



Industry Commentary

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How the Increasing Demand for Innovation Impacts Investment Strategies in the National Security Sector

The nature of global conflict is shifting from decentralized action against non-state actors to state-on-state competition. This shift to Fifth Generation Warfare is nuanced and complex but, fundamentally, it is characterized by two lines of effort: the preparation for full-scale conflict using advanced, attributable, and networked weapons, and an extended, cold conflict centered around information operations and non-kinetic action.

As a result of this shift, new technology and new use cases for existing technology are emerging at an increasing pace. This is driving large strategic companies that focus on national security to move quickly to create or acquire innovative solutions to fill capability gaps.

To compete with large strategic acquirers and continue to generate strong returns, financial sponsors may need to re-evaluate the point in a company's corporate lifecycle at which they invest. Some private equity firms that have historically targeted mature companies with a long history of financial performance are already heading in that direction—investing in earlier stage companies.

"If you have a unique technology people are so worried that someone else is going to get it before they do that they're willing to go earlier and earlier in the corporate lifecycle," Justin Siken, founder of market intelligence firm HigherGov, told National Defense earlier this year.¹

In this article, William Blair's aerospace, defense, and government services team explains the market forces driving strategic acquirers to target earlier-stage companies and how sponsors might consider adapting to the trend.

[The High Stakes of Innovation and the Demand for Disruptive Technology](#)

The national security industry is dominated by a relatively small number of big players. These large companies face a host of challenges related to internal innovation and have a difficult time moving swiftly to develop disruptive technology.

Meanwhile, the demand for innovation—and the stakes involved—have never been higher. The White House made this plain in 2021's National Security Strategic Guidance, which stated that "the world's leading powers are racing to develop and deploy emerging technologies...that could shape everything from the economic and military balance among states to the future of work, wealth, and inequality within them."²

Policy has reinforced this strategic guidance and further emphasized the importance of innovation. Across the Department of Defense, new organizations like the Office of Strategic Capital and various innovation units are expressly focused on emerging and disruptive technology. Additionally, legislative measures like 2022's Chips & Science Act allocate direct funding to technology advancements that have

1. Source: [National Defense, "Private Equity Fueling Growth of Defense Mergers," February 27, 2023.](#)
2. Source: [White House Interim National Security Strategic Guidance March 2021.](#)

far-reaching implications for the national security industry including everything from semiconductors to artificial intelligence.³

Like most industries, many of the most important innovations in the national security space occur at smaller, more agile enterprises. This leads large, established companies to an acquire-to-innovate approach. Unlike most other industries, that approach is made particularly attractive by a unique set of industry factors - consolidation, a highly regulated market, and a complicated, slow-moving customer (the U.S. government). These factors conspire to make it difficult for small enterprises to sell their technology and easy for large companies to wield their contracting and business development expertise to accelerate the adoption of innovative technology.

Increasing Regulation's Compounding Effect on the Behavior of Strategic Acquirers

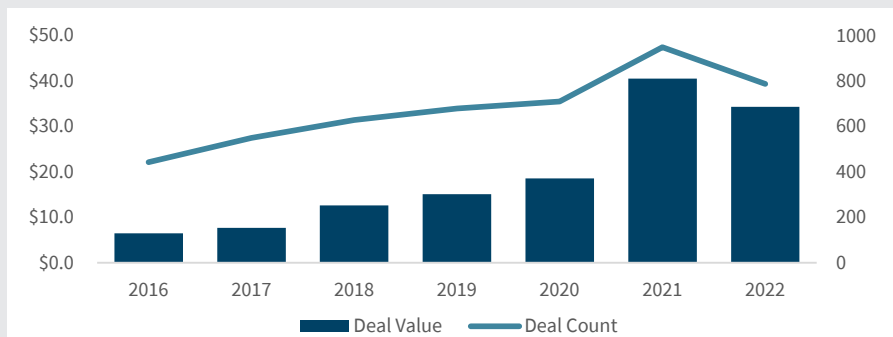
The past three decades have seen rapid consolidation in the national security space, especially among prime defense contractors. Defense primes numbered more than 50 in the early 1990s compared with only five today.⁴ This has resulted in greater antitrust scrutiny on mergers and other deals that involve large companies, further reinforcing the strategy of acquiring disruptive technology or early-stage companies instead of pursuing large, industry-transforming mergers.

As just one example, the Federal Trade Commission recently sued to block Lockheed Martin's \$4.4 billion acquisition of Aerojet Rocketdyne Holdings Inc. (founded in 1942), a manufacturer of space propulsion systems, citing the need to maintain competitive pressure.⁵ But Raytheon Technologies' purchase of Blue Canyon Technologies (founded in 2008), a privately held small satellite maker, for about \$350 million in tax benefits⁶ did not face the same kinds of regulatory pressures.

What Recent Deal Activity Tells Us

Venture Capital Deal Activity in National Security Technology

(\$ in Billions)⁷



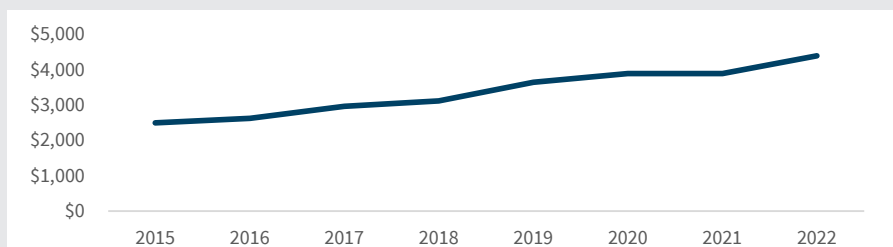
Setting aside 2022's broad market disruption, there has been an uptick in spending for venture capital investment in the national security space, as noted in the chart above. The data shows that venture capital, despite stigmatizing the national security space for years, is increasingly recognizing the potential for early-stage companies to impact the national security landscape and generate above average returns. Private equity firms should register this shift and consider following suit (if they haven't already).

Policy changes further highlight the emerging awareness of the critical role small firms play in the national

security landscape with Pentagon policy expressly supporting small companies that develop national security technology. While the Department of Defense's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs have faced some just criticism, they have also distributed billions of dollars to thousands of small companies. Those awards have facilitated the continued development of technology and telegraphed the Pentagon's commitment—at least in principle—to supporting innovation in the small business community.⁸

SBIR & STTR Value Obligated

(\$ in Millions)⁹



The government's sustained investment in small businesses and the influx of venture and growth-stage capital in the national security space, taken together, are a threat to the stable positions larger national security firms have long enjoyed. These larger companies have responded in-kind by acquiring younger companies and then developing them from within. To wit, between 2016 and 2022, \$135.3 billion was invested in nearly 5,000 national security technology deals, with 71% of venture capital exits classified as acquisitions.¹⁰

3. Source: [White House Fact Sheet, August 9, 2022.](#)

4. Source: [Department of Defense Report, State of Competition within the Defense Industrial Base, February 2022.](#)

5. Source: [Federal Trade Commission News Release: "FTC Sues to Block Lockheed Martin Corporation's \\$4.4 Billion Vertical Acquisition of Aerojet Rocketdyne Holdings Inc." January 25, 2022.](#)

6. Source: [FactSet financial data and analytics.](#)

7. Source: PitchBook Data, Inc.; *Data has not been reviewed by PitchBook analysts.

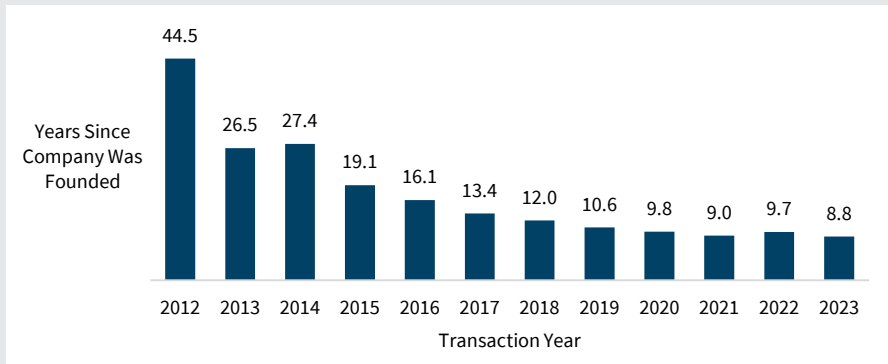
8. Source: [U.S. Department of Defense Press Release, "DoD Announces First Set of Projects to Receive Funding From the Pilot Program to Accelerate the Procurement and Fielding of Innovative Technologies \(APFIT\)," July 19, 2022.](#)

9. Sources: [SBIR.gov](#)

10. Source: PitchBook Data, Inc.; *Data has not been reviewed by PitchBook analysts.

Average Age of National Security Technology Companies at Time of Acquisition

(in Years)¹¹



Driving Value Through National Security Markets in the Near Term

All these data points serve to illustrate the importance earlier-stage companies play in the national security industry, particularly as strategic acquirers increasingly target earlier-stage companies to satisfy their goals for innovation and technology development. These trends show no signs of slowing, and neither does the broader national security technology market, which is on track for strong growth over the next few years, from \$76.1 billion in 2022 to \$184.7 billion in 2027.¹²

Looking at the average age of national security companies at the time of acquisition over the past decade paints a clearer picture of this trend. As the chart above shows, national security technology companies acquired in 2022 were 78% less mature (defined as the years since the company's

founding) than similar companies acquired in 2012. This trend has accelerated so far through May YTD 2023, with the average age falling to 8.8 years. The youngest companies acquired have been focused on space or artificial intelligence.

Given these factors, financial sponsors should, at minimum, monitor the space closely and look for opportunities to buy earlier-stage national security companies to get ahead of strategic acquirers and compete with financial sponsors who have already adopted a more aggressive posture. Doing so could lead to strong value and more opportunities down the line.

Select William Blair Transactions

Bernhard Capital Partners

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Enabling Technology

a portfolio company of

WINDJAMMER CAPITAL

has been acquired by

Qconnect
a portfolio company of Arcline Investment Management

BIGBEAR.AI
DECISION DOMINANCE

a portfolio company of

ae Industrial Partners

has merged with

GigCapital4™

FEDERAL RESOURCES

has been acquired by

NOBLE
MISSION. POSSIBLE.

SIONYX

has been acquired by

DC CAPITAL PARTNERS
Domain Expertise | Market Focus | Strategic Principals

ORBIS OPERATIONS

has been acquired by

McNally CAPITAL

abl space systems

Capital Raise

AEVEX AEROSPACE

has been acquired by

MDP COVANT

Covidence
miniature surveillance solutions

has been acquired by

EMK Capital
Enterprise Management Knowledge

To learn more about the evolution of the national security industry, please do not hesitate to contact William Blair's aerospace, defense, and government services team.

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11. Source: PitchBook Data, Inc. and WB Internal Databases; *Data has not been reviewed by PitchBook analysts.

12. Source: PitchBook Data, Inc.; *Data has not been reviewed by PitchBook analysts.