Resilience Tech

Lessons from Israel's Emerging Resilience Tech Ecosystem
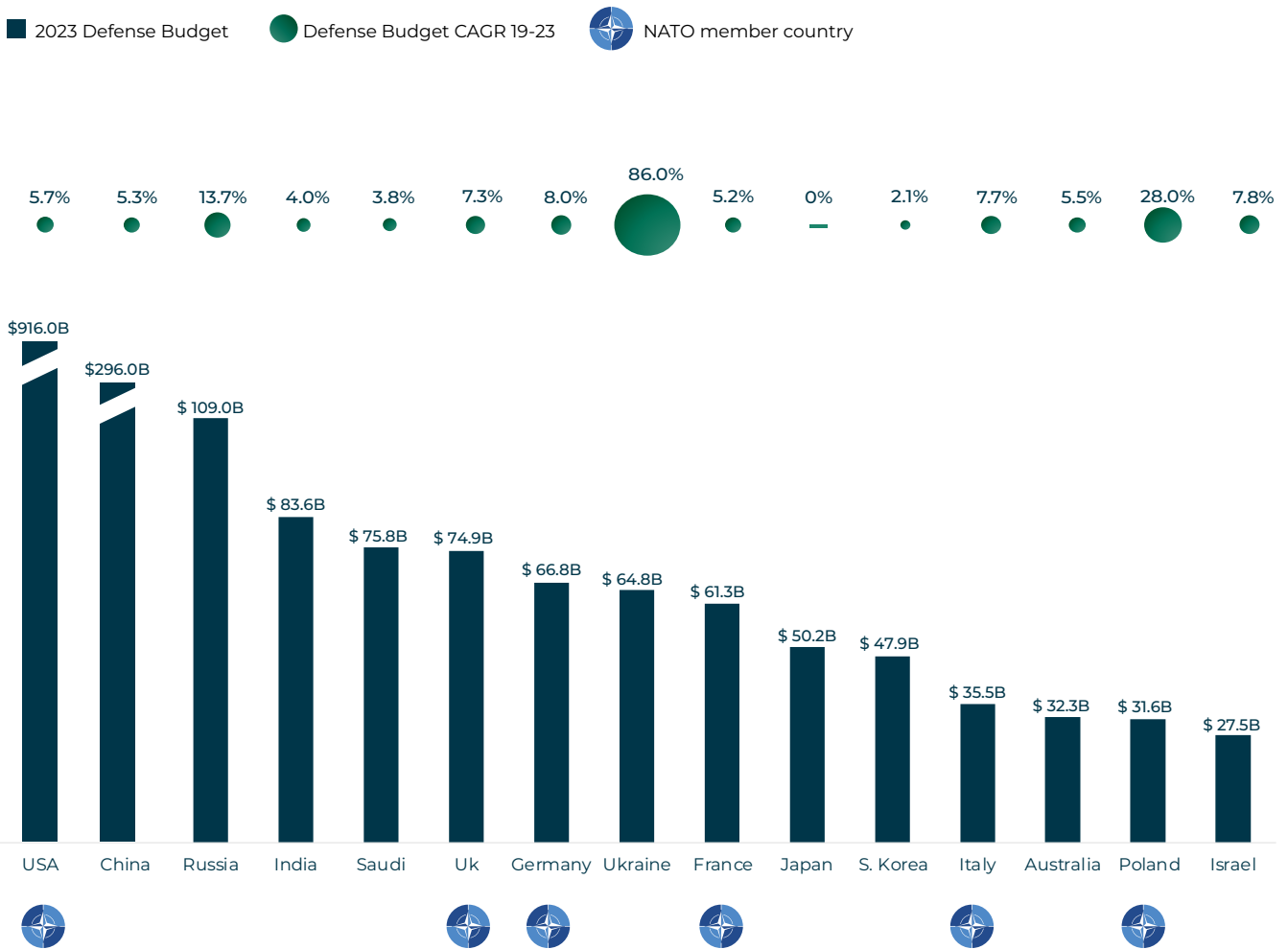
November 2024

After extensive talks with various industry leaders, it's evident that defense tech is evolving.

The 2020s bring heightened geopolitical tensions, rapid tech advancements, and economic shifts. Rising internal polarization and ongoing conflicts in Ukraine, the Middle East, and the Sahel underscore growing tensions and the challenges of asymmetrical warfare, as governments with large budgets contend with low-cost, agile tactics. This has spurred growth in resilience tech for new national security solutions.

Global defense spending now tops $2.2 trillion, with countries like Ukraine, Poland, and Germany ramping up investments in AI, robotics, and satellite tech.

■ 2023 Defense Budget   ● Defense Budget CAGR 19-23   ✪ NATO member country

Country	2023 Defense Budget	CAGR 19-23	NATO
USA	$916.0B	5.7%	✪
China	$296.0B	5.3%	
Russia	$109.0B	13.7%	
India	$83.6B	4.0%	
Saudi	$75.8B	3.8%	
Uk	$74.9B	7.3%	✪
Germany	$66.8B	8.0%	✪
Ukraine	$64.8B	86.0%	
France	$61.3B	5.2%	✪
Japan	$50.2B	0%	
S. Korea	$47.9B	2.1%	
Italy	$35.5B	7.7%	✪
Australia	$32.3B	5.5%	
Poland	$31.6B	28.0%	✪
Israel	$27.5B	7.8%	

Source: World Bank

The Asymmetry Paradox: Expensive tech is winning the battle but low cost innovation is winning the war

The Asymmetry War Paradox is increasingly evident: expensive defense systems are often losing against inexpensive, adaptive tactics. In Ukraine, commercial drones and the Diia app enable civilians to participate in real-time intelligence, disrupting traditional warfare models. Furthermore, civilian innovation is outpacing government-funded research and development, signaling a need to adopt a new, open-source approach to harnessing technology effectively.

This paradox is also evident in Israel's confrontations with Hamas, Hezbollah, and Iran where civilian drones and AI-driven systems are leveraged to counter low-cost kinetic threats.

The cost gaps between Western top-of-the-line technology and low-cost drones and ballistic missiles is also evident in military technology. To illustrate the gap - the April 2024 and October 2024 attacks involving Iranian low-cost drones and ballistic missiles cost an estimated $200 million, while the defensive response by Israel's air defense systems exceeded $1.1 billion, illustrating a >5x cost disparity. As these examples demonstrate, modern conflicts are increasingly defined by adaptability and the innovative use of commercially available technology, shifting the focus away from traditional military dominance.

> "What we're witnessing is the democratization of intelligence. Ordinary civilians with commercial tech now have a role in real-time intelligence gathering and defense operations"

Former Innovation Lead, Foreign Security Agency

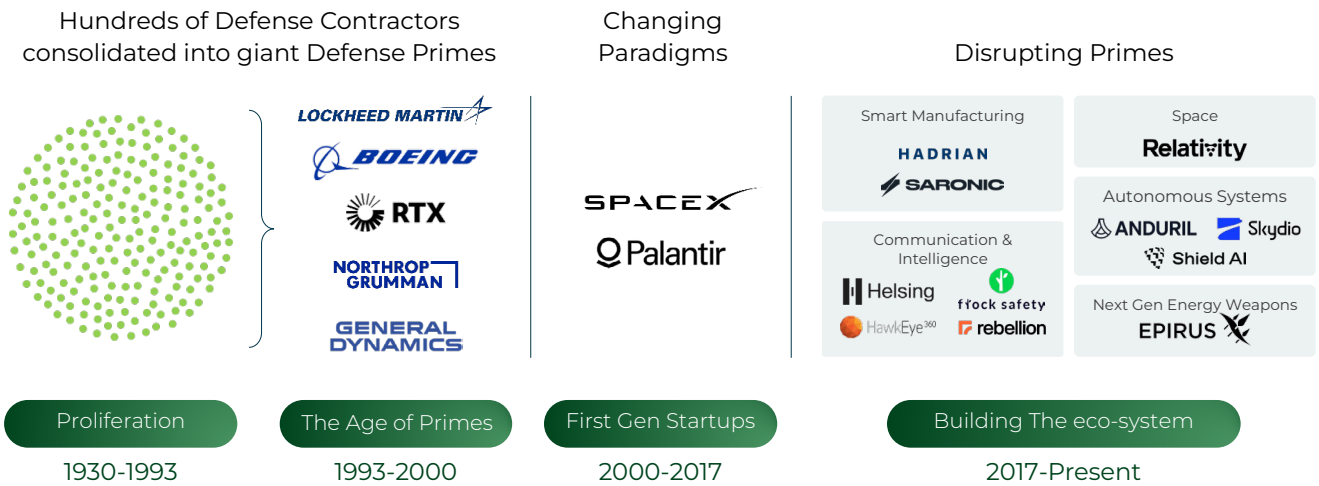Modern defense is **>5x** more expensive than offense

> "Defense technology is no longer solely about possessing the most sophisticated equipment; it is about adaptability and speed. Asymmetric warfare demands agility and cost-efficiency to address shifting tactical and strategic needs, as well as to endure prolonged conflicts of attrition, like those experienced in Ukraine and Israel."

Former Executive, MAFAT (Israel's Directorate of Defense Research and Development)

The Birth of Resilience Tech

Hundreds of Defense Contractors
consolidated into giant Defense Primes

Changing
Paradigms

Disrupting Primes

Smart Manufacturing	Space
HADRIAN	Relativity
SARONIC	

Communication & Intelligence	Autonomous Systems
Helsing f'ock safety	ANDURIL Skydio
HawkEye360 rebellion	Shield AI
	Next Gen Energy Weapons
	EPIRUS

| Proliferation	The Age of Primes	First Gen Startups	Building The eco-system
1930-1993	1993-2000	2000-2017	2017-Present

The birth of the Resilience Tech ecosystem began with companies like Palantir and SpaceX, which broke into markets traditionally dominated by government agencies. Palantir even sued the U.S. Army to secure its place in defense contracts, forcing the government to consider commercial tech solutions over expensive, internal projects.

Since 2017, Anduril, founded by Palmer Luckey, has led a wave of startups striving not just to compete with primes but to become the primes. By developing AI-powered, low-cost technologies like autonomous drones, Anduril has secured major defense contracts, including a $1 billion deal with U.S. Special Operations Command, disrupting traditional defense R&D.

Challenges: Breaking into a Consolidated Market

Despite these opportunities, startups and new entrants face significant challenges when trying to penetrate a resilience market dominated by large primes contractors. These consolidated legacy players-such as Lockheed Martin, Boeing, and Northrop Grumman-maintain their dominance in military contracts through long-standing relationships with government agencies, a strong reputation for reliability, and the ability to endure lengthy development cycles and monopolistic pricing.

In the US, 67% of major defense programs have only one offer, underscoring the difficulty new players face in breaking into this space. Anduril's success is particularly remarkable given the challenges, but it raises the question of whether this success can be replicated across other geographies and categories.
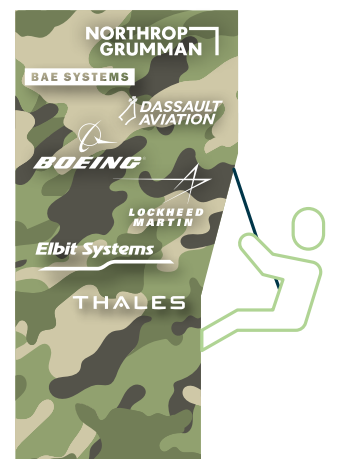
Startups face significant challenges when trying to penetrate a resilience market dominated by large prime contractors.

How Resilience Tech Startups Win

1 Leveraging Startup Advantages for Scalable Value.

One of the most significant changes in the defense sector is the shift from a cost-plus business model, where contractors are paid based on the cost of production plus a profit margin, to a product-driven model that focuses on high-margin, scalable products. This new approach aligns more closely with the venture capital model, which seeks high returns on investment through scalable, repeatable business models. Startups in the resilience tech space are particularly well-positioned to take advantage of this shift, as they can develop and deploy products quickly, iterating based on real-time feedback from the field.

The legacy defense industry is heavily reliant on research and development, posing significant challenges for startups when it comes to driving research and product innovation.

Cost-plus business model

Product-driven model
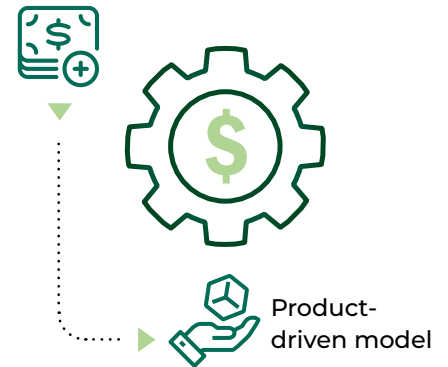
To outpace their established prime contractor competitors, startups must focus on four key pillars:

1 Talent Arbitrage:

Leveraging scarce AI expertise to develop defense solutions that surpass incumbents in agility and innovation, tapping into mainstream tech talent previously drawn to traditional primes but now eager to join dynamic, cutting-edge defense tech startups.

3 Modular Platforms:

Focus on core innovations that can be adapted for diverse use cases with minimal cost and quick adjustments—reducing time to market, lowering expenses, and increasing the total addressable market.

2 Low Cost Offerings:

Primes typically design and produce costly, specialized systems tailored to specific requirements. Startups can win by offering low-cost solutions that deliver results, utilizing modular, multi-purpose platforms built on modern infrastructure.

4 Localization of Production:

Localizing invention and production has become a critical factor for overcoming market barriers, as Tier 1 manufacturers and government agencies increasingly mandate it as a requirement.

2.a   Go-to-Market Strategies: **Targeting a Diverse Set of Buyers**

One of the key challenges for defense tech startups is devising a unique go-to-market (GTM) strategy that addresses the diverse range of resilience tech buyers. Many have started open innovation programs to serve as design partners, launch paid pilots, and invest in or partner with startups in various ways. Dual-use strategies may de-focus the company and hinder growth, while diverse resilience buyers can drive velocity and expand TAM.

Serving a Spectrum of Potential Buyers Impacts TAM, GTM & Risk Profile
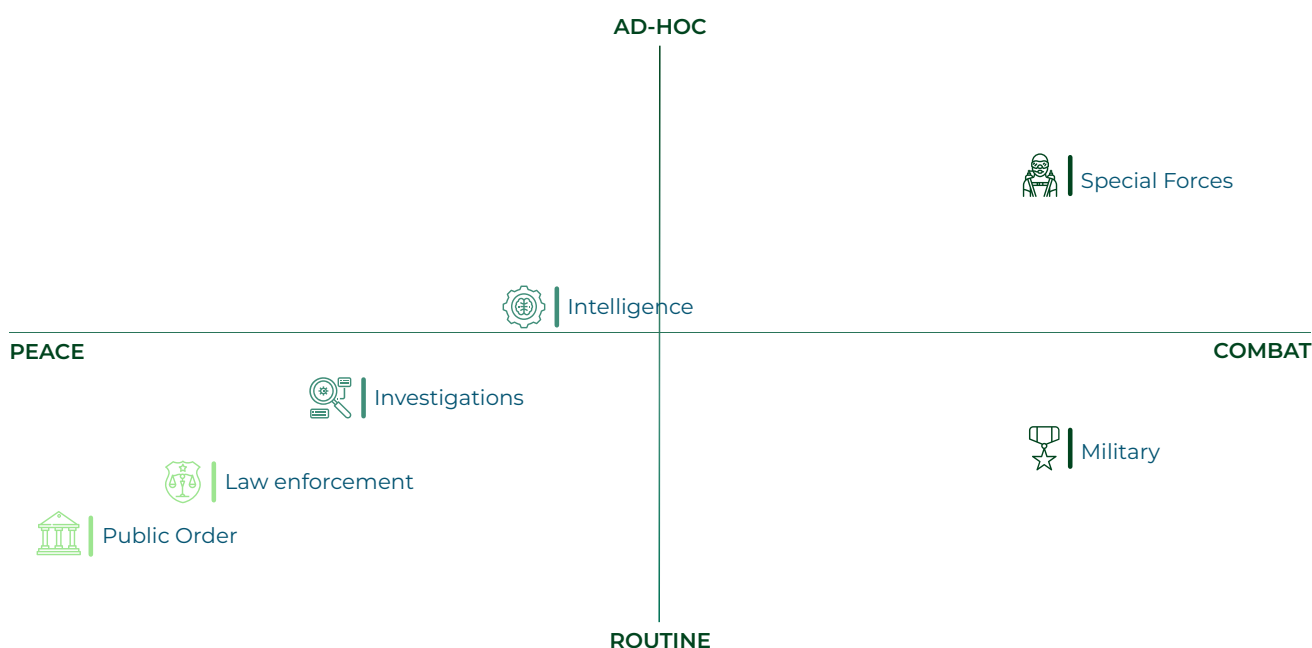
2.b   Go-to-Market Strategies: **Geographic Focus**

Geographic focus is vital for Israeli resilience tech startups, as government agencies often prefer local over global solutions for factors such as security clearance, supply chain risks, legal and compliance restrictions, and procurement processes.

Unlike most of the Israeli tech sector, resilience tech is highly sensitive to geography. Companies should select their first target geography carefully and adjust human, operational, and product roadmaps accordingly—hiring the right people and addressing specific local needs without compromising the overall product strategy. This includes considering localization requirements for manufacturing, IP, and security clearance.

The choice of target markets depends on various factors, including product category, ICP, founder familiarity, and other considerations.

At Viola Ventures, we developed a framework inspired by the Israeli defense export model, emphasizing the existing commercial and security bilateral infrastructure. This framework also accounts for the growth of defense budgets, anticipating that future spending will become more flexible and equipment-focused. Additionally, we factor in the Global Innovation Index of each country to gauge the level of local innovation that companies will face as competition.

Attractive Target Markets for Israeli Resilience Tech Founders

Attractiveness: Low ▢ ▢ ▢ High

	Defense Budget	Innovation		IL Defense Export	Attractiveness Score
		Budget Growth	GII Index Rank		
India	$ 88.7B	4.0%	39	37.2%	12.6
Philippines	$ 4.3B	3.1%	53	11.6%	12.1
Germany	$ 60.8B	8.0%	9	4.0%	12.0
Czech	$ 4.4B	8.9%	30	2.9%	11.8
Poland	$ 18.1B	28.0%	40	1.4%	11.1
Lithuania	$ 1.9B	19.1%	35	2.0%	11.1
USA	$ 955.9B	5.7%	3	8.7%	10.9
Romania	$ 5.7B	8.5%	48	1.5%	10.9
Morocco	$ 5.4B	2.7%	66	3.4%	10.8
Ukraine	$ 48.0B	86.0%	60	0.0%	10.7
UK	$ 74.6B	7.3%	5	2.6%	9.5
Canada	$ 29.3B	5.3%	14	2.2%	8.8
Singapore	$ 12.7B	2.5%	4	4.9%	7.7
Thailand	$ 6.2B	0.0%	41	3.2%	7.6
Greece	$ 8.8B	4.9%	45	0.9%	6.7
Estonia	$ 883.9M	5.9%	16	0.5%	5.9
Finland	$ 5.3B	2.4%	7	1.6%	4.8
France	$ 58.5B	5.2%	12	0.0%	4.5
Spain	$ 22.1B	2.1%	28	1.1%	4.3
South Korea	$ 50.5B	2.1%	6	0.9%	2.5

Attractiveness score calculated weighting 40% for IL export, 35% for budget growth, 20% for global innovation index score and 5% for defense budget size.
Source: Stockholm International Peace Research Institute (SIPRI), WIPO GII Index 2024, World Bank

Unlike traditional Israeli tech startups, prioritizing the USA may not be the best approach for Israeli defense tech companies. Other attractive geographies, such as NATO and Asian countries, are increasing their defense budgets and seeking imported innovation, making them potentially better targets for Israeli defense tech founders to support democratic defense efforts.

"As Israeli founders, we established partnerships with security agencies across Europe early on. Working with U.S proved to be a far greater challenge."

— Early-stage defense tech startup CEO
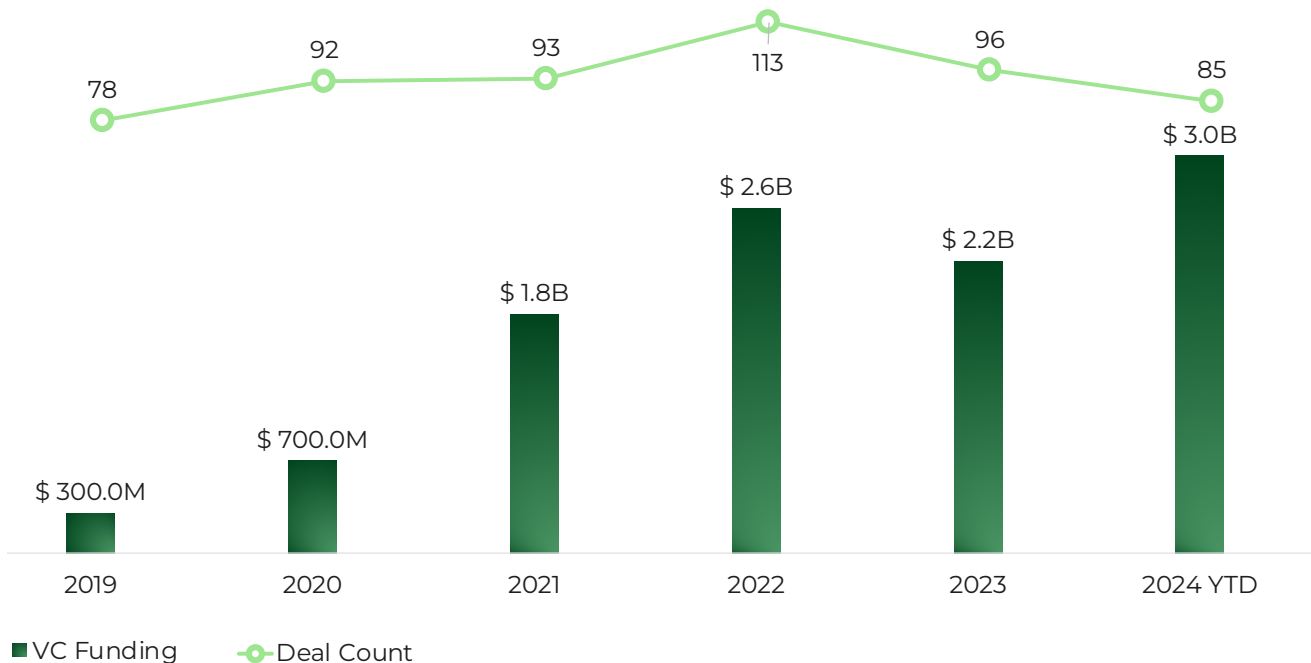
3 Mastering the Procurement Process

Besides geographic focus, the defense procurement process is notoriously complex and can be a significant barrier for startups. It involves navigating a maze of regulations, certifications, and approvals, which can vary significantly from one country to another. Successful startups will need to invest in understanding these processes and building the necessary infrastructure to support them. This might include:

- Partnering early on with experts experienced in defense procurement
- Developing strategic partnerships with established defense contractors
- Leveraging government programs designed to help startups enter the defense market

Funding Ecosystem and VC-returns:
A Cautious Outlook

Over the past five years, venture capital has invested over $10 billion into defense startups, enabling them to develop faster, cheaper, and more scalable solutions, transforming how homeland security and defense tech are built.

VC Funding Activity in Defense Tech, 2019 - 2024 YTD

Legend: ■ VC Funding — ◯— Deal Count

Data points — Deal Count: 78 (2019), 92 (2020), 93 (2021), 113 (2022), 96 (2023), 85 (2024 YTD)

VC Funding: $300.0M (2019), $700.0M (2020), $1.8B (2021), $2.6B (2022), $2.2B (2023), $3.0B (2024 YTD)

* As of November 2024

Source: Crunchbase

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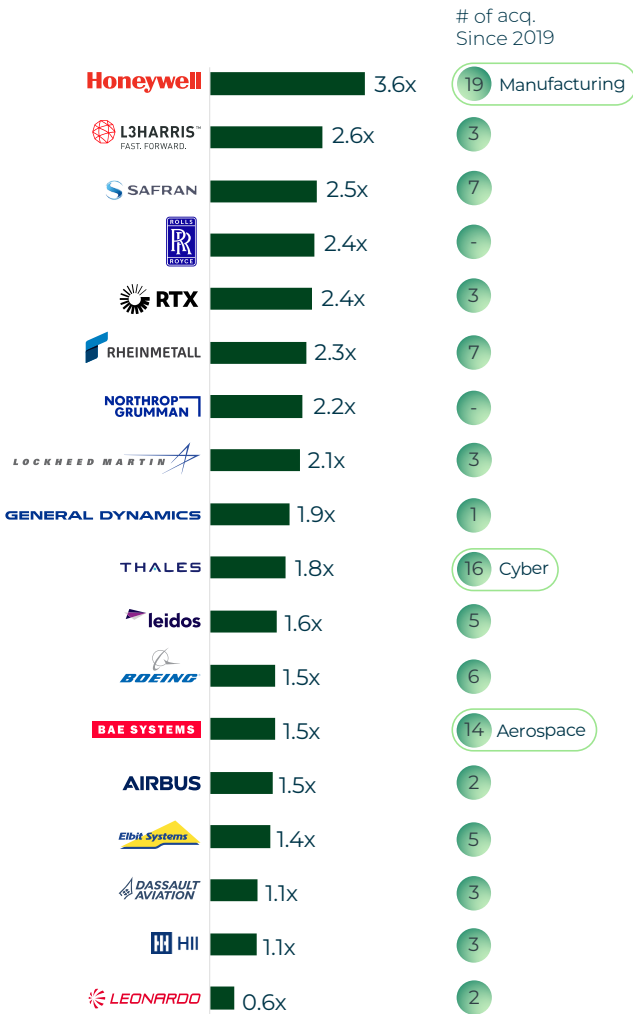
Moreover, legacy Defense Primes have been trading at low-teens revenue multiples, making them challenging strategic acquirers. However, the emergence of newly founded DefenseTech unicorns has created a new exit landscape, further reducing the risks for VC investments in the sector.
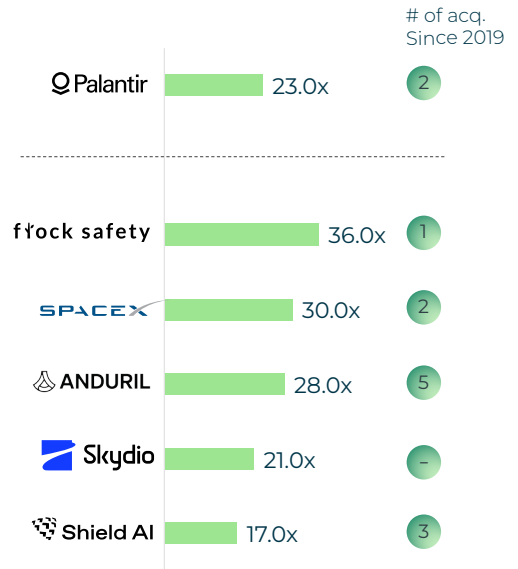
Defense Primes

NTM Revenue Multiple as of Nov 2024

	Multiple	# of acq. Since 2019	
Honeywell	3.6x	19	Manufacturing
L3HARRIS FAST. FORWARD.	2.6x	3	
SAFRAN	2.5x	7	
ROLLS ROYCE	2.4x	-	
RTX	2.4x	3	
RHEINMETALL	2.3x	7	
NORTHROP GRUMMAN	2.2x	-	
LOCKHEED MARTIN	2.1x	3	
GENERAL DYNAMICS	1.9x	1	
THALES	1.8x	16	Cyber
leidos	1.6x	5	
BOEING	1.5x	6	
BAE SYSTEMS	1.5x	14	Aerospace
AIRBUS	1.5x	2	
Elbit Systems	1.4x	5	
DASSAULT AVIATION	1.1x	3	
HII	1.1x	3	
LEONARDO	0.6x	2	

Defense Techs

Est. Last Round Revenue Multiples

	Multiple	# of acq. Since 2019
Palantir	23.0x	2
flock safety	36.0x	1
SPACEX	30.0x	2
ANDURIL	28.0x	5
Skydio	21.0x	-
Shield AI	17.0x	3

Source: Pitchbook
Palantir NTM rev. multiple as off Sep 30th, 2024

Nonetheless, despite media recognition in the sector and newfound VC appetite, the number of deals has declined since the peak in 2021 and total funding is driven by mega deals like Anduril's $1.5B, Helsing's $450M, Saronic's $175M and Skydio's $170M rounds - indicating that the bar for early stage funding remains high.
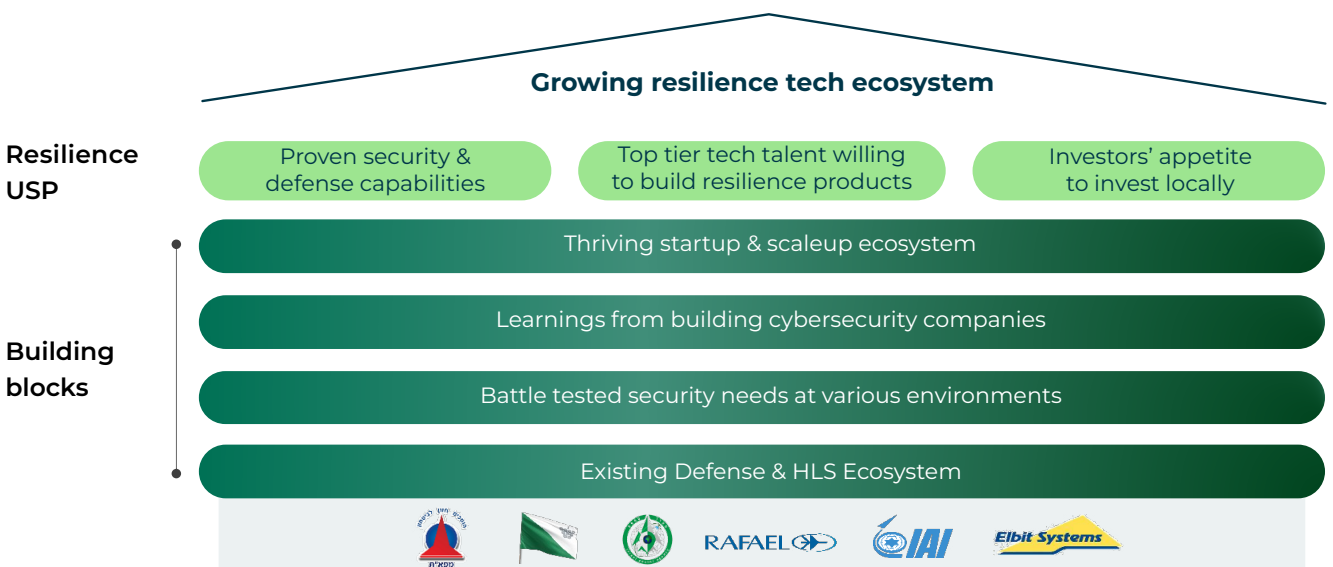
Why Israel: The Perfect Ecosystem for Defense Innovation

Israel has built a strong reputation as a global leader in defense technology, thanks to its distinctive combination of innovation, military expertise, and realworld evolving real-world security needs.

The country's defense tech ecosystem is undergoing a transformation, with promising startups led by combat veterans and reservists attracting significant seed investments. These companies are enhancing existing technologies while pioneering advancements in areas like autonomous systems, anti-drone systems, communication modules, and command and control platforms.

Global venture capital firms, like Sequoia, Lux Capital and Founders Fund are increasingly focusing on this thriving sector, underscoring Israel's strategic role in redefining modern defense technologies.

Growing resilience tech ecosystem

Resilience USP

Proven security & defense capabilities	Top tier tech talent willing to build resilience products	Investors' appetite to invest locally

Building blocks

Thriving startup & scaleup ecosystem

Learnings from building cybersecurity companies

Battle tested security needs at various environments

Existing Defense & HLS Ecosystem

RAFAEL   IAI   Elbit Systems

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1 A Deep Talent Pool with Military Experience

Israel's mandatory military service plays a crucial role in the country's tech ecosystem. Many Israeli entrepreneurs gain their first exposure to cutting-edge technology during their service in elite military units such as Unit 8200, which is often compared to the NSA in terms of its focus on cybersecurity and intelligence. These units provide young Israelis with hands-on experience in solving complex defense challenges, often under the pressure of real-world conflict. After completing their service, many of these individuals go on to found or join startups, bringing with them a deep understanding of both the technological and operational aspects of defense.

2 Go-to-Market Strategies: Targeting a Diverse Set of Buyers

Israel's defense industry is among the most advanced and innovative in the world. The country is one of the top ten exporters of defense technology, with a track record of delivering innovative solutions such as the Iron Dome missile defense system to advanced cybersecurity solutions. Israeli companies have consistently demonstrated their ability to develop technologies that meet the needs of modern militaries.
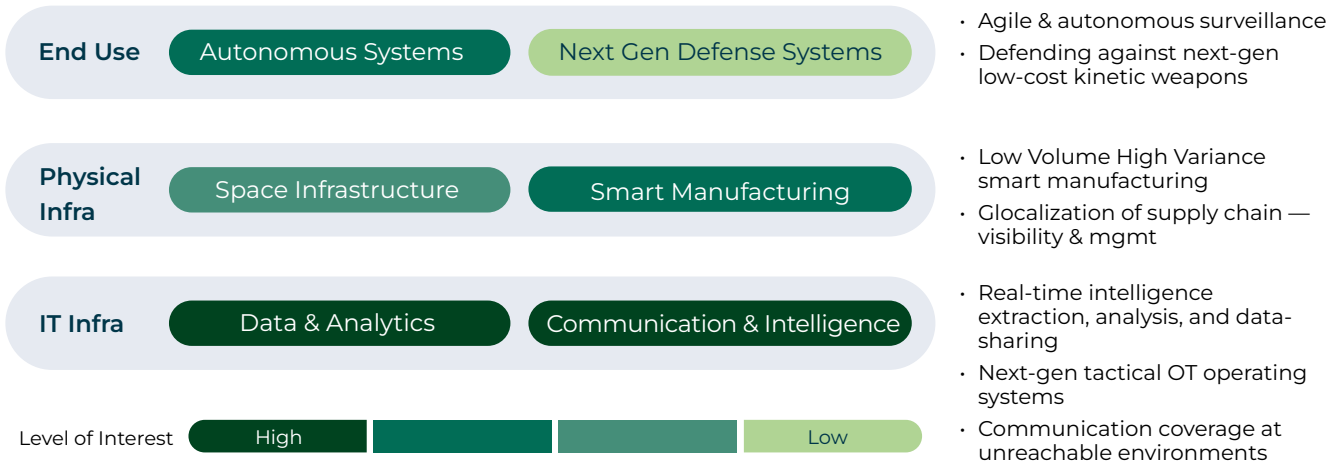
3 A Supportive Ecosystem for Startups

The Israeli government and its major defense primes — such as Rafael, Elbit Systems, and Israel Aerospace Industries (IAI) — play a significant role in nurturing the country's defense tech startups. In addition, Israel's VC community, including us at Viola Ventures, is increasingly focused on this sector, providing the capital, mentorship, and industry connections necessary to scale these startups globally. The presence of top-tier global investors who are setting up local offices in Israel is another testament to the strength and potential of the Israeli defense tech ecosystem.

Where We See Opportunities:
Resilience Tech and Beyond

Looking ahead, there are several high-growth areas in defense tech that present significant opportunities for both investors and founders.

End Use	Autonomous Systems	Next Gen Defense Systems

- Agile & autonomous surveillance
- Defending against next-gen low-cost kinetic weapons

Physical Infra	Space Infrastructure	Smart Manufacturing

- Low Volume High Variance smart manufacturing
- Glocalization of supply chain — visibility & mgmt

IT Infra	Data & Analytics	Communication & Intelligence

- Real-time intelligence extraction, analysis, and data-sharing
- Next-gen tactical OT operating systems
- Communication coverage at unreachable environments

Level of Interest: High —————————— Low

Autonomous Systems

Investment in autonomous systems focuses on agile surveillance and unmanned defense capabilities that operate with minimal human intervention. Startups should aim to provide scalable solutions to enhance both national security and commercial applications like autonomous drones or surveillance robots.

Next-Gen Defense Systems

The next generation of defense technologies must address low-cost, kinetic threats posed by adversaries. Early-stage companies that build defensive tools or countermeasures, particularly in missile defense, are well-positioned to disrupt legacy defense systems.

Space Infrastructure

The rise of private space ventures and satellite technologies makes space infrastructure a critical area. Companies focusing on space communication, earth observation, or logistics that reduce costs or improve data accessibility will be pivotal.

Smart Manufacturing

As global supply chains face disruptions, investing in low-volume, high-variance smart manufacturing is essential to create more resilient infrastructures. Startups working on the localization of manufacturing or AI-driven automation will thrive by offering agility in supply chain management.

Data & Analytics

The defense sector increasingly relies on real-time intelligence, making data extraction and analytics critical. Companies that offer AI-powered data solutions or cloud-based intelligence platforms will be key in providing faster, actionable insights for military and commercial use.

Communication & Intelligence

Resilient communication systems are crucial, especially in unreachable or conflict-prone environments. Early-stage ventures offering next-gen tactical communications or encrypted networks for remote or hostile areas can gain strong traction in both government and enterprise markets.

If you're a founder innovating in the defense or resilience tech spaces, we want to hear from you. Reach out to alexs@viola.vc to discuss how we can support and collaborate.