

THE NEW DEFENSE ECONOMY

Why defense technology is, for the first time, a
venture-backable asset class.

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Introduction

This report makes a single argument: defense technology is undergoing the most significant structural shift in 60 years, and now for the first time it's a venture-backable asset class.

For six decades, the US Department of Defense was the primary engine of global technology innovation. Defense Advanced Research Projects Agency (DARPA) produced the internet, GPS, drone technology, touchscreens, and AI. That relationship has reversed. Today, Big Tech's five largest companies spend \$229 billion annually on R&D, twelve times the entire US defense innovation budget. The technologies that proved decisive in the conflicts of the past five years were not purpose-built military hardware. They were commercial drones equipped with AI software, satellite internet built for consumers, and data platforms built for enterprise. When jamming severed the operator's control link, autonomous terminal guidance carried the drone through its final approach, and strike completion rose several-fold on unchanged airframes. The hardware did not change. The software did. Defense has become, at its core, a software problem.

This shift has also broken the economics of conventional defense. A \$20,000 one-way attack drone forces a \$4,000,000 interceptor missile response. Repeated across an engagement, that exchange ratio does not hold for any defender. The binding constraint is production, not capability: in 2025 Lockheed Martin produced roughly 600 interceptors across the full year, while one-way attack drones were coming off production lines at roughly 2,000 per month. Closing a gap of that order calls for software-driven autonomous systems, developed and updated at commercial speed, which means the companies that matter most in defense today look exactly like VC-backable software startups.

Every major defense market has already recognized this. The United States grew Other Transaction Authority OTA (the legal fast lane for software-first companies into the military supply chain) to \$21 billion annually and launched Replicator initiative, a formal commitment to attritable autonomous systems. NATO built the world's first sovereign defense technology VC fund. Turkey grew its defense exports from \$340 million to \$10 billion in twenty years by mandating localization and software-driven startups were what made it possible. The "neo-prime" defense tech startups this shift produced have returned 10-600x to seed investors.

Saudi Arabia enters this moment with conditions no prior defense tech market has had simultaneously. A \$78 billion defense budget, the fifth largest in the world and the first in the Arab world, is paired with a 50% localization mandate and a current rate of ~25%. The gap is approximately \$20 billion in annual spending that must shift to domestic suppliers by 2030. GAMI has formally published 74 supply chain gaps, 30 classified as high-priority and together accounting for 80% of projected future spending. Categories such as Advanced Electronics and System Integration are explicitly listed. SAMI Autonomous Company launched in February 2026. Dedicated defense technology capital in the region is nascent

rather than absent, but against a domestic localization gap of roughly \$20 billion a year the vehicles that exist are a signal, not coverage.

This is precisely the condition that preceded the US defense tech inflection. In 2015, Anduril had not been founded, Palantir was widely considered uninvestable, and OTA was a \$1.3 billion niche mechanism. Saudi Arabia in 2026 is structurally equivalent, with one advantage no prior market had: the government has pre-published the demand. The budget is committed, the institutional infrastructure is live, and the companies that will fill the gap do not yet exist. This report maps the shift, documents the global response, and makes the case for why that window is open right now.

1 The Inversion

"Defense built the modern tech. Now modern tech is rebuilding defense."

For 60 years, defense R&D created the technologies that shaped modern civilization. That relationship has reversed.

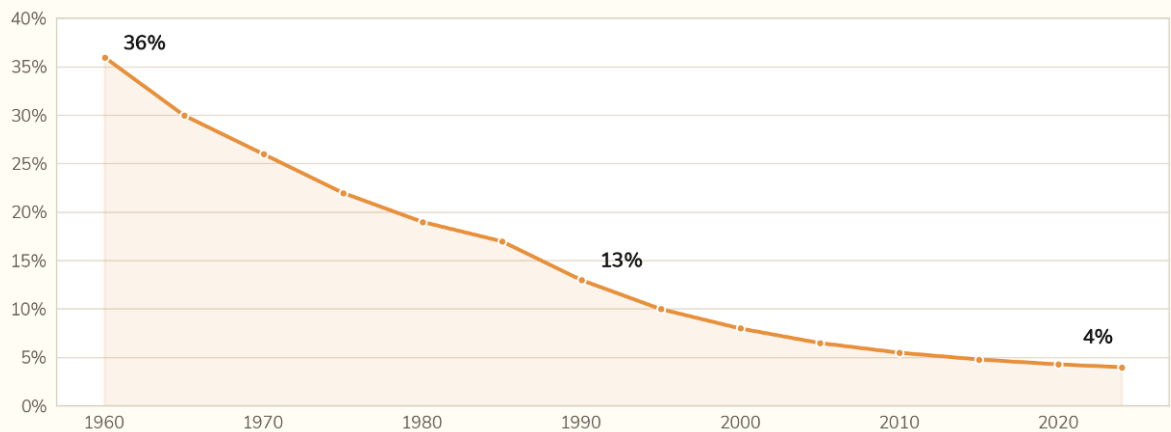
The Origin Story

Technology	Internet	GPS	Drones	Touchscreen	AI & Computer Vision	Voice Recognition
Born in	ARPANET · US DoD · 1969	US Military · 1973	Military UAVs · 1990s	DARPA-funded research · 1970s	DARPA programs · 2000s	DARPA / SRI International
Civilian Impact	Global economic infrastructure every website, app, and digital service runs on it	Ride-hailing, logistics, mapping, autonomous vehicles, precision agriculture	Delivery, agriculture, infrastructure inspection, filmmaking	Interface of every smartphone, tablet, kiosk, and ATM in existence	Face ID, self-driving cars, medical imaging, industrial automation	Apple Siri, Amazon Alexa, Google Assistant. Standard in every consumer device
Scale Today	\$30T+ annual economic value	\$1.4T+ annual GDP contribution	\$55B commercial market by 2030	4B+ devices in use today	\$1.8T market by 2030	4B+ active devices has it built-in

The Inversion in Data

In 1960, U.S. defense drove ~36% of global R&D. Today it's ~4% not because defense spends less; it spends more than ever. But because the commercial tech sector now spends dramatically more.

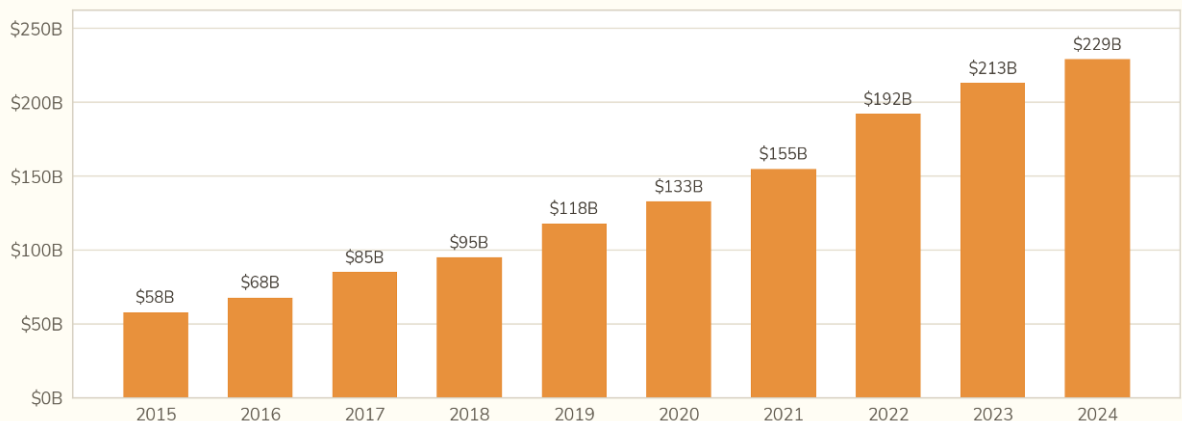
US Department of Defense (DoD) Share of Global R&D Spending¹



¹ Source: U.S. DoD, FY2025 Defense Budget Release (March 11, 2024).

If defense is no longer the primary source of R&D, where did the money go? The answer is the commercial technology sector. The combined R&D budgets of just five companies now dwarf what the U.S. spends on early-stage defense innovation.

Big Tech 5 Combined R&D Spend (\$) (Amazon, Alphabet, Meta, Apple, Microsoft)²



In 2024, the Big Tech 5 spent \$229B on R&D roughly 12× the U.S. defense innovation budget of \$19B. The frontier technologies that matter most to modern defense (AI, autonomy, computer vision, advanced communications) are now being developed first in the commercial sector, funded by private capital, and adopted by militaries afterward

The shift in Innovation Spending

Metric	1960	2024
DoD share of global R&D	~36%	~4%
US defense innovation budget (science, technology, and AI)	Dominant	\$19B out of \$143B total R&D budget
Big Tech 5 combined R&D spend	Not applicable	\$229B (2024)
Primary innovation engine	Defense Advanced Research Projects Agency (DARPA)	Commercial tech sector (startups + Big Tech)
Ratio: commercial R&D vs defense innovation spend	Defense dominant	12-to-1 in favor of commercial

Key Statistics

36% DoD share of global R&D · 1960	4% DoD share of global R&D · 2024	\$229B Big Tech 5 R&D spend · 2024	\$19B US defense innovation budget 2024	12× Commercial R&D outspends defense innovation
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2 Source: Trendline HQ — Amazon, Alphabet, Meta, Apple, Microsoft combined R&D spend,

The Inversion in Action

Defense is no longer waiting for the Defense Advanced Research Projects Agency (DARPA). It is adopting what the market already built.

4 examples where commercial technology became the military's most critical asset.

			  
Starlink (SpaceX) Commercial broadband internet · 2019	Nvidia GPUs Video gaming hardware · 2010s	DJI Drones Consumer aerial photography · 2006	LLM AI models Consumer/enterprise AI tools · 2020s
Built for commercial internet. Now the backbone of battlefield communications.	Nvidia GPUs designed for gaming. Now powering missile guidance, drone AI, and satellite imaging.	Built for photography. Now the most widely used battlefield reconnaissance tool in active conflicts.	Built for Intelligence analysis, image recognition, translation. Now its Deployed in defense intelligence workflows at fraction of custom-build cost

2 The Old Paradigm Is Breaking

The era of the exquisite, expensive, singular platform is ending. What replaces it is mass, software, and autonomy.³

\$2T F-35 program total lifetime cost (acquisition + sustainment)	\$400 Cost of a drone attacking a \$4.5m tank	70% Cut in Australia's infantry fighting vehicle order (450 → 129)	10,000 Drones deployed per month in 2023 mostly commercially sourced
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The Cost-Effectiveness Collapse of Exquisite Platforms

The economics of conventional platforms have become unsustainable. What was once a premium for superior capability is now an asymmetric vulnerability.

Exquisite Platform		Attributable System
F-35A Fighter Jet		FPV Drone (EU-spec)
\$82M Unit flyaway cost		\$400 Unit cost including warhead
\$33,000–\$42,000 per flight hour		Zero flight hour cost: no pilot, no support crew
\$6.7M per aircraft per year to operate	VS	Zero sustainment tail, designed to be expended
Produced at 13/month in manufacturing facilities		Produced at 50,000/month in workshops
Software update cycle: 8 -10 years per major update		Software update cycle: 3–4 weeks (EU standard)
63% of lifecycle cost is sustainment		\$1,300 expected cost per armored vehicle interaction
Fleet Mission-Capable Rate*: Fell from 67% (2021) to 44% (2025).		Defeating \$4.5M T-90M tanks at scale

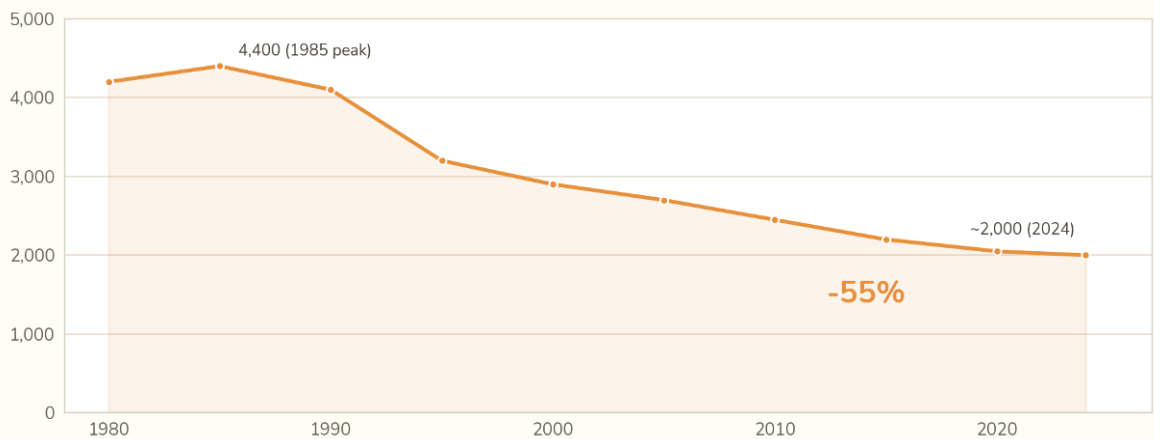
*Mission-Capable (MC) Rate is a standardized military metric that measures the health and readiness of an aircraft fleet.

Same Budget, Fewer Platforms, The Unit Count Collapse

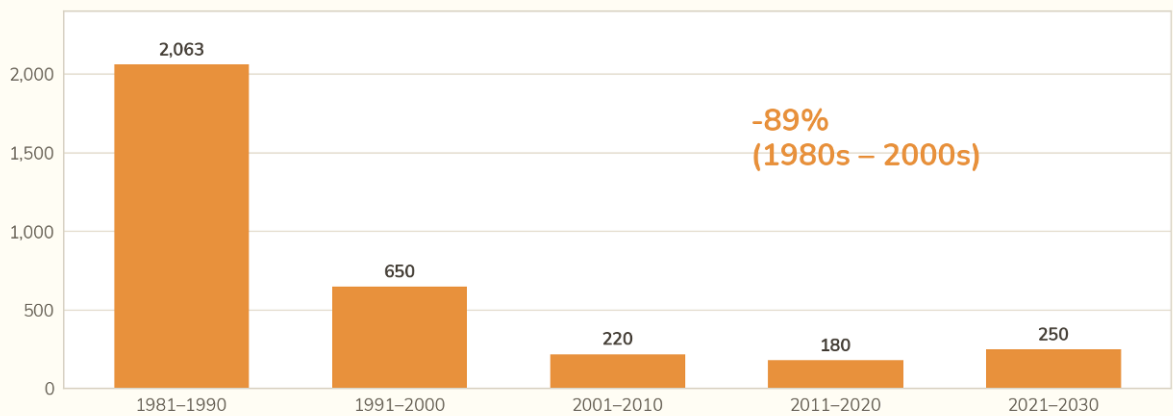
Defense budgets have grown. But the number of traditional platforms those budgets buy has collapsed because each platform costs more, takes longer to build, and sustains for less. Meanwhile, defense AI and autonomy investment has grown 19× in seven years. The shift is structural, not cyclical.

3 Sources: US GAO (GAO-24-106703); *Live in the Future / Oryx OSINT*; Australian Defence Strategic Review 2023; US Congressional Research Service (IF12611)

USAF Fighter & Attack Aircraft Fleet (Active Inventory)⁴



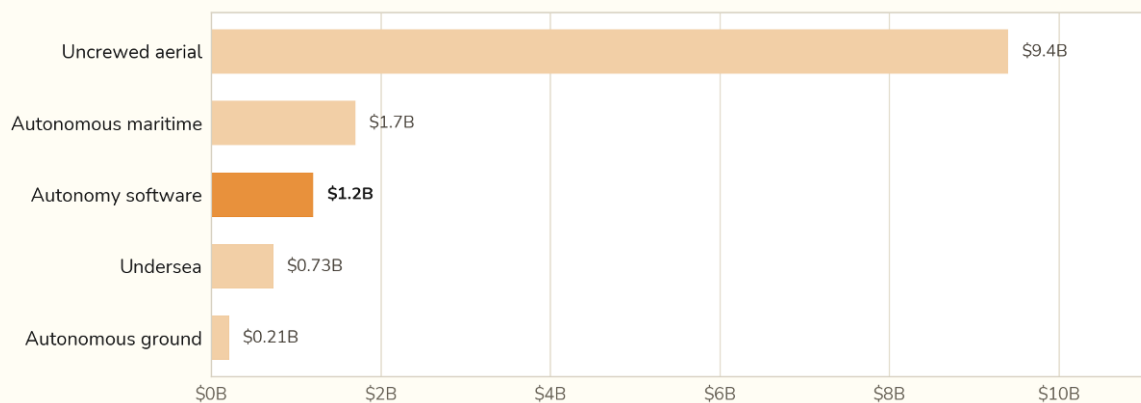
USAF Fighter Procurement Per Decade (Units Purchased)⁵



4 Source: CNAS — "Is the U.S. Military Getting Smaller and Older?"

5 Source: AEI — "The Past Decade of Military Spending"; Stimson Center; CNAS analysis.

FY2026 AI & Autonomy Budget Breakdown (\$13.4B)⁷



6 Source: DoD FY2026 Budget Request (MeriTalk Jun 2025)

The Evidence: Platforms Declining, Autonomy Rising

Platform Category	Peak Procurement	Current / Recent	Change
USAF fighter & attack aircraft	~4,400 (mid-1980s)	~2,000 (2024)	-55%
US Navy force ships	~560 ships (1975)	~289 ships (2024)	-48%
USAF fighters procured per decade	2,063 aircraft (1981–1990)	220 aircraft (2001–2010)	-89%
US fighter types introduced per 20y	15 new designs (1946–1965)	2 new designs (1985–2024)	-87%
F-35 vs predecessor unit cost	F/A-18: ~\$16–64M	F-35: ~\$82–109M	2–5× more expensive
DoD AI & autonomy budget	No dedicated line	\$13.4B (FY2026)	First dedicated line

Where the Value is Moving: From the Platform to Software

Across every major defense capability, the source of advantage is shifting from the physical platform to the software that runs on it. The old model locked cost and capability into expensive hardware: fighter jets, armored vehicles, warships. The new model delivers the same capability, or better, through autonomous software running on cheaper, more expendable hardware. The table below shows how this plays out capability by capability, and why the economics increasingly favor the software layer over the platform.

Capability	Old Value Driver	New Value Driver
Air combat	Fighter jet platform (F-35: \$82M/unit)	Autonomous drone software + swarm coordination
Ground forces	Armored vehicle (IFV: \$10M+/unit)	Autonomous ground vehicle software + sensor fusion
Maritime	Frigate / destroyer (\$1B+/unit)	Autonomous surface / subsurface systems
Intelligence	Satellite imagery + human analysts	AI-powered geospatial analysis in real-time
Training	Live exercises: expensive, infrequent	Software simulation: cheap, continuous
Electronic warfare	Dedicated EW aircraft (\$100M+)	Software-defined radio + AI signal processing

8 Source: CNAS; AEI; CFR; CSIS FY2024 Budget Analysis; DoD FY2026 Budget Request; GAO-24-106703

The Implications in Numbers⁹

\$13.4B DOD AI & autonomy budget FY2026 , up from \$5.6b in FY2022	3–4 wks Software update cycle in 2023, the new standard for defense tech	50,000 First-Person View drones produced per month , assembled from commercial components
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3 The New Defense Economy

“Three structural forces driving the shift.”

Three forces are reshaping how combat power gets built and paid for. First, capability has moved into software, the intelligence layer now matters more than the platform beneath it. Second, low-cost hardware has made that capability scalable, turning expensive one-off systems into thousands of cheap, expendable ones. Third, the economics have inverted: when a \$20,000 drone forces a \$4m response, the side that spends more no longer wins. Each force stands on its own, but together they explain why the companies defining the next era of defense will look nothing like the primes that defined the last.

Structural Force 1: Software-Defined Defense

Modern defense is fundamentally an information problem. The side that detects, decides, and strikes faster wins. not the side with the most expensive hardware. Software is now what determines the outcome of battles.

In 2022 and afterwards. Software changed the equation¹⁰.

Communications	Targeting & Intelligence	AI-Powered Autonomy
Starlink	Palantir	AI Drone Software
- Commercial satellite internet became the battlefield comms backbone. When terminals got jammed, SpaceX reconfigured them remotely in hours, a software fix, not a hardware one.	- Palantir's Gotham fused drone footage, satellite imagery, and intercepted comms into real-time targeting. What once took commanders hours of manual work, software did instantly. Strikes depended more on the targeting pipeline than the rocket.	- When jamming cut the operator's link, drones carrying autonomous terminal guidance completed strikes at several times the rate of manually flown ones. The hardware never changed — the software did.
~150K	400+	10%→80%
Active Terminals in the battlefield at Peak	Targets Struck Via Palantir Pipeline By Sep 2022	Strike completion · autonomous guidance vs human control, RF-denied (2024–2026)

9 Sources: DoD FY2026 Budget Request; Simple Flying / GAO F-35 data

10 Sources: The Spectator (March 2026); Kyiv Post (Oct 2024); Belfer Center Harvard (July 2023)

Structural Force 2: Mass + Low-Cost Hardware Enables Software Leverage

“Cheap commodity hardware + intelligent software = military-grade capability..”

The second structural force is an economic inversion. Defense used to require specialized, expensive, purpose-built hardware. Today, commercial off-the-shelf components (drones, GPUs, sensors, chips, motors, radios) provide the hardware substrate. Software provides intelligence.

The result: military-grade capability at a fraction of the cost, no need for a factory to compete.

The Economic Logic: What This Does to The Capital Requirement

The Capital Requirement Collapses: Why Defense Is Now VC-Backable **12,13**

The capital needed before first revenue drops from \$5-15B to \$5-50M, and time-to-delivery from 10-20 years to under 18 months. That is precisely the range venture capital is built to fund, which is why defense is now VC-backable for the first time.

Dimension	Purpose-Built Military Hardware	Commercial HW + Proprietary SW
Who can build it	Defense primes with established supply chains	Tech startups with access to VC capital
Capital required to compete	\$5-15B before first delivery	\$5-50M, within VC ticket sizes
Revenue model	Single contract, 10+ year cycle	Dual-use: commercial revenue + defense contract
Time to procurement	7-15 years from concept to fielding	6-18 months to contract
Loss tolerance	Each unit lost is a strategic event	Designed to be expended, losing units does not degrade capability
Software update cycle	8-10 years per major update	3-4 weeks

12, 13 Source: DoD Replicator doctrine; GAO-24-106703; CBO FY2025 analysis

14 Source: DoD Replicator doctrine; GAO-24-106703; CBO FY2025 analysis

Structural Force 3: The Economics of War Has Inverted

“Low-cost offense has inverted the cost balance of high-cost defense. The rational answer is to meet numbers with numbers, run by software.”

The third structural force is the most consequential: the cost advantage in modern warfare has shifted from the defender to the attacker. For decades, superior Western hardware justified its price through overwhelming capability. That equation has broken. A \$20,000 drone now forces a \$4,000,000 response. Repeated at scale, that exchange ratio does not hold.

The Defining Data Point: One-Way Attack Vs Interceptor Missile 15

The Attacker	The Defender	The Math
One-Way Attack Drone	Interceptor Missile	The Cost Ratio Problem
- Suicide Drone. - 2,000km range. - The motor is essentially a motorcycle engine. - A military general called manufacturing One-Way Attack Drones "as easy as producing bicycles." - Produces ~2,000/month.	- Surface-to-air missile. - Reliable , near 100% intercept rate - Lockheed Martin produced roughly 600 across all of 2025. - Annual output is measured in hundreds, against drone output measured in thousands per month.	- \$20K force a \$4M response - A defender can win every engagement and still be losing on cost. - Production rate, not intercept rate, is the binding constraint. - The economics of high-cost interception no longer scale.
\$20 – 50K	\$4 – 6M	80 – 310×
Production Cost Per Unit	Cost Per Inceptor	Cost Exchange Ratio: One-Way Attack Drone vs Interceptor Missile

The Full Cost Exchange Picture 16

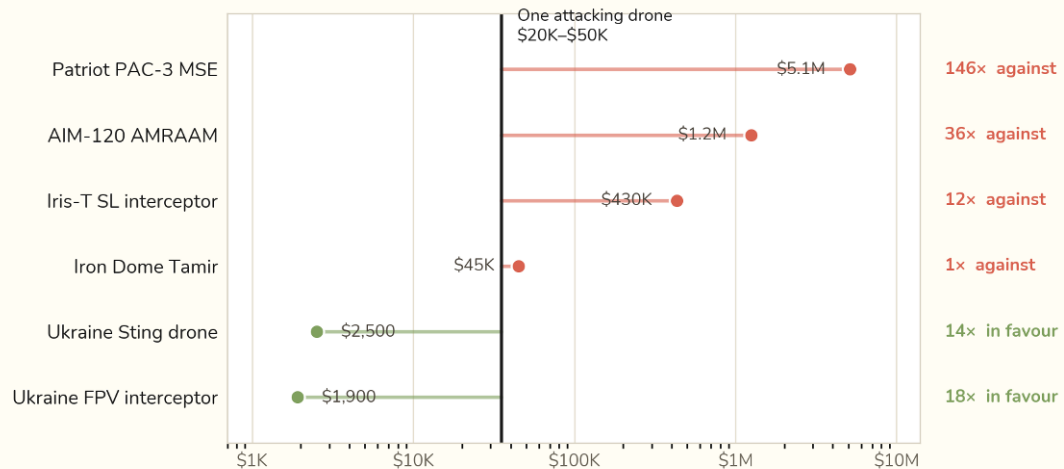
Attacker Asset	Cost	Defender Response	Defender Cost	Exchange Ratio
One-Way Attack Drone#1	\$20K–\$50K	Patriot PAC-3 MSE	\$4M–\$6.25M	80–310× unfavorable
One-Way Attack Drone#1	\$20K–\$50K	AIM-120 AMRAAM	\$1M–\$1.5M	20–75× unfavorable
One-Way Attack Drone#1	\$20K–\$50K	Iris-T SL interceptor	\$430K	9–22× unfavorable
One-Way Attack Drone#1	\$20K–\$50K	Iron Dome Tamir	\$40K–\$50K	~1× (near parity)
One-Way Attack Drone#2	\$30K–\$50K	Ukraine FPV interceptor drones (Bullet, Besomar, etc)	\$0,8K–\$3K	10–60× favorable
One-Way Attack Drone#2	\$30K–\$50K	Ukraine Sting drone	\$2.5K	12–20× favorable

15 Sources: US Army FY2025/FY2026 budget

16 Source: drone-warfare.com (April 2026) · US Army FY2026 budget · DroneXL (March 2026) · CSIS

The bottom two rows show the answer: match cheap with cheap. Ukraine built the world's only combat-proven, cost-effective counter-drone model , drone-on-drone intercept at \$800–\$3,000 per interaction. 11 countries formally requested Ukraine's technology after March 2026.

Cost Exchange Ratio: The Attacker Has the Economic Advantage (Log Scale)¹⁷



The Scale Crisis 18

600 Interceptor missiles produced by Lockheed Martin in all of 2025.

40x The gap between annual interceptor output and annual one-way attack drone output.

2,000 One-Way Attack Drones produced per month, at current production cost.

17 CSIS/CRS · drone-warfare.com (Apr 2026) · DroneXL (Mar 2026)

18 Source: DroneXL (Mar 2026) · Phenomenal World (Jun 2026)

The economics of war have inverted. The attacker now has the cost advantage. The only way to restore the equation is to match cheap with cheap and the only way to do that at scale is software-driven autonomous systems.

This is not a future trend. It is the operational lesson of every major conflict since 2022, and every major military is now racing to act on it.

4 The Global Landscape

"Everyone is Reorganizing Around This"

The transition described in the previous sections is not theoretical. Governments are restructuring procurement, sovereign VC funds are being created, and startups are winning contracts that used to go exclusively to defense primes. What follows is four specific stories each showing a different dimension of how this is playing out right now.

1- United States : The Procurement System Was Redesigned for Startups

The US did not wait for the defense industrial base to adapt on its own. It created a parallel system (new agencies, new contracts, new money) specifically designed to get software-first companies into the military supply chain. 4 mechanisms matter most.

A. Other Transaction Authority (OTA) : The Legal Fast Lane For Non-traditional Defense Contractors

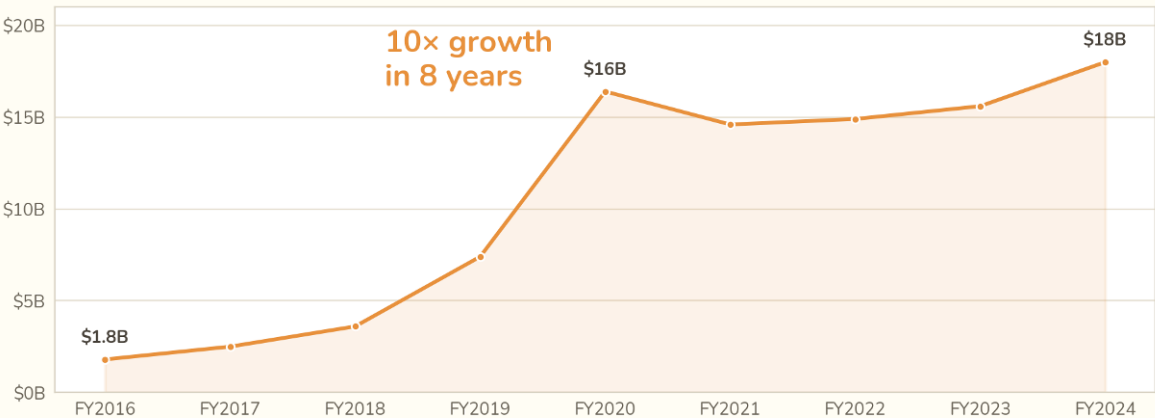
\$18B

OTA obligations · FY2024

Key Facts
Traditional defense procurement requires navigating the Federal Acquisition Regulation, a process that takes 7–15 years and locks out most startups.
OTA bypasses it entirely. A startup that has never sold to the government before can win an OTA contract in 3–6 months.
OTA use grew from \$1.8B (FY2016) to \$18B (FY2024), a tenfold increase.
OTA is currently the fastest-growing acquisition pathway in DoD history.

Key Outcomes
Anduril secured a \$99.6 million OTA agreement with the Army for its Next Generation Command and Control (NGC2) prototype
AeroVironment — founded in 1971, public since 2007 — is a \$7.4 billion company on roughly \$2.0 billion of trailing revenue, having roughly doubled in scale through the \$4.1 billion BlueHalo acquisition completed in May 2025.
Shield AI (\$12.7B valuation , \$540M+ Revenues) won its first DoD contracts via OTA

OTA Obligations (\$B): The Fast Lane Becoming the Main Lane19



B. Defense Innovation Unit (DIU) :

\$5.5B

Contract Ceiling Awards Since 2016



DIU's job is simple: find a commercial technology that solves a military problem, and get a contract signed in months, not years. It uses a "Commercial Solutions Opening" process that any tech startup can apply to directly.

19 Source: DoD OTA Report to Congress FY2023

FY2024 budget: \$946M , Congress added \$836M above what the Pentagon itself requested, a signal of how much political support the model now has.

Key Outcomes
450 prototype contracts issued to companies that had never sold to the US government before. 62 of those prototypes transitioned into full production contracts.
Companies that entered DoD through DIU: Palantir, Anduril, SpaceX (Starshield), Rebellion Defense, Shield AI, Joby Aviation, Sarcos Robotics.

C. In-Q-Tel (IQT) : the CIA's venture arm, founded 1999

100+

Portfolio Companies



IQT pioneered the model of government-backed VC investing in commercial tech companies for national security applications.

IQT was Palantir's seed investor when no one else would fund a defense data company. It backed Keyhole (became Google Earth), Palantir, and dozens of others. It now manages 100+ portfolio companies. Every major Western intelligence agency has since copied the model.

Defense Startups — IQT-Backed and Otherwise:

Founded 2017 · SD	Founded 2015 · SD	Founded 2022 · Texas	Founded 2018 · DC
 ANDURIL	 Shield AI ®	 SARONIC	Keyhole
\$61B	\$12.7B	\$4.6B	(Became Google Earth)
Valuation (Series H, 2026)	Valuation (2024)	Valuation (2025)	Acquired in 2004
- Zero legacy defense DNA. - Revenue: \$500M → \$2.2B in 3 years. - Products: Lattice AI OS, Ghost drones, Roadrunner interceptors. - March 2026: \$20B Army IDIQ — largest ever to a non-traditional contractor.	- AI pilot software that flies fighter jets and drones autonomously with no GPS, no comms, no humans in the loop. - Partnered with Singapore (Feb 2026). - Revenue +64% (2024). Now expanding into 14 countries.	- Autonomous surface vessels (USVs) for maritime defense. - No crew. No fuel cost. - Valued at \$4.6B with minimal revenue, the market is pricing the category, not just the company.	- A struggling 3D mapping startup with zero legacy intelligence DNA. - Saved from bankruptcy by a \$527,500 In-Q-Tel investment in 2003, - Its "EarthViewer" software was immediately deployed by the Pentagon to visualize battlefield terrain during the Iraq War.

D. Replicator Initiative : Structural Shift Made Official \$1B

Phase 1 Investment (FY2024–FY2025)

Deputy SecDef Kathleen Hicks: "America still benefits from platforms that are large, exquisite, expensive, and few. But Replicator will galvanize progress in the too-slow shift of U.S. military innovation to leverage platforms that are small, smart, cheap, and many."

Replicator is the DoD formally committing to mass autonomous systems over exquisite platforms. Goal: thousands of all-domain attritable autonomous systems fielded within 18–24 months. DIU is the lead executing organization. Companies selected: Anduril, AeroVironment, Performance Drone Works.

Three companies selected for initial drone contracts:

1- **Anduril** (Altius-600 drone, Ghost-X autonomous drone)



Altius-600 drone Ghost-X autonomous drone



2- **AeroVironment** (Switchblade 600)



3- Performance Drone Works (C-100 heavy-lift quadcopter)



Allied governments are pursuing their own versions of that speed-and-scale logic, though none cites Replicator by name: in February 2026 France, Germany, Italy, Poland and the UK launched LEAP (Low-Cost Effectors and Autonomous Platforms), and Australia's Ghost Shark moved to a A\$1.7 billion production award with Anduril in September 2025.

2- Europe : NATO Created The World's First Sovereign Defense VC Fund

Europe's story is not about how much it is spending, it is about the institutional architecture built to channel capital toward dual-use deep tech startups.

DIANA and the NATO Innovation Fund are the most significant new defense investment institutions created anywhere in the world in the past decade.²⁰

28 Countries · 182 Test Centers	First Multi-Sovereign VC Fund in History · 24 NATO Nations As LPs
	
3,680	€1B
Startups Applied to The 2025 Challenge Round Alone	Committed Capital · 24 Sovereign Limited Partners
- NATO's startup accelerator. Companies apply to annual "challenge" rounds focused on NATO priority technologies: AI, autonomy, quantum sensing, energy, cyber. - Selected companies receive €100K–€400K in non-dilutive funding (no equity taken). - A 6-month intensive programme, and access to 182 test centres across 28 countries.	- It invests in dual-use deep tech: AI, quantum computing, biotech, space, novel materials. - Companies from DIANA access NIF capital for scale. The fund institutionalizes government-backed VC for defense tech at the alliance level - The same model In-Q-Tel pioneered, now deployed across 24 nations simultaneously.

20 Sources: NATO DIANA · NATO Innovation Fund · Science|Business (2024)

DIANA vs NATO Innovation Fund: Two Instruments, One Pipeline²¹

Dimension	DIANA	NATO Innovation Fund
What it is	Startup accelerator: finds and accelerates early-stage dual-use companies	VC fund: provides growth capital to scale the best companies
Stage	Early-stage: pre-seed to seed	Seed to Series B , growth capital
Funding model	Non-dilutive grants €100K–€400K no equity taken	Equity investment · 24 sovereign governments as co-investors
Coverage	28 countries 182 test centers · annual challenges	€1B committed across NATO alliance
Tech focus	AI, autonomy, quantum sensing, energy, cyber, biotech	Deep tech dual-use: same categories, larger bets
Modeled on	Y Combinator + DARPA hybrid	In-Q-Tel + sovereign wealth funds (first of its kind)
The signal	3,680 startups applied to one challenge round (2025). Defense tech is where founders are going	First time in history sovereign governments co-invested as LPs in a VC fund for defense tech

3- Turkey : From 20% to 83% Localization, Software-Driven & Startup-Led

Turkey's story is the most directly relevant to Saudi Arabia. Twenty years ago, Turkey imported more than 80% of its defense needs. Today it exports \$10B per year and leads the world in armed drone exports.

It did not do this by building factories, it did it by building software companies and mandating localization.

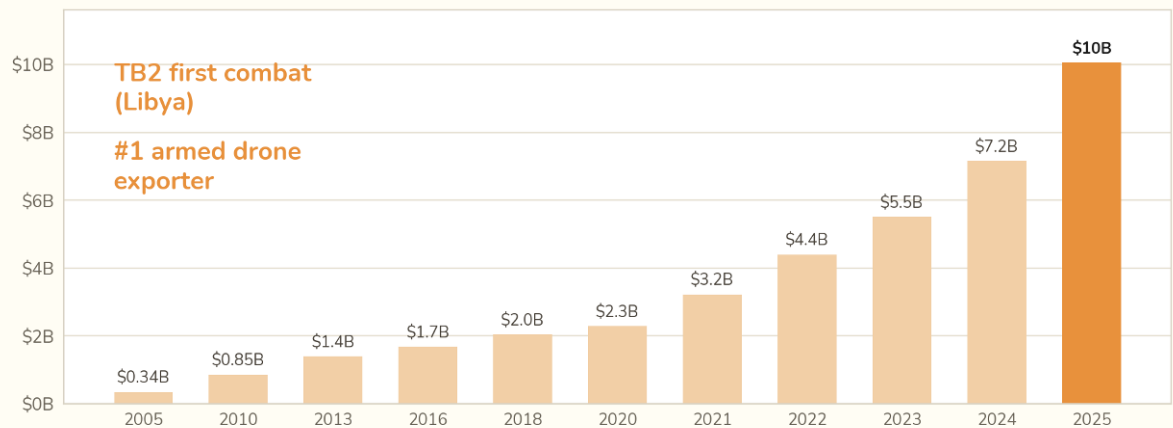
\$10B Turkey defense exports 2025 up from \$340m in 2005	35 Countries operating Bayraktar TB2 including 5 NATO members	93% TB2 localization rate	~20%→83% localization journey over 20 years
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*Bayraktar TB2: a medium-altitude, long-endurance (MALE) tactical unmanned combat aerial vehicle (UCAV) built by the Turkish defense firm Baykar

21 Sources: NATO DIANA · NATO Innovation Fund Charter · National Defense Magazine (Aug 2025)

22 Sources: SSB Turkey · Baykar (2025) · War on the Rocks (Apr 2026) · NSIN (May 2025)

Turkey Defense Exports (\$b): The Compounding Effect of Localization + Software-Driven Startups. \$340M to \$10B in 20 Years.²³



Turkey's National Defense Champions, Software-Driven Startups:24

Company	What They build	How Software-Driven	Export Signal
	- Combat drone proven in Libya and Ukraine - 1M+ flight hours	- Core IP is in flight control software, targeting algorithms, and autonomous maneuvering. - 93% locally made.	- 35 countries. - \$1.8B exports (2024). - In 2021 Turkey became the world's leading exporter of armed drones.
aselsan	- Defense electronics: radar, Electronic warfare, and comms. - Revenue \$200M (2005) → \$4.5B (2024). - Sells to 60+ countries.	- Radar, software-defined radio, and EW platforms are pure IP plays with no factory dependency. - Revenue grew 22x in 20 years, entirely software intensive electronics.	- Direct product of the localization mandates. - Started as a domestic monopoly. Now a global exporter competing against legacy primes.
	- Autonomous drone swarm. - A UN Panel of Experts on Libya reported in March 2021 that STM Kargu-2 munitions had been "programmed to attack targets without requiring data connectivity between the operator and the munition." The Panel did not confirm the system engaged autonomously or that anyone was killed by it, and STM maintains the strike is operator-executed under a man-in-the-loop principle. - Autonomy in the terminal phase; the engagement decision is disputed.	- Autonomous target recognition, tracking, engagement , all AI. - The hardware is a commodity. - The IP is the algorithm.	- Spinout of Turkey's localization policy. - Not a legacy prime, a defense software startup that emerged from the ecosystem.

23 Source: Turkish Defence Industries Presidency (SSB) · War on the Rocks (Apr 2026) · Baykar (2025)

24 Source: SSB Turkey · Baykar (2025) · ASELSAN Annual Report 2024

Saudi Arabia begins with what took others two decades to assemble: committed capital, a published mandate, and the institutions already standing. What follows is execution — localization enforced through procurement, the ecosystem funded, and the software companies given room to emerge.

4- Singapore: Built The Bridge Between Startups And The Military

Singapore has 6 million people, no natural resources, and a shrinking military-age population. Its answer was to build one institution specifically designed to move commercial and startup technology into military deployment faster than any traditional procurement system could. That institution is the Defense Science and Technology Agency (DSTA).

How DSTA Works	Operations At Scale	First Non-US Customer
The Bridge Model	Autonomous Systems at Scale	Shield AI Partnership
26 yrs	Jan 2025	\$12.7B
As the forces technology partner	First autonomous vessels on operational deployment	Shield AI valuation
1- DSTA embeds engineers directly inside the military units. When a unit needs a capability, DSTA finds it (from a startup, university, or global company) , tests it in real field conditions, and deploys it. 2- At Exercise Wallaby 2025, DSTA trialled 20+ new technology applications alongside Army troops, diagnosing issues and iterating solutions within days. The feedback loop that takes years in traditional procurement takes weeks at DSTA.	1- Singapore's Navy began uncrewed operational patrols with four Maritime Security USVs in January 2025, among the first navies to run autonomous vessels on routine patrols in waters as congested as the Singapore Strait. 2- The forces stated goal: reduce total manpower by one-third by 2030, with autonomous systems filling the gap. 3- DSTA's Robotics C3* system enables multiple unmanned assets to operate as a single networked force, including 5G drone hubs creating pop-up comms networks in remote terrain.	1- Feb 2026: Shield AI expanded partnership with DSTA and the Singapore Air Force to field Shield AI autonomy across a wider range of drone applications. 2-Singapore is Shield AI's first non-US customer for its most advanced autonomy software. 3-This is DSTA at work: identify the world's best defense software company, bring it into the ecosystem, and build local capability around it.

*C3: Command, Control, and Communication

25 Sources: DSTA.gov.sg (2025) · Singapore MOD · Indo-Pacific Defense Forum (Feb 2025)

What DSTA does	How It differs from traditional procurement	Result
Embeds engineers with military units	Procurement office writes specs → sends to industry → waits 5+ years	Capability gaps identified and solutions fielded in weeks
Tests tech in real field conditions and iterate	Lab → paper validation → field trial → approval: 3–5 years minimum	20+ technologies tested in a single large-scale exercise (2025)
Mandates autonomous systems to fill manpower gaps	Manpower shortfalls → recruit more soldiers → unsustainable	⅓ SAF manpower reduction by 2030, filled by systems already deployed

None of these countries waited for the market to deliver defense technology on its own. Each built a specific institution to channel capital and capability toward software-first companies. A VC arm, an accelerator, a procurement fast lane, or a technology bridge agency.

5 The Saudi Opportunity

"The Mandate Meets the Moment" The largest untapped defense tech market in the world, with a government mandate, institutional infrastructure, and urgency to fill it.²⁷

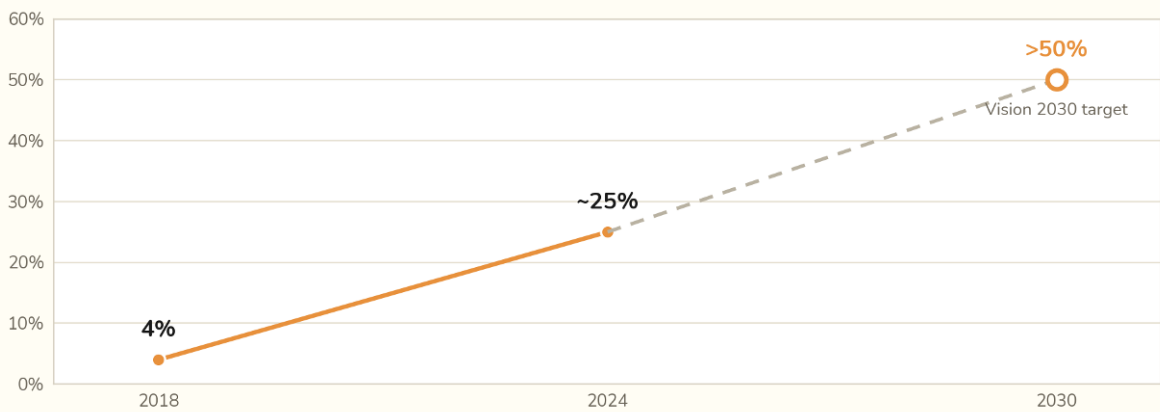
\$78B Saudi defense budget · 5th globally, 1st in the Arab world	25% Localization rate end 2024 Up from 4% in 2018 Target 50% by 2030	~\$20B Annual spend that must shift domestic by 2030. With no domestic supplier yet	311 Licensed defense establishments, holding 572 industrial licences. Up from 5 in 2019
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26 Source: DSTA.gov.sg · Singapore MOD · Indo-Pacific Defense Forum (Feb 2025)

27 Sources: SIPRI Military Expenditure Database (Apr 2026)

The Numbers

A \$78B budget, a 50% localization mandate, and a ~\$20B annual gap.²⁸



The fastest progression in the GCC, but the gap to the 2030 target is the investment opportunity.

Why now: Three Ecosystem Enablers That Came Online

Saudi Arabia has published its defense supply chain gaps, established the institutional infrastructure, and launched named potential buyers. The companies to fill them do not yet exist. Three enablers that did not exist a decade ago have come online.

28 Source: GAMI.gov.sa · GAMI Annual Meeting (Nov 2025)

Ecosystem Enabler	What it Does	VC Ecosystem Signal
1. SAMI (Saudi Arabian Military Industries)	SAMI is Saudi Arabia's state-owned defense champion, building and integrating military systems across domains including air, land, and sea	A named institutional buyer exists for defense software startups and companies in Saudi Arabia.
2. GADD (General Authority for Defence Development)	GADD funds local defense R&D, manages university partnerships, and provides institutional support for early-stage defense technology development. It has funded R&D networks and issued grants.	GADD sets national defense technology priorities and funds defense R&D through universities, national research centres and SAMI. It has not published a direct funding route for early-stage companies — which is itself part of the opportunity: the institutional appetite for sovereign defense R&D is funded and live, but no venture-stage channel yet connects it to founders.
3. GAMI (General Authority for Military Industries)	GAMI regulates and licenses the sector, sets localization policy, and maps the Kingdom's defense supply-chain priorities. GAMI has formally identified 74 supply chain gaps in Saudi defense, 30 classified as high-priority and together accounting for 80% of projected future spending.	GAMI's gap analysis de-risks the investment thesis. The 30 high-priority gaps are effectively a government-validated product market fit signal.

Saudi Arabia has the budget, the mandate, the institutional infrastructure, and the urgency. What it does not yet have is the companies and VC backing.

The Opportunity: Five Categories Where Startups Win Fast

Saudi Arabia does not need another Lockheed Martin. It needs technology companies: asset-light, dual-use, and fast-to-deploy that provide the intelligence layer. Five categories stand out.

Category	Defence Application	Dual-Use Commercial Market (Saudi)
Cybersecurity & Sovereign Data	Sovereign data protection for classified military networks, C2 systems, and intelligence infrastructure.	Energy, Telecom, Saudi banks, smart cities, Vision 2030 giga-projects, all require sovereign data infrastructure.
AI & Decision Intelligence (C4ISR)	Command, control, communications, computers, and intelligence (the targeting and decision layer). Explicitly listed as GAMI priority.	Logistics optimization, energy companies operations intelligence, electricity grid management, smart city analytics. Same software stack with different scenarios.
Drone Software & Autonomous Systems	The software brain (autonomous navigation, AI targeting, swarm coordination) for UAV, USV, UGV, and IoT connected platforms.	Oil & gas field inspection, border and infrastructure surveillance, maritime logistics monitoring, agricultural survey.
Simulation & Training Platforms	Military mission rehearsal, systems training, and tactical exercises, all software environments.	Saudi Airlines pilot training, industrial safety simulation, healthcare training, the same platform with different scenario content.
Electronic Warfare Software	Spectrum management, AI-driven jamming, navigation spoofing, signal intelligence.	Airport and stadium security, telecom spectrum management, critical infrastructure perimeter protection.

6 Why VC, and Why Now

"This Is Finally a VC Asset Class" The three objections that made defense uninvestable for VC have all been resolved.

The Three Objections, and Why They No Longer Apply

Defense used to fail every VC filter. The shift to software, dual-use, and open procurement reverses all three.

Old Objection	Resolved By
Too Capital-Intensive Building defense hardware required factories, specialized supply chains, and \$5–15B before a single unit was delivered. No VC fund could write that check and none would want to.	Software Driven and Asset-Light Software running on commercial hardware now delivers defense grade capabilities. Capital requirement to compete: \$5–50M , squarely within VC ticket sizes. No factory. No specialized supply chain. The barrier to entry is no longer capital, it is technical depth.
Procurement Cycles Too Long Traditional DoD procurement: 7–15 years from concept to contract. A VC investing in 2010 would wait until 2025 for a government check. The typical 10-year fund lifecycle made this structurally impossible.	Fast Commercialization Software-driven, asset-light, and dual-use companies reach the market in months, not years. Low capex allows them to ship, generate revenue, and iterate before any defense contract lands. Dual-use demand accelerates this further (logistics, energy, cybersecurity, smart cities) bringing revenue in fast, making the defense contract the premium layer, not the first dollar.
No Market Access Large defense contractors had exclusive relationships, decades of procurement history, and regulatory compliance infrastructure that a startup could not replicate. The market was structurally closed.	OTA, DIU, GAMI, SAMI, and Open Procurement Procurement pathways like OTA and DIU allowed startups to win defense contracts in months rather than years. These mechanisms broke the monopoly of legacy primes and opened the market to new entrants. Saudi Arabia's institutional framework (GAMI, GADD, and SAMI) is still maturing, but presents a comparable opening for companies entering early.

What Early Investors Actually Made²⁹

The three companies that proved defense tech is a venture asset class, and what they returned

Founded 2003 · IPO 2020		Founded 2017 · Series H 2026		Founded 2015 · Series G 2026	
Palantir		Anduril		Shield AI	
Seed investment (In-Q-Tel, 2005)	~\$2M	Seed (Founders Fund, 2017)	~\$50M round	Early valuation (2020 est.)	~\$300M
IPO valuation (Sep 2020)	\$16B	Valuation at seed (est.)	~\$500M–\$1B	Valuation Mar 2026 (Series G)	\$12.7B
Revenue 2025	\$3.7B +39% YoY	Revenue growth	\$500M → \$2.2B (2023–2025)	Revenue growth (2024)	+64%
Market cap today	~\$295B	Valuation growth 2022→2026	\$8.5B → \$61B (+618%)	Valuation Growth: 12 months	\$5.3B → \$12.7B (+140%)
Saudi angle: Palantir had no captive government market and no localization mandate. Saudi founders have both.		Saudi angle: Anduril had to fight for DoD access. A Saudi equivalent gets SAMI Autonomous as a named customer from day one.		Saudi angle: Shield AI's Saudi equivalent starts with zero domestic competition and a published government procurement mandate.	

29 Sources: Sacra · Augment Market · New Market Pitch · Hustle Fund · Motley Fool (Jul 2026)

The Window: Saudi DefenseTech Is Where US Was in 2015

The returns above were made by investors who recognized the inflection point before the market did. In 2015, Anduril did not exist. Palantir was private and widely considered uninvestable for a conventional VC. The OTA mechanism existed but was used for \$1.3B of contracts compared to \$23B in 2023. The defense tech category was not a category yet. Five years later, those who entered early owned a generation-defining asset class.

2015	2026
US DefenseTech, the year before the inflection	Saudi DefenseTech, the year of the inflection
OTA obligations: \$1.8B (still niche, not mainstream)	GAMI licensing framework: 311 licensed establishments, 74 published gaps
Anduril does not yet exist (founded 2017)	SAMI Autonomous Company just launched, active demand, no suppliers
Palantir still private, widely dismissed as uninvestable	GCC defense tech VC: no dedicated fund at scale
DIU just founded: unproven and underfunded	GADD operational: sovereign defense R&D funded and live, no venture-stage channel yet
Defense tech VC investment: <\$1B globally	Defense budget: \$78B and growing (#1 in MENA)
Early investors who entered here made 10–600x returns.	The mandate is funded. The infrastructure is live. The company layer is still thin.

The GCC VC Gap: A \$3.3B Ecosystem With No Dedicated Defense Tech Fund

GCC VC Sector	2024 Status	Coverage	Return Outlook
Fintech	Largest category · UAE fintech market projected \$5.7B by 2029	Well served · multiple dedicated funds	Mature, compressed multiples, high competition
E-commerce & logistics	Second largest · Tabby Series E \$160M+ (Q1 2025)	Well served	Mature, exit multiples compressing
Healthcare tech	Growing · multiple sovereign fund mandates	Growing coverage	Moderate, competition emerging
AI / Deep tech	Rising	Partial general AI covered, defense AI not addressed	Strong but crowding fast
Defense Tech	~\$0 from dedicated GCC VC funds	Nascent — dedicated defense-tech vehicles exist but none at scale	>\$50B demand

The GCC VC ecosystem is mature, well-capitalized, and actively deploying into fintech, e-commerce, and healthcare. It has no dedicated defense tech fund. Saudi Arabia has a \$20B

annual demand gap, a government mandate, published supply chain requirements, and institutional infrastructure. The US proved the returns. The GCC has the capital. What is missing is the fund that connects the two.

7 Conclusion

The structural shift described in this report is not a future prediction, it is already the operational reality of every major conflict since 2022, and every serious defense power is racing to act on it. The software layer has become the decisive factor in modern warfare, the capital requirement to compete has collapsed from \$10 billion to \$50 million, and the global returns to early investors in this category are in and verified.

Saudi Arabia has built the conditions to capture this moment. The budget is the largest in MENA. The mandate is there. The institutional infrastructure (GAMI, SAMI, GADD) is live. The demand has been pre-published in a way no prior defense tech market has ever done. What does not yet exist are the Saudi "neo-prime" defense tech startups.

That is the window. The ecosystem gets built between now and 2030, and the companies that enter it in this period will define who captures the value when the market matures. It is time for regional defense tech venture capital, in tandem with the government infrastructure already in place, to point capital at this category and build the first generation of Saudi defense technology champions. The company layer is still thin. The mandate is funded. The window is open now.

