



October 3, 2024

The Honorable Jeanne Shaheen
Chair, Senate Small Business Committee
U.S. Senate
Washington, DC 20510

The Honorable Roger Williams
Chairman, House Small Business
Committee
U.S. House of Representatives
Washington, DC 20515

The Honorable Frank Lucas
Chairman, House Committee on Science
Space & Technology
U.S. House of Representatives
Washington, DC 20515

The Honorable Joni Ernst
Ranking Member, Senate Small
Business Committee
U.S. Senate
Washington, D.C. 20510

The Honorable Nydia Velazquez
Ranking Member, House Small
Business Committee
Washington, D.C. 20515

The Honorable Zoe Lofgren
Ranking Member, House Committee
on Science Space & Technology
Washington, D.C. 20515

Dear Chairs Shaheen, Williams, Lucas, and Ranking Members Ernst, Velazquez, Lofgren:

The Alliance for Commercial Technology in Government, the Software in Defense Coalition, and the National Venture Capital Association together represent hundreds of leading technology startups and small businesses dedicated to our nation's security. In an era of strategic competition among technologically advanced powers, the contribution of state-of-the-art products from the commercial sector, where over 90% of all US R&D occurs, is critical to military deterrence and supremacy.

To maintain our national advantage, the Department of Defense ("DoD") must be the indisputable first and best investor and customer for any commercial technology innovator, anywhere in the world. The Small Business Administration's Small Business Innovation Research (SBIR) program, known as America's Seed Fund, is key.

The Alliance's members use SBIR awards to amplify investment from friends, family and individual investors, venture capital, and other funding sources to help America keep pace with her competitors including China, which has a sophisticated and well-funded defense and dual-use technology sector.

For more than 40 years, SBIR has provided seed capital to some of our nation's greatest companies, including Anduril, Aerovironment, AMGEN, Broadcom, Ginkgo Bioworks, IRobot, JDS Uniphase, Millennium Pharmaceuticals, Qualcomm, Symantec and ViaSat. Our members leverage SBIR awards to commercialize state-of-the-art defense and dual-use capabilities and get them to the warfighter, yielding to our nation a return on investment many times over. They generate economic growth and tax revenue, build America's technology infrastructure, and train the next generation of innovators.

As SBIR reauthorization approaches in FY2025, our members as well as top analysts in and outside government have developed recommendations to better ensure that the \$4 billion of taxpayer dollars invested per year under SBIR seeds technologies with the highest potential impact in the commercial and defense markets.

Among other changes, Congress should ensure more funding is awarded to companies with a viable commercial and defense product, rather than SBIR mills that treat the program as a business in itself. The SBIR program better serves taxpayers by funding development of technology with a clear potential commercial and defense market.

Changes in the SBIR award process would make it more consistent in and across agencies and less cumbersome for small technology startups. We further recommend Congress formalize a Phase III program that would supercharge investment in the most promising technologies by matching transition or end-user procurement dollars, as seen in the Air Force's highly successful STRATFI and TACFI programs. Notable STRATFI awardees include Anduril, Archer, Boom Technologies, GoTenna, Hermeus, Orbit Fab, Reveal Technology and Slingshot Aerospace. Those matching funds would finally eliminate what defense technology start-ups call "the Valley of Death" — the two to five year gap between the successful demonstration of a working prototype and the beginning of the purchase. See our recommendations in greater detail, below.

These recommendations are well supported by the Defense Innovation Board's (DIB) report, [*Terraforming the Valley of Death*](#), The Atlantic Council Commission on Defense Innovation Adoption Final Report on PPBE reform, and several recent GAO studies including [*Small Business Research Programs: Agencies Broadly Solicit Ideas, but Clearer Guidance Could Improve DOD Efforts. Most Agencies Allow Applicants to Define Needs and Propose Solutions*](#), and [*Increased Performance Standards Likely Affect Few Businesses Receiving Multiple Awards*](#).

In *Terraforming the Valley of Death*, the DIB interviewed more than 300 companies, including many that had successfully graduated from Phase II. Common themes of criticism of the SBIR program included that solicitations appeared aimed at specific, well-connected companies; timelines and formats were inconsistent across awarding agencies; guidance and feedback from the agencies was poor; the demand for large, complex proposals is burdensome given the low probability of winning, and companies would prefer a more flexible format with less onerous preparation; and many others.

We appreciate your time and attention to this matter of national security and look forward to discussing it further.

Recommendations:

- 1) **Bridge the Valley of Death by formalizing a Phase III SBIR program that:**
 - a) is modeled on Air Force's highly successful STRATFI Program,
 - b) funds Phase III contracts from a combination of these three pools (similar to STRATFI):
 - i. Transition Dollars (a combination of SBIR (as used in TACFI or STRATFI), DIU (including Hedge Portfolio), RIF, RDER, RCCTO, RRTO, SCO, APFIT, FCT, Defense Modernization Account (DMA), or any other similar type funding)
 - ii. End-user customer procurement dollars (direct funding from DoD, or funding already awarded to a prime contractor under an existing program). Our members support setting up a standing budget from end-user programs.
 - iii. Outside capital (VC, private equity, commercial loans, or past and future commercial sales)
 - c) includes incentives for primes to convert in-house development dollars to outside commercial purchases,
 - d) provides instant requirement generation for surprise innovations, such as a novel solution to a problem that is unsolved or a new approach to an antiquated existing requirement,
 - e) includes broad Program Element line items for a "portfolio" that encompasses the new product
 - f) provides a standard contract form and process for proceeding from Phase II to Phase III
 - g) creates an online product catalog with pre-awarded contracts for ongoing sales for all Phase II awardees who successfully commercialize

- 2) **Require that a minimum percentage of SBIR funding go through Open Topics:** We recommend at least 50% of all SBIR funding be dedicated to Open Topics, which invite bidders to describe problems they have discovered and solutions they have developed, and which augment and often surpass in impact the priorities the DoD advanced on its own.

The 2022 SBIR reauthorization required all DoD agencies to have at least one Open Topic per year, but [in a Sept. 30, 2024 report](#), the Government Accountability Office found that many ostensible Open Topics seem to be little more than reworked conventional topic descriptions, “narrowly defining needs and suggesting potential solutions”, and thereby “miss opportunities to collect innovative proposals.” Conventional topics typically focus on well-understood problems in existing systems and can suggest a preferred technical approach targeted toward a favored potential bidder. That format gives preference to incumbents and SBIR mills against commercial innovators. Open Topics, GAO found, “can attract more diverse applicants and promote competition.”

Treating SBIR funding as supplemental contract funds rather than high-payoff IP investment limits innovation in solving high-level challenges. More than half of all Air Force SBIR awards now come via Open Topics, confirming that unrestricted calls for innovation produce more impactful ideas from a broader range of non-traditional respondents. SBIR’s success requires enforcement of Open Topic legitimacy, a minimum funding level, and an independent third-party validation that Open Topics conform to GAO’s definition. In addition, we were delighted by the GAO’s determination that participation in Open Topics by companies owned by socially and economically disadvantaged groups was 3 percentage points higher than conventional topics (10% vs 7%).

- 3) **Institute and enforce a “Shot Clock” for award notification and contract award:**
 - a) 30 days for Phase I notification of award, and 60 days to issue contract
 - b) 60 days for Phase II notification of award and 60 days to issue contract
 - c) If an agency fails to award in a timely manner, its funding for the following year is reallocated to other agencies that are meeting the timeline.
- 4) **Ensure clear, consistent standards in Foreign Malign Influence Assurance.** The same rules must apply to all industrial base companies performing defense or intelligence work.
- 5) **Direct FAR Council to put SBIR Phase III authority in the FAR.**
- 6) **Enforce the market research requirements of FASA, 10 USC 3453, and FAR Part 10:**
 - a) Conduct expeditionary tech scouting, maintain a database of commercial technologies and SBIR products, and provide outsourced market research services for PMs and contracting officers who lack the capacity or desire to seek out commercial items.
 - b) Recommend program strategies that maximize participation of multiple vendors, use of open standards, and commercial content.
 - c) Audit market research performed by PMs or contracting officers on behalf of DoD.
 - d) Implement a new protest process for FAR Part 10 violations.
 - e) Create career incentives for acquisition professionals to find commercial items and SBIR products that are “close enough”, pursuant to FAR 10.001(a)(3)(ii), and that deliver the capability faster, at a lower cost, or with improved capabilities compared to the original plan.
- 7) **Eliminate “SBIR Mills”,** companies that treat SBIR as perpetual contract labor rather than commercial product investment.

According to an [analysis of SBIR awards data by Amanda Bresler](#), the top 25 companies received 18% of all DoD Phase I/II funding, and of those, only four of those generated more in DoD Phase III contracts than they received in non-dilutive Phase I/Phase II awards. Twenty of those 25 companies have been receiving DoD SBIR awards for more than 20 years. That suggests that almost a fifth of all SBIR funding goes to companies that do not create commercially viable products, but come back to the SBIR funding spigot year after year to consume funding that could otherwise invest in future commercially viable defense capabilities. We recommend the program:

- a) Implement meaningful commercialization benchmarks that unambiguously convey the message that SBIR is investment capital, not a business unto itself, and that the government expects companies to eventually graduate. We recommend:
 - i. After 25 Phase IIs, a company must demonstrate a greater than 1:1 gross revenue ratio of all non-SBIR sources directly resulting from SBIR investments against the total lifetime SBIR funding the company has been awarded
 - ii. Failure to meet the benchmark results in company not being permitted to submit any new Phase I proposals until they exceed the benchmark
 - iii. Above conditions have no time limits or agency separation, but apply to the total from all agencies
 - b) Reduce maximum allowable headcount to 200 employees for a Phase I proposal and 500 for Phase II
 - c) Expand agency use of Technical and Business Assistance (TABAs) and require agencies to permit awardees to select their own vendors rather than funneling them to agency-selected contractors.
- 8) Create proposal evaluation criteria and contract incentives for prime integrators that leverage open standards and commercial technology to increase the passthrough fee structure when buying commercial items that displace in-house custom development labor.**
- 9) Implement and maintain a standard set of DoD-wide proposal formats**, so that individual agencies do not impose unique proposal requirements that discourage young, growth-oriented firms from participating.
- 10) Require proposal evaluation teams to have evaluators with commercial market expertise to legitimize the commercial value evaluation criteria.** Participants have observed that conventional topics call for contract labor that has no commercial potential, effectively coopting SBIR funds for existing programs. Technical evaluators who are unqualified to judge the commercial value of a product, or worse yet, don't really care, are often in charge of commercial assessment.
- 11) Strictly enforce use of open interoperability standards.** While open interoperability standards are mandated by law (i.e., National Technology Transfer and Advancement Act of 1995, OMB A-119), prime contractors often circumvent them to create stovepipes that keep out third-party commercial plug-in products. We recommend a legislative proposal to more strictly enforce the Clinger-Cohen Act and prohibit proprietary interfaces for subsystems and software.
- 12) Commission GAO to study the common characteristics of the most successful companies to participate in the SBIR program as measured by:**
- a) Ratio of total commercial revenue from SBIR products to SBIR investment
 - b) IR&D investment that the company has contributed to government applications
 - c) Federal tax revenue the company has generated
 - d) Jobs a company has created that stemmed from SBIR investment
 - e) Number of spinout companies resulting from SBIR investment
 - f) Private investment attracted to augment SBIR investment

- g) Compare performance of the top 25 SBIR companies of all time, as measured above, with average SBIR awardees, and the 25 companies that have been awarded the most SBIR funding
- 13) **Commission a GAO study on what a “small business” is in 2024 as compared to 1982, when the SBIR program was established by Congress.** The study should consider:
- a) Appropriate headcount as a function of product viability, revenue, and profitability
 - b) Time from founding of company to first product revenue
 - c) Necessary investment capital from all sources to achieve breakeven

Thank you so much for your service in the 118th Congress.

Sincerely,

Software in
Defense Coalition
Jane Lee
jane@softwareindef
ense.org

Alliance for Commercial Technology in
Government
Warren Katz, Chairman
wkatz@alum.mit.edu

National Venture Capital
Association
Ashlyn Roberts
Senior Director of
Government Affairs
aroberts@nvca.org

cc: House Appropriations Subcommittee on Defense
House Select Committee on the Chinese Communist Party
House Oversight and Accountability Committee
Senate Appropriations Subcommittee on Defense
Senate Committee on Homeland Security and Governmental Affairs