



Investing in Defense: How an In-Q-Tel for DoD Can Help America Win the New Technology Race

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The Soviets shook the world in 1957 when they launched a beachball-sized satellite into space. This “Sputnik moment” showed America it was falling behind its Cold War rival, so in response, President Dwight D. Eisenhower created the Defense Advanced Research Projects Agency (DARPA). By investing in technology, America not only landed men on the moon, but won the Space Race and eventually the Cold War.

Today, however, as Walter Copan and Andrei Iancu argue, we are facing a new Sputnik moment that “is harder to see. It is not about just one critical technology, but many, and several are much harder to visualize than a rocket soaring into the sky.”¹ China plans to invest one-and-a-half trillion dollars in paradigm-shifting, emerging technologies, and the Chinese Communist Party’s (CCP) authoritarian state-capitalism and growing ambitions have re-awakened Washington.² Eric Schmidt’s Special Competitive Studies Project recently reported that “the United States could lose the competition [with China] if dramatic action is not taken across a broad range of public policy arenas to invest in U.S. technology advantages, strengthen the techno-industrial base, and deploy disruptive technologies democratically and responsibly.”³ Congress recently passed the bipartisan CHIPS and Science Act⁴ and the Inflation Reduction Act.⁵ But we must do more.

The Department of Defense (DoD) should partner with a not-for-profit venture capital firm: an In-Q-Tel (IQT) for DoD.⁶ Doing so will catalyze additional venture funding to grow the defense startup base, make it easier for startups to work with DoD, and create the opportunity to earn a return on the money DoD deploys. At first, the firm should have a budget of \$75 million and report directly to the Deputy Secretary in the Office of the Secretary of Defense. This follows the original DIUx reporting structure developed under the late Secretary of Defense Ash Carter. By remaining outside the walls of the Pentagon, it can more easily avoid the bureaucratic gravity that has hamstrung similar initiatives. Because it will make equity investments and reinvest returns, it could ultimately be free from the notoriously unpredictable congressional appropriations cycles that could hamper its success and stability.

Although DARPA has led to incredible inventions like the internet and GPS, an IQT for DoD will better drive research from the lab to the battlefield.⁷ While Americans and the DoD have benefited from these investments, the taxpayer didn’t receive a return on its investment. The ability to earn a return on investment also helps incentivize and attract a strong venture team and help put the firm on a path to self-sustainment over the long run.

And while DARPA has yielded some valuable products, it has struggled to deliver on a consistent basis. We hear often about their successful development of the internet and stealth technology, but less about examples like the failed “Future Combat Systems”: a DAPRA-backed program within the Army that wasted millions of dollars of investment and resulted in a cancelled program.⁸ Additionally, technology cycles are moving faster today, but DARPA still focuses on technologies decades out, making it harder for it to transition technology out of the lab and into the market quickly enough. The former head of Air Force contracting General Cameron Holt recently said that China is “about five to six times faster than us in acquisition” and that we will “lose” if we don’t increase the speed in our acquisition process.⁹ An IQT for DoD can help accelerate the process of bringing new technologies to market faster.

An IQT for DoD will also help early-stage startups overcome the infamous “valley of death.” Former Under Secretary of Defense for Policy Michèle Flournoy describes what startups experience: “So you’ve done a great prototype... And

then they say, ‘Well, the next time we can actually insert you into the program and for a production contract is...two and a half years from now.’...And so they get pressure from their investors to forget the national security side, just go commercial.”¹⁰ Startups can’t wait for a drawn-out process and need a steady stream of funding from DoD.

If DoD were to invest in a startup, it would send an important signal to other venture capital firms about that company’s potential and open the door to additional investments. In *The Kill Chain*, Christian Brose explains why billions of venture funding sit on the sidelines: “More of that money does not flow into the defense sector because most venture capitalists have come to believe that defense is a lousy investment.”¹¹ DoD investing in a startup would validate DoD’s purchase intent, and because the firm would be run by professional investors, sitting outside of the Pentagon, it validates the company’s financial potential. For example, the Small Business Innovation Research (SBIR) program provides less than \$3 billion a year to spur innovation in defense, but the venture industry has more than \$400 billion under management, making it higher leverage. This helps explain why every dollar the Central Intelligence Agency’s (CIA) IQT invests in a startup leads to an additional \$18 in private investment.¹² Additionally, SBIR is limited in what it can do to help startups at the Phase 1 and II levels—the exact stage that an IQT for DoD would be well suited to help with.

By following the IQT model at the CIA, DoD could appeal to and work with new founders and companies. Most importantly, IQT says that 50% of its investments led to the U.S. government adopting new technologies.¹³ This is in part because IQT helps companies secure real contracts, not just SBIR grants, and works with other venture capital firms to help startups receive funding.

While challenges still exist, important initiatives such as the Defense Innovation Unit (DIU) have begun to improve the process. DIU has a decent transition rate of 50%, meaning half of the time, it has been able to help a company’s prototype turn into a successful DoD contract. Despite this success, moving it within the Pentagon’s bureaucracy was a mistake because it stifled innovation and flexibility. It also spends the bulk of its budget of \$42 million on administrative and personnel costs instead of making equity investments in startups. Despite its challenges, DIU is an important piece of the puzzle, but it alone is not enough.

Not only will Congress need to authorize and fund the IQT for DoD, but also Pentagon leadership pushing for its success is essential. The Army Venture Capital Corporation (AVCC), for example, which gave the Army authorities to make investments, flopped because the Army wanted nothing to do with it. It also had a fee structure that was double the industry standard, which de-incentivized taking risks. For IQT at DoD to succeed, it will require the top brass at DoD to embrace this idea and learn from why AVCC failed.

Some will argue that an IQT for DoD will be redundant to existing institutions that already exist. Do we really need another one? Yes. None of the other many entities are DoD-wide ventures that sit outside of the DoD chain of command that can make equity investments with a focus of seeing successful returns in the long run and shipped products.

So which firm should DoD partner with? Gilman Louie, the first CEO of IQT, recently created a new fund called America’s Frontier Fund to act like an IQT across the U.S. government. This is an important effort and has tremendous potential to help facilitate the investment we need in technologies of the future. Other good candidates exist, like Marquee Ventures, which focuses solely on investing in defense startups. DoD should have a fair and open process for deciding who to work with and should explore the possibility of partnering with multiple firms.

The U.S. cannot risk falling technologically behind the CCP’s surveillance state and must ensure that our military is the most technologically capable, especially in an era where AI and quantum computing are as paradigm shifting as nuclear weapons and space satellites. Past attempts of solving this problem failed because they lived within the Pentagon bureaucracy, were tied to the unreliable congressional appropriations process, could not bring technology out of the lab quickly enough, and could not make equity investments in startups. An IQT for DoD will ensure the twenty-first century is an American one, and that the technology of the future is developed in a free and open society, for a free and open world. This is our Sputnik, and the moment is now.

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- ¹ Walter Copan and Andrei Iancu, “Will America Squander Its New Sputnik Moment?” Center for Strategic and International Studies, January 19, 2021, <https://www.csis.org/analysis/will-america-squander-its-new-sputnik-moment>.
- ² Liza Lin, “China’s Trillion-Dollar Campaign Fuels a Tech Race With the U.S.,” *The Wall Street Journal*, June 11, 2020, <https://www.wsj.com/articles/chinas-trillion-dollar-campaign-fuels-a-tech-race-with-the-u-s-11591892854>.
- ³ “Special Competitive Studies Project Releases First Report,” Special Competitive Studies Project, September 12, 2022, <https://www.scsp.ai/2022/09/special-competitive-studies-project-releases-first-report-sept-12-2022/>.
- ⁴ A \$280 billion dollar investment into science research, semiconductor chips, and emerging technologies.
- ⁵ A \$369 billion investment in clean energy technology.
- ⁶ IQT has been successful for the CIA and should serve as a model for DoD. IQT was created in 1999 and has now made over 500 investments ranging from \$500,000 to \$3 million, with all returns sent back to the fund for future investments. It has amassed almost \$1 billion in assets and seventy percent of its portfolio companies had never worked with the government before.
- ⁷ Jane McCallion, “10 Amazing DARPA Inventions: How They Were Made and What Happened to Them,” IT Pro, June 15, 2020, <https://www.itpro.com/technology/34730/10-amazing-darpa-inventions>; Budget, DARPA, <https://www.darpa.mil/about-us/budget#:~:text=The%20President's%20FY2023%20budget%20request,enacted%20budget%20was%20%243.868%20billion>.
- ⁸ Christopher Permin et al, “Lessons from the Army’s Future Combat Systems Program,” RAND Corporation, 2012, <https://www.rand.org/pubs/monographs/MG1206.html>.
- ⁹ Eric Lofgren, “China’s Weapons Acquisition Cycle 5-6x Faster than the United States — ‘We Are Going To Lose’ If We Don’t Change,” Acquisition Talk, July 6, 2022, <https://acquisitiontalk.com/2022/07/chinas-weapons-acquisition-cycle-5-6x-faster-than-the-united-states-we-are-going-to-lose-if-we-dont-change/>.
- ¹⁰ Steve Blank, “Technology, Innovation, and Modern War – Class 10 – The DOD and Modern War — Michèle Flournoy,” November 5, 2020, <https://steveblank.com/2020/11/05/technology-innovation-and-modern-war-class-10-the-dod-and-modern-war-michele-flournoy/>.
- ¹¹ Christian Brose, *The Kill Chain: Defending America in the Future of High-Tech Warfare*, (New York: Hachette Books, 2020).
- ¹² “How We Work,” In-Q-Tel, <https://www.iqt.org/how-we-work/>.
- ¹³ “How We Work,” In-Q-Tel, <https://www.iqt.org/how-we-work/>.