit edge computers.

Unhackable data transmission drives the next wave of spending in space-based ISR. Quantum computing firm IonQ acquired synthetic aperture radar operator Capella Space in July 2025 for $311 million. The deal fuses Capella's persistent SAR constellation with IonQ's quantum key distribution network. Space tech is no longer about launching hardware. It is about delivering algorithmic targeting data and zero-trust quantum networks to battlefield commanders.

10,000

The estimated number of drones Ukrainian armed forces lost per month, highlighting the severe attrition rate caused by advanced Russian electronic warfare.

200,000

The number of small, lethal uncrewed aerial systems (sUAS) the U.S. Drone Dominance Program aims to procure by 2027 to establish attritable mass.

SCALE IS THE NEW MOAT

Innovation theater is over. Market winners in the 2024–2026 timeframe are defined by their ability to achieve industrial-scale manufacturing and translate venture momentum into trusted programs of record.

$35K vs $2.5M

The unit cost of an attritable LUCAS strike drone compared to a traditional Block V Tomahawk missile—a radical economic inversion driving the DoD's procurement pivot.

Defense Tech Domains by Saturation and Opportunity

DOMAIN	SATURATION LEVEL	KEY WHITE-SPACE DEMAND	REPRESENTATIVE INNOVATORS
Group 1 & 2 Drones	Oversaturated	Attritable mass; GPS-denied autonomy	Shield AI, Firestorm Labs
Counter-UAS	Rapidly Crowding	Non-disruptive EW; low-cost kinetic kill	Fortem Technologies, Epirus
Maritime Autonomy	Emerging White Space	Shipyard manufacturing capacity; swarming	Saronic, HavocAI
Electronic Warfare	Crowded (Primes)	AI-driven tactical edge systems	Helsing, Netline
Contested Logistics	Vast White Space	Edge-native predictive AI; expeditionary mfg	Rune Technologies, Gallatin AI
Space ISR	Hardware Saturated	AI image analytics; in-orbit edge compute	ICEYE, SATIM

While generalist capital crowded into small drone hardware, operational white space remains in logistics, maritime scale, and software-defined EW. Source: PitchBook & Newmarket.

Saronic Fleet Specifications

VESSEL NAME	LENGTH	PAYLOAD CAPACITY	RANGE
Spyglass	6 feet	Configurable	Tactical
Cutlass	14 feet	Configurable	Extended
Corsair	24 feet	~1,000 lbs	>1,000 nm
Mirage	40 feet	~2,000 lbs	2,000 nm
Marauder	150-180 feet	150 metric tons	5,400 nm

Saronic pairs vertically integrated autonomy software with massive organic shipyard capacity to bypass legacy bottlenecks.

Dino Mavrookas

FOUNDER, SARONIC

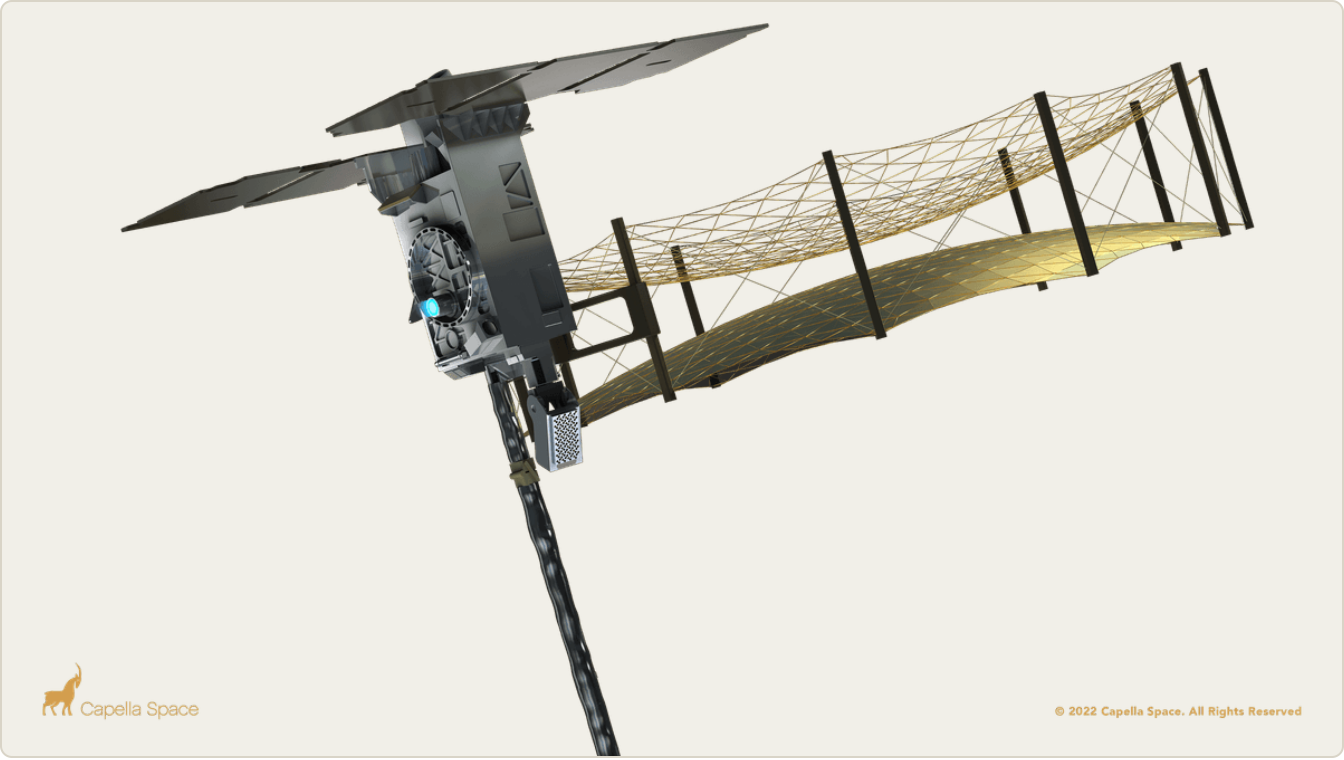
Leveraged vertical integration to pair software autonomy with massive Louisiana shipyard capacity, achieving a $9.25B valuation and a $392M Navy production contract.

Brandon Tseng

CO-FOUNDER, SHIELD AI

Spearheaded the Hivemind AI pilot, decoupling autonomous software from specific airframes to allow swarms to operate in fully GPS-denied environments.

The 24-foot Corsair secured a $392 million Navy production contract and executed the first known U.S. rescue by an autonomous surface vessel.



SAR satellites like Capella's Acadia bypass cloud cover and darkness, providing the persistent data streams necessary for

tactical sensor fusion.

CHAPTER 3

3

Business Models: Software-Defined vs. Legacy Primes

Recurring software margins and cost-plus hardware sustainment are two different businesses wearing the same uniform.

CHAPTER 3 ANALYSIS

Business Models: Software-Defined vs. Legacy Primes

While legacy primes rely on capital-intensive hardware sustainment and margin-capped cost-plus contracts, software-defined defense companies leverage commercial procurement authorities to unlock 80% gross margins and capture enterprise software valuation multiples.

The 12% Ceiling and the Fixed-Price Trap

Cost accounting standards legally cap prime profitability. Under cost-reimbursement frameworks, the government covers direct labor, overhead, and materials, but explicitly caps profit margins between 8% and 12%. Legacy primes scale enterprise value only by adding raw headcount and billing more engineering hours. Lockheed Martin generated $75.0 billion in 2024 revenue but remained structurally bound to an 11.9% gross margin. This is not operational inefficiency. It is the mathematical ceiling of the cost-plus procurement model.

Attempting to break this ceiling by bidding on developmental Firm-Fixed-Price (FFP) contracts destroys hardware primes. Under FFP, the contractor absorbs all supply chain disruptions and inflation shocks. Boeing Defense absorbed $4.9 billion in fixed-price losses in 2024 alone across the KC-46 Pegasus and MQ-25 programs. Fixed-price hardware development pushes existential financial risk onto the contractor for marginal upside.

To compensate for 8-to-12% margins and FFP risk, legacy primes rely entirely on the sustainment tail. The initial metal platform is a loss-leader designed to secure a 30-to-50-year monopoly on Operations & Maintenance (O&M), spare parts, and mid-life overhauls. This razor-and-blades approach creates immense, highly predictable cash flows. But it remains a capital-heavy, decades-long arbitrage play that breaks venture-backed growth models.

Asset-Heavy Friction vs. Software Scaling

Defense hardware consumes massive working capital and physical capital expenditures. Lockheed Martin projected 2026 CapEx of $2.5 to $2.8 billion just to maintain production capacity. The prime reported negative $291 million in free cash flow in Q1 2026 as inventory drag and billing transitions absorbed liquidity. Hardware builders suffer 30-to-180-day working capital gaps driven by lumpy government milestones. They require complex capital stacks of venture debt and AR factoring to survive the valley of death.

Software bypasses this physical friction. Helsing reached an estimated €85 to €120 million in government ARR by 2026 with gross margins above 70%. Their model is hardware-agnostic, integrating sensor-fusion AI directly into existing platforms like the Eurofighter Typhoon. Zero marginal cost of replication means defense SaaS companies scale like commercial B2B software. While RTX guides for 5-6% organic growth, Palantir accelerated its revenue 53% to an estimated $4.4 billion in 2025.

By front-loading R&D, defense software companies retain their intellectual property and sell licenses rather than engineering hours. Selling licenses turns top-line growth directly into operating leverage. A software-defined defense company operates insulated from titanium shortages and shipyard delays. It translates rapid deployment cycles into cash flow profiles that hardware primes cannot physically replicate.

Escaping the FAR Through Commercial Authorities

Selling software under cost-plus frameworks destroys enterprise value. Modern defense tech companies weaponize 10 U.S.C. 3451-3453 and FAR Part 12 to bypass certified cost and pricing data. Using Commercial Solutions Openings (CSOs) and Other Transaction Authorities (OTAs), they force the government to buy capabilities at market value rather than through a bottom-up cost audit. This regulatory arbitrage is the lifeblood of the commercial-first defense model.

Palantir is the apex predator of this approach. By selling off-the-shelf platforms like Gotham and AIP, the company maintains 80% to 82% gross margins. Instead of fighting multi-year RFP bidding wars, Palantir runs five-day "Bootcamps" with forward-deployed engineers. They prove immediate operational value on live, classified data. Small pilot contracts rapidly expand into command-wide software licenses.

This sales model decouples revenue generation from headcount. Palantir generated over 50% adjusted operating margins in late 2025, hitting a software "Rule of 40" score above 114%. With recent CapEx at just $33.9 million, the company operates a scalable software business that simply happens to count the Pentagon as a core customer.

The Valuation Divergence and the "Atoms as a Moat" Playbook

Public markets decoupled defense tech valuations from legacy metal-bending. Lockheed Martin trades at a 1.8x EV/Revenue multiple. Palantir's EV/Revenue multiple surged past 105x at its 2024 peak. Lockheed generates 17 times more revenue, yet both companies reached $135 billion enterprise values in late 2024. The market assigns a terminal premium to SaaS unit economics and automated software over hardware volume.

Standalone software startups struggle against a Pentagon procurement apparatus wired to buy physical assets. The mandatory strategy for modern defense tech is wrapping 80% margin software inside proprietary hardware to satisfy government buyers—using atoms as a moat.

Anduril Industries proves this hybrid model. By manufacturing expendable drones and sensor towers integrated with its Lattice OS, Anduril licenses high-margin software across every deployed hardware unit. This pushed blended gross margins to 40-45% on $1 billion in 2024 revenue, driving a $30.5 billion private valuation. Builders must either own the data integration layer entirely or embed high-margin software within physical platforms. Anything in between is a low-margin systems integrator waiting to be commoditized.

THE SUSTAINMENT TAIL

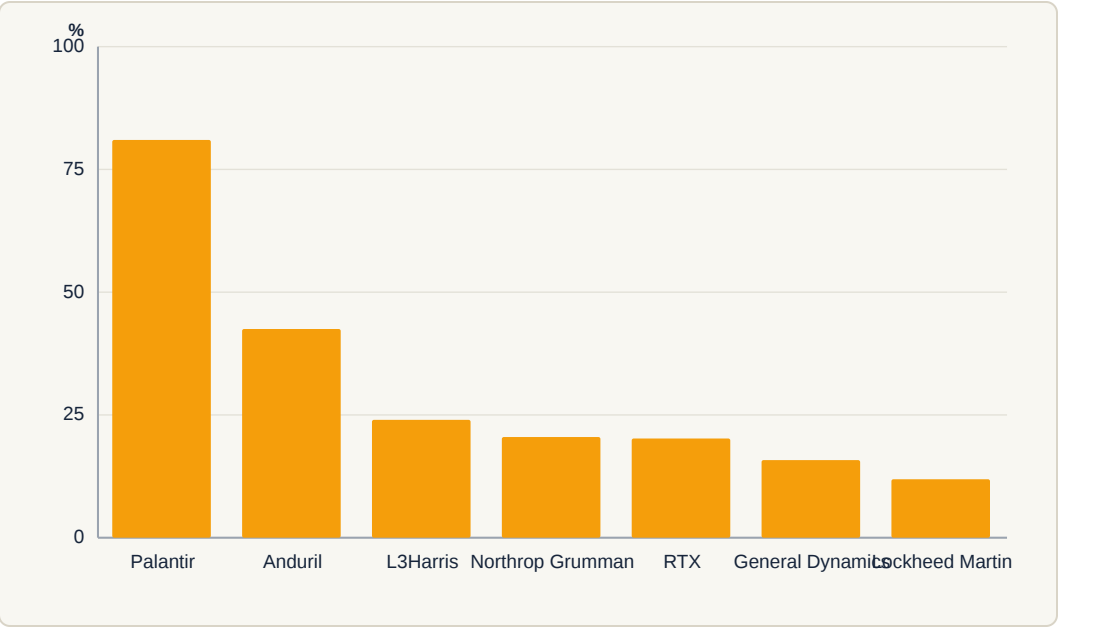
Hardware primes often accept low margins or losses during initial development to secure decades of lucrative Operations & Maintenance (O&M) and sustainment revenue once a platform is fielded.

$4.9B

The staggering loss Boeing accumulated in 2024 alone on fixed-price developmental hardware programs like the KC-46 tanker and MQ-25 drone.

> ### ESCAPING THE MARGIN CAP
>
> *Because Palantir sells commercial software licenses rather than cost-plus engineering hours, its margin profile is entirely detached from the legacy defense sector. — Research Dossier*

Software-defined entrants capture massively higher gross margins.



Palantir's commercial-first software licensing bypasses the DoD's traditional 8-12% profit caps on cost-plus development.

Legacy Primes vs. Software-Defined Defense: Financial Profiles

COMPANY	RECENT REVENUE	GROSS MARGIN	R&D (% OF REV)	PRIMARY CONTRACT MODEL
Palantir	$2.87B	80%	18.0%	Commercial SaaS / FAR 12
Anduril	$1.0B	40-45%	—	Hardware + Software Licensing
L3Harris	$19.4B	24.0%	2.5%	Cost-Plus / FFP
Northrop Grumman	$39.3B	20.5%	2.8%	Cost-Plus / FFP
RTX	$88.6B	20.2%	~3.0%	Cost-Plus / FFP
Lockheed Martin	$75.0B	11.9%	2.6%	Cost-Plus / FFP

Software-first companies command commercial enterprise gross margins and reinvest heavily in R&D, whereas legacy hardware primes rely on high-volume, low-margin cost-plus/FFP contracts.

Alex Karp

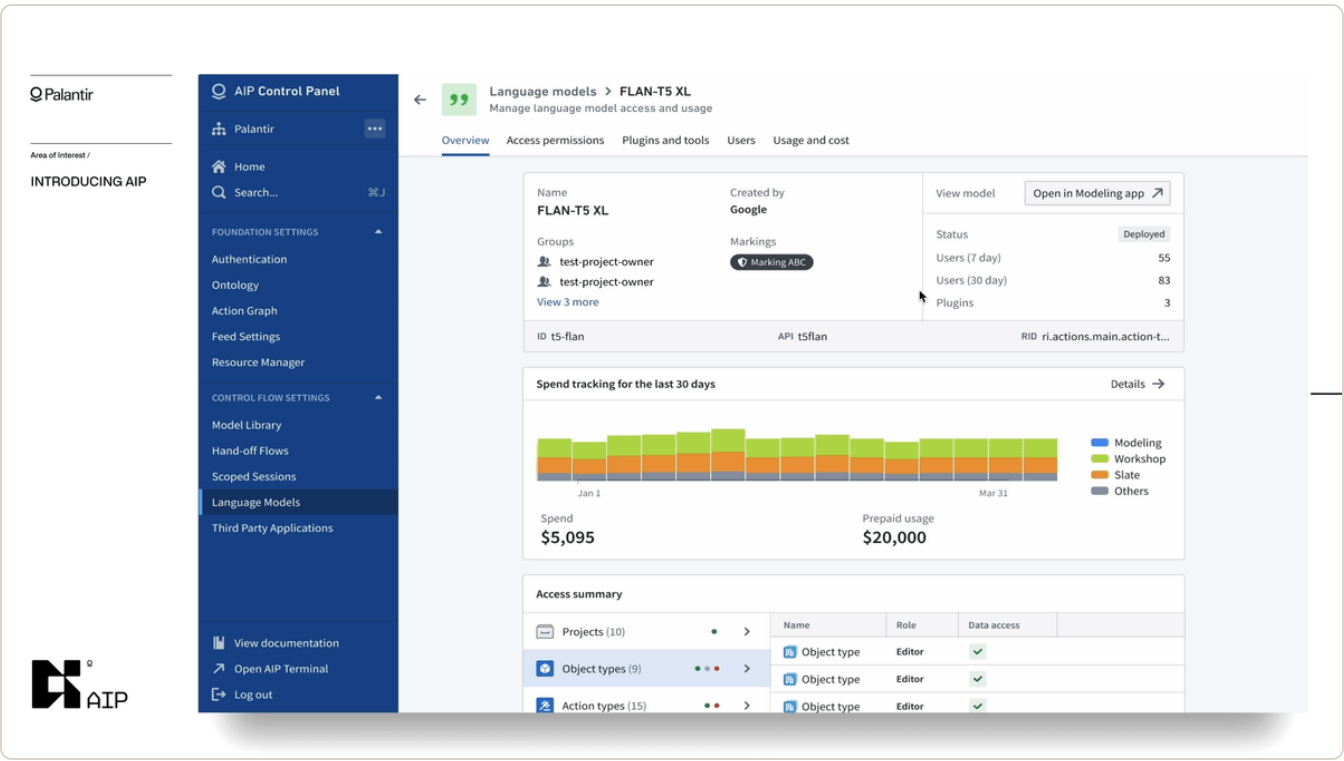
CEO, PALANTIR TECHNOLOGIES

Pioneered the integration of commercial SaaS economics into the DoD, pushing for FAR Part 12 and CSOs to protect 80% gross margins.

Palmer Luckey

FOUNDER, ANDURIL INDUSTRIES

Leveraged high-margin software economics via Lattice OS to subsidize the rapid, private capital-driven development of an autonomous defense prime.



Palantir's commercial-off-the-shelf (COTS) software is deployed via 'Bootcamps' in days, skipping multi-year cost-plus RFPs.

The KC-46 exemplifies the extreme financial risks of firm-fixed-price (FFP) contracts for developmental hardware.

CHAPTER 4

4

Sources of Competitive Advantage

Startups win on cycle time and talent; incumbents win on integration, clearances, and Washington.

CHAPTER 4 ANALYSIS

Sources of Competitive Advantage

Startups are capturing market share through equity-fueled talent acquisition and hyper-accelerated iteration cycles, but legacy primes defend their oligopoly by weaponizing long-term program integration, massive lobbying expenditures, and cleared infrastructure.

The F-35 Updates in Years; The Frontline Iterates Nightly

Legacy prime contractors build for decades, bound by rigid 36-month procurement rules. The production rhythm of established war platforms means system overhauls take ten years. Boeing and General Atomics take up to 16 months to field simple software patches. Lockheed Martin recently delivered an 'accelerated' baseline for the Navy's Aegis combat system—an achievement that merely established a six-month update cadence. Against modern electronic warfare, a six-month refresh is obsolete on arrival.

Defense tech startups compress this timeline into weeks using commercial software sprints. Anduril Industries operates on a six-week hardware-in-the-loop and software-in-the-loop testing cadence known as 'Project Crucible.' Relying on strict release trains, missing a deployment window at Anduril means waiting 42 days, not three years. This software-first architecture forces hardware to iterate at the speed of code.

The Russo-Ukrainian war sets the absolute floor for iteration. Combat relevance is no longer a decade-long hardware roadmap; it is the capacity to push over-the-air firmware updates faster than an adversary can deploy new countermeasures. To evade Russian GPS spoofing and radio frequency jamming, Ukrainian frontline units update drone software nightly. Combat FPV hardware cycles every one to two weeks. Startups capable of mimicking this consumer-electronics product rhythm rout primes paralyzed by Title 10 procurement rules.

SpaceX and Tesla Alumni Chase Pre-IPO Multipliers

The ideological firewall between Silicon Valley and the Pentagon is gone. U.S. defense-sector AI engineers surged from fewer than 500 in 2014 to nearly 7,000 in 2024. Builders are rejecting consumer ad-tech for national security, bringing rapid prototyping and mass manufacturing with them. This migration actively bleeds top-tier engineering talent away from commercial giants and legacy defense primes alike.

Executive poaching reveals the scale of this shift: Armor Harris left SpaceX's Starshield program to lead Shield AI's X-BAT autonomous fighter jet. Justin Lopas took SpaceX Falcon manufacturing principles to scale Anduril's Anvil interceptor production. Forrest Iandola left Tesla Autopilot to run Anduril's computer vision and sensor fusion efforts. These are not isolated hires; they are direct conduits bringing Silicon Valley production speeds into defense manufacturing.

While the mission matters, compensation closes the deal. Legacy primes offer stable cash, solid 401(k) matches, and zero equity. Defense tech startups deploy aggressive venture capital to offer Restricted Stock Units (RSUs) with seven-figure payouts. Startups match the 15% to 25% salary premium demanded by cleared Top Secret/SCI talent, while providing the uncapped upside of pre-IPO equity.

As valuations explode—Anduril hit a reported $61 billion in 2026—early equity dwarfs prime salaries. With median software engineering compensation hitting $268,000, and L7 staff engineers clearing $517,000, startups hold early employees in golden handcuffs. Because secondary tender offers let employees cash out early, venture-backed startups are pricing the Big Five out of the elite talent market.

Incumbents Weaponize the Indefinite Delivery Vehicle

Superior artificial intelligence does not dislodge a prime contractor. The Department of Defense acquisition framework favors incumbents who control Programs of Record (PoRs). Once a prime like Lockheed Martin secures systems integration for the $27.5 billion F-35 aeronautics franchise, the switching costs become prohibitive. Traditional cost-plus contracting incentivizes primes to spend taxpayer dollars on conservative internal R&D rather than integrating external startup technology.

Primes trap startups in the 'Valley of Death' by forcing them into restrictive subcontracting agreements. Startups must surrender Government Purpose Rights (GPR) to their intellectual property or accept slashed margins just to access the program baseline. Without a direct line to the end-user, primes squeeze startup innovation to protect their corporate margins.

The ultimate gatekeeping mechanisms are mega-IDIQ (Indefinite Delivery/Indefinite Quantity) vehicles. Contracting officers default to these existing vehicles. Establishing a new contract with a startup takes up to 18 months, whereas issuing a task order under an IDIQ takes weeks.

Recent awards prove the enduring power of the IDIQ. The Missile Defense Agency's $151 billion SHIELD contract and the Defense Logistics Agency's $5 billion Virginia-class submarine contract lock in the Big Five for the next decade. Even in asymmetric domains like loitering munitions, Mistral's $982 million HERO 120 award proves the rule. If a startup wants to reach full-rate production, it must subordinate itself to the prime that owns the task order.

SCIFs and Lobbyists Create an Unscalable Fortress

Regulatory friction is a deliberate business strategy for the Big Five. Operating at scale requires Facility Clearances and Sensitive Compartmented Information Facilities (SCIFs). The 2025 ICD-705 standard updates introduced brutal new radio frequency shielding and TEMPEST countermeasures. Building these facilities costs $3M to $5M for a baseline 1,000-square-foot build, and accreditation timelines now stretch up to 36 months.

This creates a fatal catch-22 for startups: they cannot bid on classified RFPs without a SCIF, and they cannot finance a SCIF without a contract. While shared-infrastructure startups like Nooks offer Classified-Infrastructure-as-a-Service, legacy primes already own sprawling, fully accredited SAPF complexes that absorb sudden surges in classified work without delay.

Primes also hold a monopoly on cleared engineers. With Secret clearance processing taking 138 days and Top Secret clearances dragging to 243 days, startups cannot afford to pay engineers for eight months of idle time. Lockheed Martin employs 123,000 people globally and instantly reassigns its 72,000 engineers and scientists across active programs. Startups possess no such geographic reach or cleared bench depth.

Finally, primes write the rules through sheer financial force. Between 2001 and 2021, the Big Five spent $1.1 billion on federal lobbying, reaping an estimated $1,813 in contracts for every dollar spent. Boeing deployed 112 lobbyists in a single year. Lockheed Martin dropped over $8 million in the second half of 2025 alone. Startups relying on 24-month venture runways cannot compete in a lobbying game where the returns manifest in five-year congressional appropriation cycles.

$1,813

The estimated return in Pentagon contracts for every single dollar the top five defense firms spent on lobbying between 2001 and 2021.

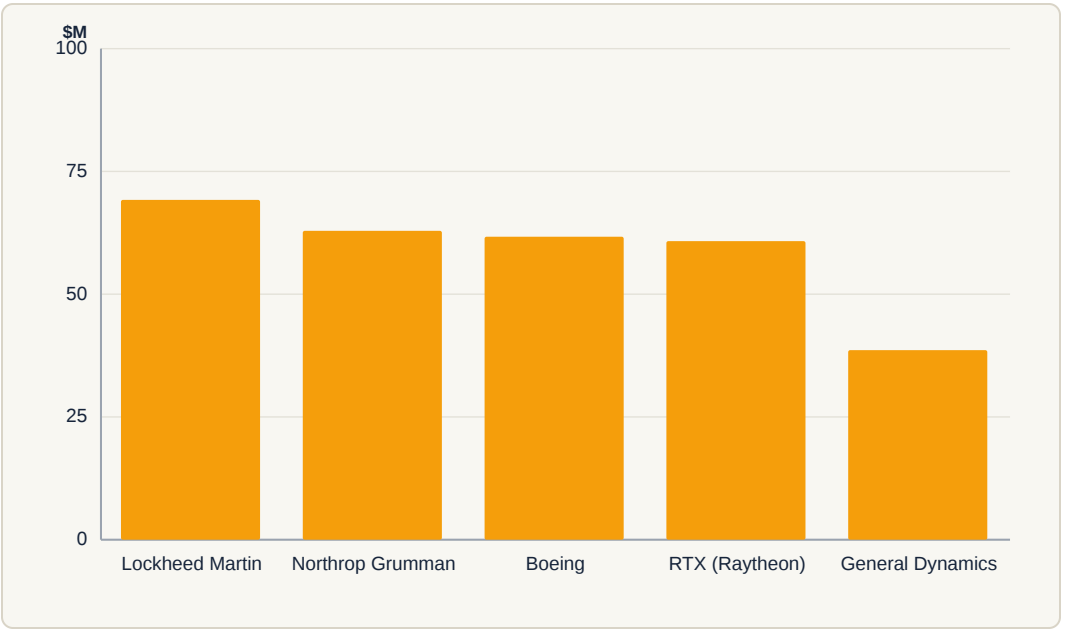
THE SCIF CATCH-22

Strict new ICD-705 standards have pushed SCIF accreditation timelines to 24-36 months. Startups are forced to invest millions in physical infrastructure before they even know if they've won a classified contract.

6,927

The number of top AI engineers working in the U.S. defense sector in 2024, up from just 487 in 2014, signaling a massive talent migration from Big Tech.

Federal lobbying spend by the 'Big Five' legacy primes (2020–2024)



The structural moat of legacy primes is heavily reinforced by immense government relations budgets. Source: Senate LDA filings.

Startups vs. Legacy Primes: The Asymmetric Battleground

DOMAIN	DEFENSE TECH STARTUPS	LEGACY PRIME CONTRACTORS
Hardware Iteration	6-week integrated cycles	3 to 10+ years
Software Cadence	Continuous to 6 weeks	6 to 16 months
Talent Comp	Pre-IPO Options & RSUs	Competitive Base & Zero Equity
Facilities	Shared SCIFs (CIaaS)	Massive owned SAPF/SCIF enclaves
Contracting	Subcontracting & STRATFI ($60M max)	Dominate mega-IDIQ vehicles ($100B+)

How emerging venture-backed defense startups contrast with the 'Big Five' incumbents across key operational domains.

R&D and Iteration Cycle Times

ENVIRONMENT	SOFTWARE UPDATE CADENCE	HARDWARE PROGRAM ITERATION
Traditional Defense Primes	6 to 16 months	3 to 10+ years
Defense Tech Startups	Continuous to 6 weeks	6 weeks
Active Combat (Ukraine)	Daily / Nightly	1 to 2 weeks

The speed of software and hardware evolution across traditional procurement, startup methodologies, and active combat zones. Source: U.S. DoD, CSIS.

Armor Harris

SVP OF AIRCRAFT ENGINEERING, SHIELD AI

Transitioned from directing SpaceX's Starlink bus engineering to leading Shield AI's development of the X-BAT autonomous fighter jet.

Justin Lopas

FORMER HEAD OF MANUFACTURING, ANDURIL

Brought SpaceX's vertical integration and lean manufacturing principles to Anduril, successfully scaling the production of Anvil interceptors to hundreds of units.

Forrest Iandola

FORMER HEAD OF PERCEPTION, ANDURIL

Left Tesla Autopilot to apply commercial machine learning and sensor fusion to defense, developing the AI autofocus systems for Anduril's counter-drone platforms.

Powered by the same engine as an F-16 and driven by Shield AI's Hivemind autonomy, the X-BAT is designed to organically close its own kill chains.

Benefiting from a hyper-accelerated 6-week iterative release cycle, the Anvil relies heavily on commercial manufacturing

scale and continuous software integration.

CHAPTER 5

5

Investor Networks and Key Personalities

A small, tightly networked capital base sets the valuations and works the politics.

CHAPTER 5 ANALYSIS

Investor Networks and Key Personalities

Late-stage defense technology valuations and DoD procurement policies are tightly controlled by a concentrated network of Palantir alumni and multi-billion-dollar generalist funds.

The $6 Billion Mega-Funds Underwriting Industrial Scale

Defense tech is no longer an early-stage venture market. By May 2026, Series B and later rounds consumed 94% of all deployed capital. The "missing middle" of defense manufacturing—the $50 million to $300 million chasm required to build first-of-a-kind hardware facilities—locks out traditional early-stage generalists. Valuations are now dictated by an oligopoly of mega-funds capable of fronting the infrastructure costs required to challenge Lockheed Martin and Raytheon.

Founders Fund and Andreessen Horowitz (a16z) dominate this tier. Founders Fund closed its Growth IV vehicle at $6 billion in May 2026, deploying a historic $1 billion check into Anduril’s $30.5 billion Series G. Andreessen Horowitz formalized this category by carving a dedicated $1.176 billion American Dynamism allocation out of its January 2026 $15 billion raise. Together with Lux Capital’s $1.5 billion Ventures IX and 8VC’s $998 million Fund VI, this cartel provides the massive balance sheets required to signal financial invulnerability to Pentagon procurement officers.

For startups, cap-table strategy is binary. Reaching the scale of a prime contractor requires capturing one of these mega-fund checks. The top three annual funding rounds alone capture 75% of all sector capital. If a founder cannot secure an institutional lead from these four funds, they lack the multi-year runway required to survive DoD Program of Record cycles.

The Palantir Lineage and Cross-Pollinated Boardrooms

A single professional lineage tracing back to Palantir Technologies controls this capital base. Peter Thiel and Joe Lonsdale established the archetype in 2003, proving the intelligence community would buy software at enterprise multiples. Today, Palantir alumni and Founders Fund partners hold the critical board seats across the highest-valued neo-primes.

Anduril Industries operates as the apex entity of this network. Anduril's board structure locks venture capitalists and founders into joint control. Trae Stephens holds a rare dual mandate: he is the Founders Fund partner managing the firm's $2.6 billion Anduril exposure while simultaneously serving as Anduril’s Executive Chairman. Alongside founder Palmer Luckey and CEO Brian Schimpf—an early Palantir engineering leader—this ring of operators guarantees absolute alignment between check-writers and manufacturers.

These overlapping cap tables force a closed co-investment pipeline. 8VC, managed by Lonsdale, routinely co-invests alongside Founders Fund and a16z in hardware scale-ups like Anduril and the autonomous maritime manufacturer Saronic. Katherine Boyle, the animating force behind a16z's American Dynamism practice, led Anduril's seed round while at General Catalyst before moving to a16z, where she now sits on boards like Apex Space and Hadrian. Penetrating this closed loop of board observers and capital allocators is a strict prerequisite for a $1B+ valuation.

Defense-First Vehicles De-Risk the Early Cap Table

Beneath the multi-billion-dollar generalists sits a scouting layer: specialized, defense-first venture funds. Managed by former military operators and intelligence officers, these vehicles write $1 million to $30 million checks to navigate the classified infrastructure and government contracting hurdles that mega-funds avoid.

Three vehicles act as primary filters for the mega-funds:

- **Shield Capital**: Managing a $186 million Fund I, former Defense Innovation Unit director Raj Shah secures initial DoD pilot contracts for companies like Armada and Code Metal.
- **Point72 Ventures**: Steve Cohen's $400 million Deterrence Fund anchored Shield AI’s early rounds before the drone maker surpassed a $5.2 billion valuation.
- **Harpoon Ventures**: Armed with a $125 million Fund III, former Navy SEAL Larsen Jensen secures non-dilutive contracts, such as Astranis’s nine-figure MB Group deal.

These specialists help founders win Small Business Innovation Research (SBIR) grants and secure facility clearances. They absorb the bureaucratic friction of Pentagon sales, validating prototypes to secure the $100 million industrialization checks from Founders Fund and Lux Capital.

Engineering Procurement Policy From the Inside

This investor network does not passively wait for the Department of Defense to issue favorable solicitations; it actively engineers the political and regulatory environment. By embedding partners in transition teams and funding political allies, the Founders Fund and a16z syndicate writes the rules of the new defense industrial base.

Trae Stephens ran the DoD transition landing team for the first Trump administration and reprised his role in the 2024 transition—directly shaping procurement policy without divesting his Anduril stake. Jacob Helberg, a former Palantir advisor heavily backed by this network, was appointed Under Secretary of State, pushing the "Pax Silica" supply-chain initiative to isolate Chinese technology. In the legislative branch, Peter Thiel's historic $15 million super PAC donation secured a Senate seat for J.D. Vance—a former Mithril Capital principal and Anduril shareholder who now serves as Vice President.

Helberg's Hill and Valley Forum funnels Silicon Valley capital to Capitol Hill lawmakers, while Joe Lonsdale's Cicero Institute crafts state and federal legislation to force commercial off-the-shelf procurement mandates. The message for competitors is clear: technical superiority is secondary. Winning defense contracts at a multibillion-dollar scale requires deploying capital to rewrite the acquisition rulebook from the inside.

94%

The share of deployed defense tech capital captured by late-stage (Series B and beyond) funding rounds by May 2026.

THE 'MISSING MIDDLE'

Hardware startups must cross a $50M to $300M capital chasm to transition from prototyping to scalable industrial manufacturing, necessitating massive venture backing.

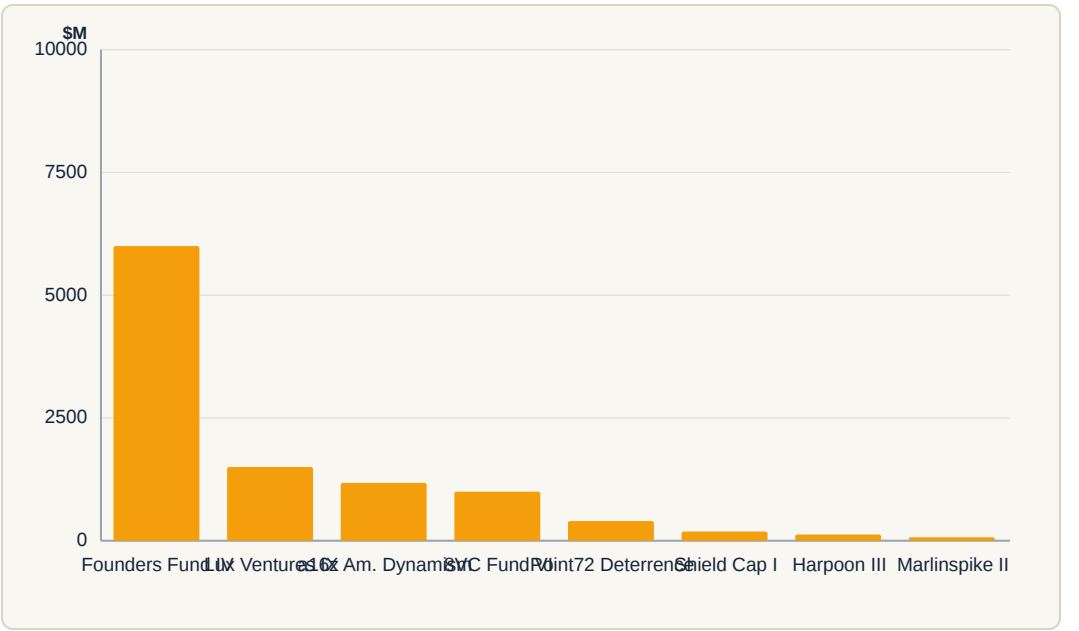
$1B

The unprecedented single check written by Founders Fund into Anduril's 2025 Series G, pushing the company's valuation to $30.5 billion.

AN INTERDEPENDENT ECOSYSTEM.

The investor base has bifurcated into specialist funds identifying early-stage innovations, and mega-funds deploying billions to industrialize them.

A bifurcated market: Generalist mega-funds vs. specialized defense vehicles.



Capital concentration is driven by massive generalist growth funds, while highly networked specialist firms fill the early-stage pipeline.

Leading Defense-Tech Investors by Core Vehicle

VENTURE FIRM	CORE DEFENSE / GROWTH VEHICLE	FUND SIZE	NOTABLE DEFENSE BETS
Founders Fund	Growth IV	$6.0 Billion	Anduril, Hadrian, Saronic
Andreessen Horowitz (a16z)	American Dynamism	$1.176 Billion	Anduril, Shield AI, Skydio
Lux Capital	Lux Ventures IX	$1.5 Billion	Anduril, Applied Intuition, Saildrone
8VC	Fund VI	$998 Million	Palantir, Anduril, Epirus
Point72 Ventures	The Deterrence Fund	$400 Million	Shield AI, Vannevar Labs, CX2
Shield Capital	Fund I	$186 Million	Code Metal, Armada, Elroy Air
Harpoon Ventures	Fund III	$125 Million	Astranis, Merlin Labs, Solugen
Marlinspike	Disruptive Tech Fund II	~$70 Million	Voyager Space, Elroy Air, Chariot

The defense venture ecosystem relies on mega-funds for late-stage industrialization and specialized boutique funds for early-stage bridging.

Trae Stephens

PARTNER, FOUNDERS FUND & EXECUTIVE CHAIRMAN, ANDURIL

A quintessential node bridging capital and policy, Stephens simultaneously manages Founders Fund's massive defense stakes while leading Anduril's board.

Katherine Boyle

GENERAL PARTNER, A16Z

The ideological architect behind 'American Dynamism', Boyle formally aligned Silicon Valley venture capital with U.S. national security interests.

Peter Thiel

FOUNDER, FOUNDERS FUND & PALANTIR

The foundational anchor of the ecosystem, Thiel provided the early capital, strategic direction, and political connectivity that spawned both Palantir and Anduril.

Anduril's hardware systems are the flagship outputs of the highly concentrated Founders Fund and Palantir-alumni network.

A highly capitalized hardware neoprime, Saronic represents the co-investment convergence of Founders Fund, a16z, and 8VC.

CHAPTER 6

6

Incumbent Prime Responses: VC Arms and Teaming

The primes aren't asleep — they're teaming, investing, and absorbing the disruptors on their own terms.

CHAPTER 6 ANALYSIS

Incumbent Prime Responses: VC Arms and Teaming

Legacy prime contractors are neutralizing the threat of venture-backed disruptors by weaponizing strategic teaming agreements and multi-million-dollar corporate venture capital to absorb emerging technologies as integrated subcomponents.

The Merchant Autonomy Compromise

Defense procurement forces a hard compromise. Software startups build superior artificial intelligence, but legacy primes own the manufacturing scale and cleared facilities required to field hardware. Rather than die in the "Valley of Death" waiting for independent program records, survivalist founders adopt the merchant autonomy model. They act as the software brain, slotting their tech directly into the established platforms of the legacy industrial base.

Boeing’s 2023 memorandum of understanding with Shield AI exemplifies this capitulation to scale. Instead of wasting capital developing a proprietary AI pilot from scratch, Boeing’s Phantom Works division opted to integrate Shield AI’s Hivemind into its current and future fleets. Shield AI secures an immediate pathway to thousands of existing Department of Defense aircraft, while Boeing prevents its aircraft from aging out.

General Dynamics Land Systems executed a similar maneuver for ground forces. Facing urgent demands for counter-drone swarming capabilities, GDLS bypassed internal R&D and signed a teaming agreement with Epirus in October 2021. By mating Epirus’s Leonidas high-power microwave arrays to the Stryker combat vehicle—and expanding the partnership in 2022 to mount the system on the Tracked Robot 10-ton (TRX) unmanned vehicle—GDLS rapidly hybridized its legacy steel with venture-backed directed energy. Teaming allows the prime to claim the innovation, and the startup to claim the revenue.

The CCA Blueprint for Direct Combat and Prime Retaliation

When startups bypass teaming to compete directly for primary platform awards, the capital requirements and manufacturing hurdles are staggering. The Air Force's Collaborative Combat Aircraft (CCA) program provides the test case. In a sharp rebuke of the old guard, the Air Force excluded Boeing, Lockheed Martin, and Northrop Grumman from the January 2024 CCA Increment 1 downselect. The service awarded the prototype build phase to General Atomics and Anduril. A highly capitalized neo-prime can unseat legacy manufacturers.

Anduril's ability to compete head-to-head relied entirely on buying a hardware company. By acquiring Blue Force Technologies in 2023, Anduril secured the mature "Fury" airframe required to carry its Lattice operating system. This deal culminated in the October 2025 autonomous flight of the YFQ-44A prototype. But winning a prototype downselect is not winning a production run. The Air Force explicitly stated the unselected primes remain in the 20-vendor pool and will compete for the fiscal 2026 production decision.

Legacy primes weaponize their capital reserves. Following its exclusion from Increment 1, Northrop Grumman deployed its multibillion-dollar independent research and development (IRAD) budget to continue its own CCA program. By December 2025, Northrop forced its way back into the procurement, securing the Air Force designation YFQ-48A for its self-funded "Talon Blue" concept. Primes absorb initial losses, outspend challengers over long acquisition cycles, and grind their way back into competitive procurements.

Corporate Venture Capital as a Strategic Call Option

Primes no longer rely solely on mergers and acquisitions to absorb startup intellectual property. Corporate venture capital (CVC) has transitioned from a vanity project to a core procurement strategy. Prime CVC arms use minority equity stakes as real options to de-risk acquisitions, secure exclusive licensing, and lock up critical supply chain nodes before a startup scales out of reach.

Lockheed Martin Ventures (LMV) sets the standard for this aggressive posture, doubling its capitalization twice to hit a $1 billion target. LMV joined HawkEye 360's $68 million Series D-1 round in 2023. The capital was secondary to a strategic cooperative agreement integrating HawkEye's space-based radio frequency intelligence directly into Lockheed’s tactical infrastructure. LMV applies this same model to hardware, investing $25 million in Fortem Technologies in April 2026 to embed Fortem’s DroneHunter interceptors directly into Lockheed’s Sanctum counter-UAS mission management software.

RTX Ventures applies identical tactics to the propulsion and hypersonic sectors. Its stake in Hermeus's $100 million Series B round in 2022 guaranteed a direct payoff: Hermeus selected the Pratt & Whitney F100 turbofan (an RTX product) to power its Darkhorse aircraft. Primes use minority stakes to dictate product roadmaps, ensuring venture-funded engineering hours directly serve their broader platform monopolies.

Structural Arbitrage in Defense Venture Management

Internal corporate venture arms suffocate under prime bureaucracy. Legacy players are structurally divorcing their capital from their corporate hierarchy. In August 2021, Boeing executed a radical spin-out of its HorizonX venture portfolio. Transitioning the team and 40 startups to AE Industrial Partners, Boeing acted as the $50 million anchor limited partner for a new $250 million fund. The move offloaded day-to-day fund management while retaining early visibility and IP access to firms like SparkCognition.

Operating under intense sovereign technology mandates, European primes push this externalized model further. In 2024, BAE Systems committed €50 million across two specialized defense funds—deploying €25 million to Lakestar and €25 million to Expeditions. This limited partner strategy grants BAE board-level access across the European deep-tech base without the administrative burden of running direct due diligence on hundreds of seed-stage companies.

When a capability is too vital to outsource to fund managers, primes strike directly and demand hard physical integration. With its 2025 $50 million investment in Firefly Aerospace, Northrop Grumman did not just buy equity; it co-developed the "Eclipse" medium launch vehicle. By fusing Northrop’s flight-proven Antares avionics with Firefly’s Miranda engines, the prime physically bounds the IP of a startup to its own mass manufacturing base. This hybrid approach dictates the new standard: primes will fund emerging entrants, but they will never let them dictate the final architecture.

THE MERCHANT AUTONOMY MODEL

Rather than attempting to construct full multi-billion dollar platform hardware, software-focused startups are increasingly opting to act as the "brain" layer, embedding their AI pilots and operating systems directly into aircraft and vehicles built by legacy primes.

BYPASSING THE VALLEY OF DEATH

Strategic teaming acts as a vital survival mechanism for defense startups. Partnering with a prime bypasses the crippling delays of military procurement by immediately injecting the startup's technology into massive, pre-cleared programs of record.

$1B

Lockheed Martin Ventures expanded its fund capitalization target to $1 billion, signaling a permanent institutional shift toward relying on venture-backed startups for defense innovation.

Prime-Startup Teaming: Key Deals and Integrations

PRIME CONTRACTOR	STARTUP PARTNER	PROGRAM / PURPOSE	YEAR
Boeing	Shield AI	Integrating "Hivemind" AI pilot into Boeing defense platforms	2023
General Dynamics	Epirus	Mounting "Leonidas" HPM on Stryker & TRX robotic vehicles	2021-2025
Lockheed Martin	HavocAI	Co-developing Medium Unmanned Surface Vessels (mUSVs)	2025
Lockheed Martin	Fortem Technologies	Integrating DroneHunter into Sanctum C-UAS ecosystem	2026
Northrop Grumman	Luminary Cloud	Using Physics AI to accelerate spacecraft design	2025
Northrop Grumman	Apex Space	Partnering for 2027 Space-Based Interceptor (SBI) demo	2026
Northrop Grumman	Picogrid	Integrating "Legion" into AiON C2 architecture	2025

Select partnerships where legacy primes utilized startup technologies to bypass R&D cycles and integrate advanced capabilities. Source: Company Announcements.

Marquee Defense Prime CVC Investments

CVC ARM	PORTFOLIO COMPANY	SECTOR FOCUS	YEAR
Lockheed Martin Ventures	HawkEye 360	Space-based RF data & geospatial intelligence	2023
RTX Ventures	Hermeus	Hypersonic aircraft for defense/commercial	2022
RTX Ventures	Neural Propulsion Systems	Digital imaging & advanced radar technology	2023
Boeing HorizonX	SparkCognition	AI and machine learning analytics	2017
Northrop Grumman Ventures	Firefly Aerospace	Medium launch vehicles & lunar landers	2025
BAE Systems	Oxford Dynamics	Agentic AI orchestration & embodied autonomy	2025

Notable minority equity investments executed by the venture arms of major A&D primes to secure intellectual property rights and strategic access.

Brian Schettler

PARTNER, AE INDUSTRIAL PARTNERS

Schettler led Boeing's HorizonX venture arm through its unique 2021 spin-out to AE Industrial Partners, creating a highly agile, hybridized defense CVC model.

Palmer Luckey

FOUNDER, ANDURIL INDUSTRIES

Luckey's "neo-prime" successfully eliminated legacy defense giants like Boeing and Lockheed Martin to secure a spot in the historic CCA Increment 1 prototype build.

General Dynamics successfully integrated Epirus's Leonidas high-power microwave onto the Stryker combat vehicle to defeat drone swarms.

Acquired by Anduril in 2023 and heavily modified, the YFQ-44A Fury autonomous aircraft beat out legacy primes in the Air

Force's Collaborative Combat Aircraft program.

CHAPTER 7

7

The M&A Pipeline: Sub-Tier Acquisitions

Below the headline unicorns, a brisk market in sub-$250M IP and manufacturing is the real exit engine.

CHAPTER 7 ANALYSIS

The M&A Pipeline: Sub-Tier Acquisitions

A robust pipeline of sub-$250M acquisitions serves as the primary exit mechanism for venture-backed defense startups, driven by neo-primes absorbing hardware platforms and legacy contractors bolting on mature software capabilities.

The $146M Median Valuation Cements the Feeder Market

Exit liquidity in defense technology takes the form of upstream acquisitions. With 2025 defense tech venture exits totaling $54.4 billion, public markets remain inaccessible due to erratic contracting timelines and strict profitability demands. The real liquidity engine is targeted sub-$250 million bolt-on acquisitions. PitchBook data shows the 2025 median post-money valuation for defense tech startups stabilized at $146 million, categorizing 85% of defense tech startups as feeder targets for larger primes seeking discrete capabilities rather than sprawling mega-mergers.

Valuation multiple mismatches dictate this tier. Traditional defense hardware businesses trade on conservative cash-flow metrics, typically commanding 12.1x to 14.7x EV/EBITDA. Venture-backed founders arrive at the negotiating table expecting software multiples. Broad defense technology EV/Revenue multiples sit between 1.9x and 2.9x, while space and C5ISR segments stretch to 4.0x. AI-centric autonomous outliers skew the upper bounds. High-growth firms command funding rounds up to 118x EV/Revenue.

Bridging this gap requires acquirers willing to pay a premium for speed and specialized talent. Neo-primes pay the spread. Operating on proprietary software business models rather than margin-capped cost-plus contracts, companies like Anduril and Shield AI willingly pay technology multiples for sub-$250 million startups to buy operational systems immediately.

Neo-Primes Purchase Hardware to Host Proprietary Software

Heavily capitalized neo-primes use their multibillion-dollar venture valuations to buy niche, battle-tested hardware to serve as physical vessels for their proprietary AI operating systems. Bypassing decades of mechanical engineering and prototyping, they buy physical platforms and instantly inject them with algorithmic autonomy.

Anduril Industries wrote the blueprint for this hardware assimilation. To push its Lattice OS across air, land, and sea domains, Anduril acquired sub-$250 million hardware developers. In 2022, it bought Dive Technologies to secure the DIVE-LD autonomous underwater vehicle and its large-format additive manufacturing (LFAM) 3D-printing IP. In 2023, Anduril acquired Blue Force Technologies, absorbing the Fury autonomous fighter jet, a 90-person aerospace engineering team, and a composite manufacturing facility in North Carolina.

Shield AI did the same to deploy its Hivemind AI pilot. Rather than spending a decade designing an airframe, Shield AI acquired Martin UAV in 2021 to secure the V-BAT vertical takeoff and landing drone. Just days earlier, it bought Heron Systems to capture the reinforcement learning algorithms that defeated a human F-16 pilot in DARPA's AlphaDogfight Trials. For neo-primes, sub-tier acquisitions instantly turn them into vertically integrated defense manufacturers capable of delivering mass.

Mid-Tier Contractors Bolt On Software to Modernize Legacy Iron

Legacy and mid-tier defense contractors execute the inverse of the neo-prime playbook. They own massive hardware platforms, cleared infrastructure, and entrenched program records. They use M&A to rapidly acquire the software engineering and artificial intelligence talent they cannot organically recruit.

AeroVironment proves the value of the software bolt-on. Headlines focused on its $4.1 billion mega-merger with BlueHalo in 2025, but AeroVironment's real modularity advantage stems from its $120 million acquisition of Tomahawk Robotics in 2023. By acquiring Tomahawk's Kinesis Ecosystem AI software, AeroVironment secured a universal controller capable of linking diverse drone platforms into a single interface. Earlier, the company expanded its hardware by acquiring Arcturus UAV for $405 million at an 11x EBITDA multiple to capture Group 2 and 3 drone contracts.

Traditional ground vehicle manufacturers run the same playbook. Oshkosh Defense modernized its legacy tactical vehicle portfolio by acquiring Pratt Miller for $115 million in 2021. Oshkosh wanted the autonomous ground navigation IP and electrification engineering talent required to compete for the Army's robotic combat vehicle programs. Similarly, South Korea's LIG Nex1 bought a 60% stake in Philadelphia-based Ghost Robotics for $240 million in 2024, assigning the company a $400 million enterprise valuation to capture quadrupedal robotics IP.

Architecting the Built-to-Be-Acquired Startup

The consolidation of the defense industrial base dictates a brutal reality for early-stage founders: architect your product for integration, or face the procurement Valley of Death alone. Building a standalone defense behemoth from scratch has only happened twice in two decades: Palantir and Anduril. Founders must design modular tech an upstream acquirer can actually integrate.

Founders must adopt open-architecture standards and APIs from day one. A computer vision algorithm, edge processing module, or optical payload must integrate with Anduril’s Lattice, Shield AI's Hivemind, or a legacy prime's existing combat system. Startups that position themselves as modular subsystems become highly attractive targets for strategics unwilling to spend five years developing a capability in-house.

Corporate venture capital accelerates this pipeline. PitchBook projects defense corporate venture arms will participate in 25% of startup funding by 2025, up from 8% in 2019. These equity investments serve as direct previews for future M&A. The ultimate financial return for a founder depends entirely on getting acquired: positioning the company as an indispensable software upgrade for a legacy prime, or an essential hardware node for a neo-prime willing to pay SaaS multiples.

$146M

The median post-money valuation for venture-backed defense startups in 2025, placing the vast majority of the sector precisely within the sub-$250M M&A feeder tier.

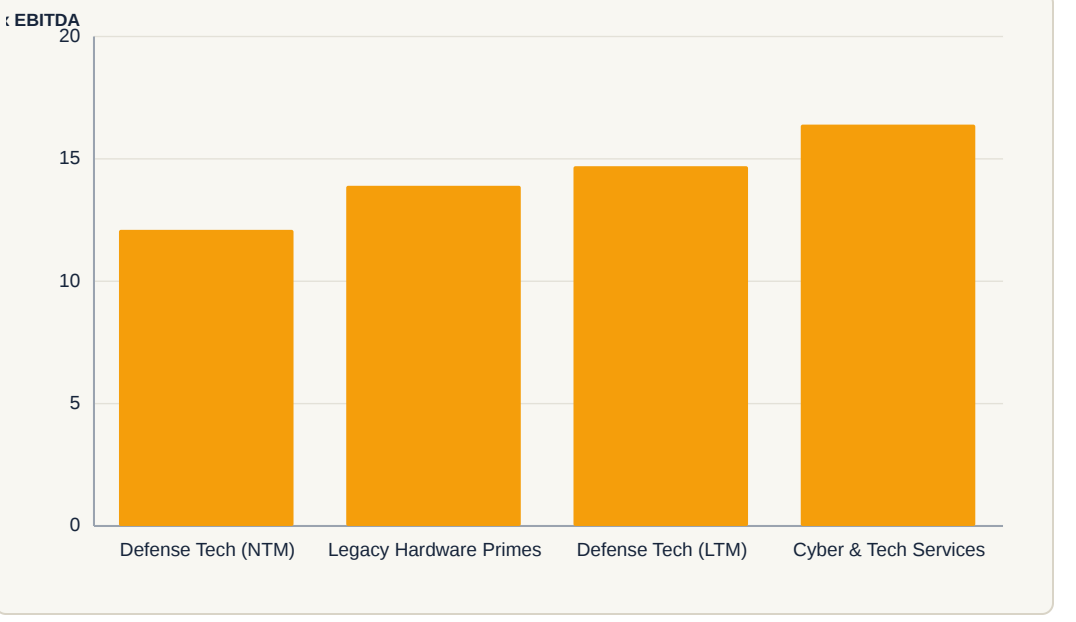
THE M&A THESIS

The thesis is not to buy fixer-uppers but rather to acquire teams and technologies that have the ability to do additional great things for the company and the country. — Chris Brose, Chief Strategy Officer, Anduril

BUILT TO BE ACQUIRED

With independent defense IPOs remaining historically rare due to the monopsonistic market, savvy founders are architecting their software with open APIs explicitly to be bolted onto neo-prime platforms.

Software and cyber command higher defense multiples.



Traditional hardware primes trade at conservative valuation multiples compared to technology-driven cybersecurity and government services firms.

Notable Defense-Tech M&A Feeder Exits

TARGET COMPANY	ACQUIRER	YEAR	DISCLOSED PRICE	PRIMARY ASSET ACQUIRED
Pratt Miller	Oshkosh Defense	2021	$115M	Autonomous ground vehicle IP
Arcturus UAV	AeroVironment	2021	$405M	JUMP-20 VTOL airframes
Heron Systems	Shield AI	2021	—	AlphaDogfight AI algorithms
Dive Technologies	Anduril	2022	—	DIVE-LD AUV & LFAM printing
Blue Force Technologies	Anduril	2023	—	Fury jet drone & composites
Tomahawk Robotics	AeroVironment	2023	$120M	Kinesis universal AI controller
Ghost Robotics	LIG Nex1	2024	$400M (Valuation)	Vision 60 quadrupedal UGV
Kudu Dynamics	Leidos	2025	$300M	AI-enabled offensive cyber
SciTec	Firefly Aerospace	2025	$855M	Missile tracking software

A snapshot of the sub-$250M tier (and adjacent mid-tier) acquisitions that neo-primes and legacy integrators use to bolt on capabilities. Source: PitchBook, Company Announcements.

Chris Brose

CHIEF STRATEGY OFFICER, ANDURIL

Articulated the neo-prime M&A thesis of buying elite teams and hardware to host proprietary software, driving Anduril's rapid expansion into sea and air domains.

Jason Kim

CEO, FIREFLY AEROSPACE

Executed the $855M acquisition of SciTec to bolt data processing software onto Firefly's rockets, recognizing the need for integrated analytics to win massive defense contracts.

Acquired by Anduril in 2023, the Fury jet instantly accelerated the neo-prime's entry into the Pentagon's Collaborative Combat Aircraft program.

Shield AI acquired Martin UAV to secure a runway-independent VTOL airframe capable of hosting its Hivemind AI pilot for expeditionary swarms.

South Korean giant LIG Nex1 bought a controlling stake in Ghost Robotics at a $400M valuation to dominate the automated perimeter defense market.

CHAPTER 8

8

Exit Strategies and Long-Term Financial Metrics

Late-stage money needs liquidity, the mega-cap M&A door is jammed shut, and the IPO window is judged on backlog conversion.

CHAPTER 8

ANALYSIS

Exit Strategies and Long-Term Financial Metrics

Locked out of prime M&A by antitrust regulators and irreconcilable valuation gaps, late-stage defense tech companies must pursue IPOs measured against Palantir’s dual-use margin profile and rigorous backlog conversion metrics.

Crossover Capital Demands Unprecedented Liquidity

Private market exits have stalled, trapping billions in crossover capital inside defense technology startups. In 2024, venture-backed exit activity in the United States crashed by 82.2% from its 2021 peak. Distributions to limited partners collapsed to a record low of 11% of net asset value. Non-traditional venture investors like Tiger Global, Advent International, and JPMorgan Chase flooded the defense sector with late-stage capital, betting on rapid public offerings. Advent and JPMorgan's co-leadership of Shield AI's $2 billion Series G in March 2026 illustrates the massive checks written by funds operating on strict, short-term return mandates.

With IPOs delayed, general partners rely on synthetic liquidity to placate investors. Secondary markets, continuation funds, and NAV loans absorbed $360 billion in 2024. LPs offloaded $87 billion in fund stakes the year prior. These mechanisms buy time but fail to resolve the structural illiquidity of a $5.8 trillion global unicorn backlog. Founders face compounding pressure to force a liquidity event, yet aggressive FTC antitrust enforcement has blocked defense primes from acquiring them.

Antitrust Precedent and Valuation Chasms Freeze Mega-Cap M&A

The traditional prime contractor buyout is permanently closed for late-stage defense unicorns. The Federal Trade Commission's unanimous 2022 block of Lockheed Martin's $4.4 billion acquisition of Aerojet Rocketdyne established an impenetrable regulatory ceiling. Antitrust authorities view the aerospace and defense sector as maximally consolidated. Any acquisition of a startup valued over $1 billion triggers grueling vertical foreclosure scrutiny and Federal Acquisition Regulation novation risk. Primes restrict their M&A activity to sub-$111 million bolt-ons that avoid Hart-Scott-Rodino reporting thresholds, acquiring drone vision startups like Edgybees solely to satisfy DoD offset mandates.

Even absent FTC intervention, a mathematical chasm prevents prime-led buyouts. Public markets anchor legacy primes like Lockheed Martin and Northrop Grumman at 1.6x to 2.7x annual revenue. Conversely, private markets price defense startups on terminal monopoly expectations. Anduril's $61 billion Series H in mid-2026 valued the company at 27.7x its $2.2 billion 2025 revenue. Saronic’s $1.75 billion Series D priced the maritime drone maker at $9.25 billion—a 46.25x multiple on actual 2025 revenue. Legacy primes cannot legally acquire these challengers, and their boards refuse the severe stock dilution required to pay tech-style multiples for hardware-intensive defense contractors.

Palantir Establishes the Dual-Use Margin Mandate

Blocked from M&A, defense unicorns must pursue an IPO. Institutional investors measure every prospective defense tech listing against Palantir Technologies. Trading at nearly 90 times its $4.475 billion 2025 sales and commanding a $370 billion market capitalization, Palantir solved the defense multiples trap. It proved a contractor can escape the 10% gross margins of cost-plus hardware programs and trade like an enterprise software monopoly.

Palantir's valuation rests entirely on its commercial-to-defense revenue split and corresponding margins. In 2025, Palantir achieved near-parity, with government contracts driving 53.68% of revenue and commercial enterprise comprising 46.32%. Profit margins across both segments converged at roughly 65%. Pre-IPO companies must match this revenue split. Hardware-centric startups must prove their physical platforms exist to sell high-margin software licenses. Shield AI is aggressively expanding its Hivemind software from 30% of total revenue to a targeted 50% by 2028 to justify its $12.7 billion price tag.

Backlog Conversion Determines Public Market Survival

Private fundraising narratives rely on government contract ceiling values, but public markets aggressively discount unfunded backlog. Institutional buyers judge defense IPOs strictly on the velocity and predictability of backlog conversion. Accounting standards like ASC 606 and IFRS 15 enforce milestone-based revenue recognition. This turns defense procurement into an irregular cash flow stream. Shares of Swedish defense software firm 4C Group plunged in 2025 despite a 50% backlog increase to SEK 332 million. Recognized revenue grew only 3%. Startups must demonstrate rapid backlog conversion to avoid violent post-listing volatility.

Appetite for pure-play defense exposure runs high provided the commercial model holds. Ukrainian drone software company Swarmer debuted on the NASDAQ in March 2026 and raised $15 million. The company recorded $309,920 in 2025 sales against an $8.53 million net loss. The stock still surged 520% on day one to a $400 million market capitalization. Investors bought the $16.3 million software license backlog and the combat validation of the operating system.

Late-stage defense startups cannot rely on retail fervor to absorb billions in capital expenditure. Anduril recorded 115% year-over-year revenue growth in 2025 but faces a projected $1.2 billion operating loss in 2026 as it funds the 5-million-square-foot Arsenal-1 manufacturing facility. Anduril secures $20 billion Army enterprise vehicles. However, an IPO requires demonstrating that 45% hardware gross margins can fund mass production while driving positive cash flow. Until they transition from cash-burning disruptors to free-cash-flow generators, the largest defense startups will delay their public market debuts.

$4.4B

The value of Lockheed Martin's attempted acquisition of Aerojet Rocketdyne. The FTC's successful block of this deal in 2022 firmly established an antitrust 'ice age' for transformational defense M&A.

11%

Distributions to limited partners as a percentage of net asset value hit a record low in 2024. Crossover investors are facing intense pressure to force liquidity events for aging unicorns.

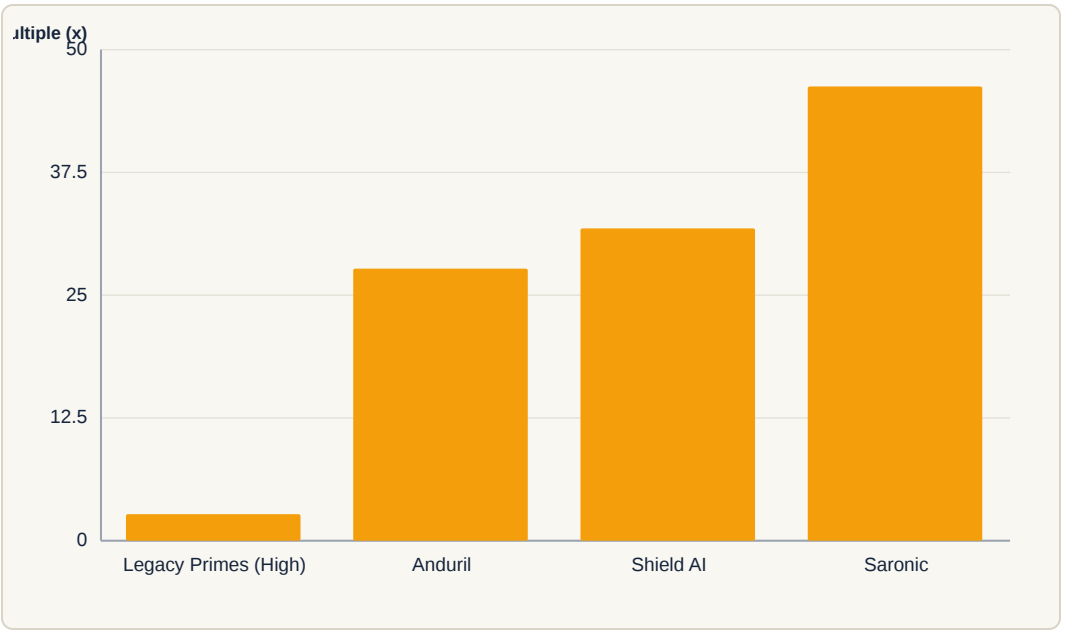
THE BACKLOG CONVERSION HURDLE

Public markets punish lumpy hardware execution. To survive an IPO, defense unicorns must prove they can consistently convert massive, multi-billion-dollar government backlogs into recognized revenue.

520%

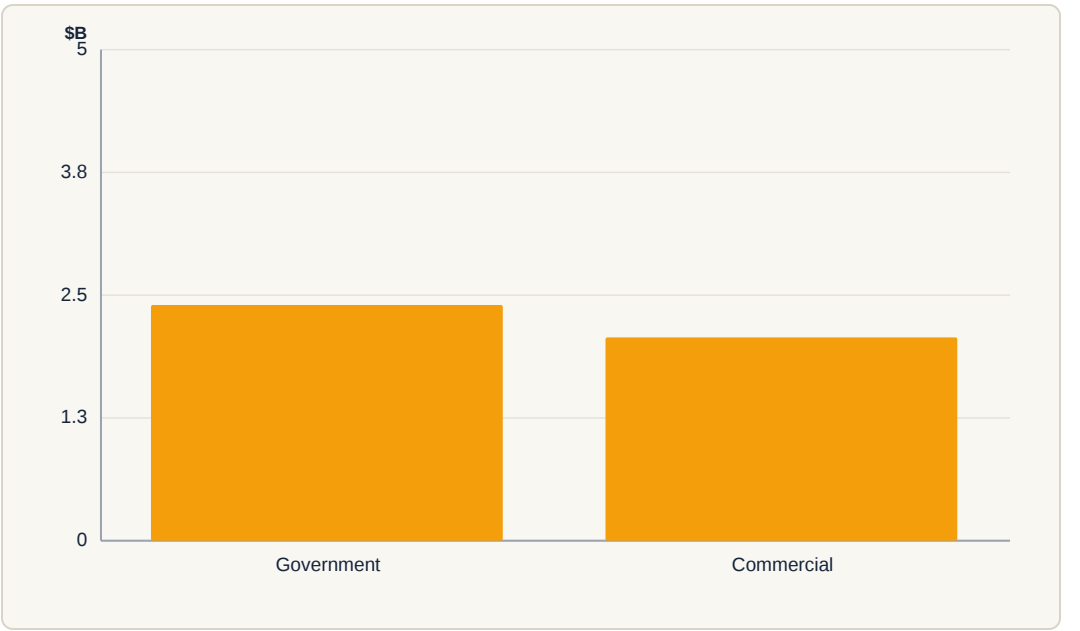
The first-day surge of Swarmer's 2026 IPO. The market valued the drone software company at nearly $400 million despite generating just $309k in 2025 sales, betting purely on its $16.3M backlog and combat provenance.

The M&A Valuation Gap: Legacy Primes vs. Defense Tech Startups



The delta between public defense market baselines and venture-backed tech valuations has created a mathematical chasm, functionally stalling traditional M&A exits.

The Palantir Benchmark: 2025 Global Revenue Split



Palantir's ~90x sales valuation is anchored by its ability to achieve near-parity between stable government contracts and high-growth commercial enterprise sales.

The Pre-IPO Defense Tech Unicorns

COMPANY	LATEST VALUATION	EST. REVENUE	IMPLIED MULTIPLE
Anduril Industries	$61.0B (Series H, 2026)	~$2.2B (2025)	~27.7x
Shield AI	$12.7B (Series G, 2026)	~$300M (2025)	>31.8x
Saronic Technologies	$9.25B (Series D, 2026)	~$200M (2025)	~46.2x

Mega-cap defense startups have achieved tech-style valuations that vastly exceed the 1.6x–2.7x revenue multiples typical of legacy prime contractors. Sources: PitchBook, Company Disclosures.

Palmer Luckey

FOUNDER, ANDURIL INDUSTRIES

Luckey has established Anduril as the preeminent defense tech disruptor, explicitly signaling a future IPO while managing the immense capital requirements of the Arsenal-1 hyperscale manufacturing facility.

To achieve tech multiples at IPO, Shield AI is pushing to expand its software revenue mix to 50% by 2028, embedding high-margin platforms like Hivemind within hardware like the V-BAT.

Saronic's compressed ascent to a $9.25 billion valuation on projected hardware scaling exemplifies the steep venture premiums currently pricing legacy primes out of acquisitions.