



ACQUISITION RESEARCH PROGRAM SPONSORED REPORT SERIES

SBIR/STTR Commercialization Phase III: Transition Barriers

June 2024

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Prepared for the Naval Postgraduate School, Monterey, CA 93943

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ABSTRACT

The purpose of this mixed methods research project is to identify causes of the valley of death that prevent small businesses and the Department of the Air Force organization, AFWERX, from achieving a successful Small Business Innovative Research/Small Business Technology Transfer Phase III transition.

Specifically, what are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transitions within the AFWERX organization and what are the current Phase III reporting practices and are there potential gaps in data collection?

The results from the questionnaires and interviews show there are specific areas that can be addressed to eliminate some of the barriers this research identifies. Specifically, advocating for the recent Congressional proposed reform to the Planning, Budgeting, Programming, and Execution Model to address funding gaps and enhance agility in acquiring current technologies such as the creation of an agile innovation fund. Additionally, research emphasizes increasing awareness and understanding of Phase III among all stakeholders within the Department of the Air Force.

There is an ongoing emphasis within the DAF on accurately recording Phase III awards in the Federal Procurement Data System – Next Generation, which serves as the federal government’s data repository. A recommendation to FPDS-NG requests an additional field be added to better track the progress of Phase III awards.



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ABOUT THE AUTHORS

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We also want to thank the DAF for the sponsorship of our Naval Postgraduate School master's program and this Capstone effort. The opportunity we had to learn from professors from various backgrounds and experiences from our fellow students from all the different services enriched our experience and our lives.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	XV
INTRODUCTION	1
A. PROBLEM STATEMENT	1
B. RESEARCH QUESTIONS	4
C. METHODOLOGY	5
D. LIMITATIONS AND SCOPE.....	7
E. ORGANIZATION OF THE CAPSTONE.....	7
BACKGROUND	9
A. SBIR/STTR BACKGROUND	9
B. AFWERX BACKGROUND	11
C. THEORETICAL FRAMEWORK.....	15
D. CONCEPTUAL FRAMEWORK.....	15
E. PREVIOUS RESEARCH	16
LITERATURE REVIEW	17
A. RESEARCH THEMES AND SYNTHESIS	17
1. Commercialization Barriers	17
2. Government Policy and Processes	19
B. GAPS IN THE LITERATURE.....	22
C. SUMMARY AND CONCLUSION	23
METHODS, DATA RESULTS, AND ANALYSIS	25
A. RESEARCH METHODS	25
1. Research Design.....	25
2. Participants.....	25
3. Data Collection Procedures.....	26
4. Ethical Considerations	26
5. Limitations	27
B. WHAT ARE THE CAUSES AND THE POTENTIAL SOLUTIONS TO BARRIERS PREVENTING SMALL BUSINESSES AND ACQUISITION PROFESSIONALS FROM ACHIEVING PHASE III TRANSITION WITHIN THE AFWERX ORGANIZATION?	27
1. Questionnaire Results	27
2. Interview Summaries	43



C.	WHAT ARE THE CURRENT PHASE III REPORTING PRACTICES AND ARE THERE POTENTIAL GAPS IN DATA COLLECTION?.....	51
CONCLUSIONS, RECOMMENDATIONS, AND POTENTIAL FUTURE RESEARCH		55
A.	PRIMARY RESEARCH QUESTION CONCLUSIONS	55
1.	Causes (Based on Findings).....	55
2.	Potential Solutions (Based on Findings).....	56
B.	SECONDARY RESEARCH QUESTION CONCLUSIONS	57
1.	Reporting Practices	57
2.	Data Collection Gaps	57
C.	OVERALL CONCLUSIONS.....	58
D.	RECOMMENDATIONS	60
1.	Funding	60
2.	Awareness and Education.....	61
3.	FPDS-NG Additional Data Collection.....	63
4.	Selected/Not-Funded Tool	63
E.	POTENTIAL FUTURE RESEARCH	64
APPENDIX A: RAW DATA: ACQUISITION PROFESSIONAL QUESTIONNAIRE RESPONSES BY QUESTION.....		67
APPENDIX B: RAW DATA: SMALL BUSINESS QUESTIONNAIRE RESPONSES BY QUESTION		97
APPENDIX C: PIE CHARTS SUMMARIZING ACQUISITION PROFESSIONAL QUESTIONNAIRE RESPONSES BY QUESTION.....		171
APPENDIX D: PIE CHARTS SUMMARIZING SMALL BUSINESS.....		179
LIST OF REFERENCES		187



LIST OF FIGURES

Figure 1.	SBIR/STTR Impact to Small Business. Source: Miller (2023).	4
Figure 2.	SBIR/STTR Three-Phase Process. Source: SBIR (2020).....	11
Figure 3.	AFVentures SBIR/STTR Phases. Source: AFWERX (n.d.-b).	12
Figure 4.	STRATFI/TACFI Matching Options. Source: AFWERX (n.d.-c).....	14
Figure 5.	Award Amounts for 2024 Annual STRATFI/TACFI Call. Source: AFWERX (n.d.-c).	14
Figure 6.	Conceptual Framework.....	16
Figure 7.	Email Response Rate	28
Figure 8.	Small Business Respondents: Award Fiscal Year	29
Figure 9.	Acquisition Professional Respondents: Award Fiscal Year	29
Figure 10.	Functional Area of Acquisition Professional Respondents	30
Figure 11.	Breakdown of Other.....	30
Figure 12.	Question 2: Acquisition Professional Questionnaire Response Summarization	32
Figure 13.	Question 6: Acquisition Professional Questionnaire Response Summarization	35
Figure 14.	Question 1: Small Business Questionnaire Response Summarization	37
Figure 15.	Question 3: Small Business Questionnaire Response Summarization	40
Figure 16.	Question 6: Small Business Questionnaire Response Summarization	42
Figure 17.	Screenshot of FPDS-NG Data Entry Example	52
Figure 18.	Screenshot of SBIR.gov Award Data Report Filters	53



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LIST OF ACRONYMS AND ABBREVIATIONS ¹

AAS	Assisted Acquisition Services
ACE	Acquisition Center of Excellence
AFMC	Air Force Materiel Command
AFRL	Air Force Research Laboratory
AFRL/RGK	AFWERX Contracting Division
BAA	Broad Agency Announcement
CAGE	Commercial and Government Entity
CRS	Congressional Research Service
CSO	Commercial Solutions Opening
DAF	Department of Air Force
DAFFARS	Department of Air Force Federal Acquisition Regulation Supplement
DAU	Defense Acquisition University
DISA	Defense Information System Agency
DOD	Department of Defense
FAQ	Frequently Asked Questions
FAR	Federal Acquisition Regulation
FY	Fiscal Year
FPDS-NG	Federal Procurement Data System–Next Generation
GAO	Government Accountability Office
HSR	Human Subjects Research
IRB	Institutional Review Board
MRL	Manufacturing Readiness Level
N/A	Not Applicable



O&M	Operations & Maintenance
PCO	Procuring Contracting Officer
PEO	Program Executive Officer
PII	Personally Identifiable Information
PMR	Program Management Review
PPBE	Planning, Programming, Budgeting & Execution
R/R&D	Research/Research and Development
SAM	System for Award Management
SBA	Small Business Administration
SBIR	Small Business Innovation Research
SES	Senior Executive Service
SME	Subject Matter Experts
S&T	Science and Technology
STRATFI	Strategic Funding Increase
STTR	Small Business Technology Transfer
TACFI	Tactical Funding Increase
TBD	To Be Determined
TPOC	Technical Point of Contact
TRL	Technology Readiness Level
TTP	Tactics, Techniques, and Procedures
UFR	Unfunded Requirement

¹ Note: AFWERX is not an acronym.



EXECUTIVE SUMMARY

The Department of the Air Force (DAF) is steadfast in its commitment to supporting the warfighter, an overarching mission that remains paramount. In an era marked by rapid technological advancement, the imperative for agile acquisition methods has become increasingly evident. The protracted cycles typical of government contract awards are simply inadequate to match the pace of evolving technology. To ensure that our warfighters remain equipped with cutting-edge tools and capabilities, expediting the acquisition process is of vital importance.

“The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are highly competitive programs that encourage domestic small businesses to engage in federal Research/Research and Development (R/R&D) with the potential for commercialization” (Small Business Administration [SBA], n.d., para. 1). These programs offer crucial funding avenues aimed at translating innovative concepts into tangible technological solutions for the warfighter, all while furnishing the government with agile acquisition processes to swiftly recognize and reward such efforts. These programs are administered across three distinct phases; our research focuses specifically on the transition to Phase III. According to the Small Business Administration, “the objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I/II R/R&D activities” (SBA, n.d., paras 11–14). Of particular interest to our team is the phenomenon commonly referred to as the “valley of death.” “The ‘valley of death’ refers to the gap between Phase II and Phase III of the SBIR program, where many products and companies struggle to bridge the divide between research and commercialization” (Parts Life, Inc., 2023).

Within the DAF, AFWERX emerges as a prominent figure in the realm of SBIR/STTR contract awards, thus positioning itself as the focal point of our study. In reviewing the numbers during fiscal year (FY) 2022 to FY2024, the AFWERX organization awarded and executed 1,154 Phase I and Phase II contracts. However, at the October



2023 program management review for AFWERX, the organization reported less than 375 Phase III awards (AFWERX Contracting Division, 2023).

Our team chose to investigate two research questions to better understand why the valley of death exists and to formulate potential solutions to overcome or eliminate that gap. Our two research questions are:

- What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?
- What are the current Phase III reporting practices and are there potential gaps in data collection?

The research methodology employed in this report adopts a mixed-methods approach, deemed most suitable for the investigation at hand. Quantitatively, data from the Federal Procurement Data System – Next Generation (FPDS-NG) spanning FYs 2022–2024, along with internal data from the AFWERX Organization, is scrutinized. This analysis juxtaposes the number of Phase I and II contracts with the corresponding Phase III awards, shedding light on completed research and its transition to commercial use within the Air Force. Furthermore, it aids in identifying existing data collection practices and potential gaps in reporting across all SBIR/STTR phases. On the qualitative front, insights are gathered through questionnaires and interviews with acquisition professionals and SBIR/STTR small business participants.

Our research yielded valuable insights from the perspective of acquisition professionals:

- **Transitioning to Phase III:** Success in transitioning was linked to alignment with Air Force priorities, strategic partnerships, and prototype demonstration. Challenges encompassed funding uncertainty and small business comprehension of government processes.
- **Influential Factors:** Key policies such as the Federal Acquisition Regulation (FAR), technology readiness levels, and budget constraints significantly influenced Phase III award determinations. There is a consensus on the necessity for improved communication regarding the significance of investment in transitions.
- **Challenges with Small Businesses:** Small businesses encountered obstacles like resource constraints, weak intellectual property positions, and comprehension difficulties regarding government processes.

Insights from small business questionnaires include:



- **Transition Experience:** Small businesses reported success in refining offerings but encountered hurdles in securing Phase III funding and navigating government procedures. Identifying government advocates and sponsors proved particularly challenging.
- **Challenges Faced:** Challenges ranged from limitations within contracting offices to communication gaps and budgetary constraints. Some businesses faced difficulties due to contracting officers' lack of understanding of SBIR processes.
- **Government Suggestions:** Recommendations encompass enhanced communication, streamlined processes, and increased funding support to facilitate smoother Phase III transitions. Clarity in guidance and consequences for non-support of the SBIR program are emphasized as necessary improvements.

Our research captures the complexities faced by acquisition professionals and small businesses in transitioning to Phase III awards within the SBIR/STTR programs. The questionnaire responses underscore the significance of factors like alignment with Air Force priorities, innovative solutions, customer engagement, strategic partnerships, and prototype demonstration in facilitating successful transitions. However, challenges such as funding uncertainty, barriers for small businesses, difficulties in navigating government processes, and the imperative for long-term sustainability are highlighted as formidable obstacles that hinder Phase III transitions.

Moreover, our research emphasizes the pivotal role of government processes, including SBIR/STTR program policies, FAR regulations, technology readiness levels, mission relevance criteria, and budgetary constraints, in shaping decision-making processes.

We have provided the following recommendations AFWERX and the DAF can employ to overcome or eliminate the valley of death:

Funding: Our questionnaire responses identify a significant challenge in obtaining dedicated Phase III funding, hampering the transition from Phase I or II awards. Recommendations include establishing an Agile Innovation Fund and supporting reforms outlined in the Commission on PPBE Reform report to streamline funding processes and enhance agility in acquisitions.

Awareness and Education: A notable gap exists in the awareness and education of SBIR/STTR policies and procedures among the acquisition workforce. We propose



creating a specialized contracting credential for SBIR/STTR, launching an awareness campaign, establishing a SBIR/STTR Center of Excellence, and updating procurement tools for better visibility.

FPDS-NG Additional Data Collection: Proposed actions involve adding a field to the FPDS-NG to link Phase I/II and Phase III awards, enabling better tracking and understanding of SBIR/STTR program success.

Selected/Not-Funded Tool: Opportunities to leverage Selected/Not Funded notices for alternative funding avenues are highlighted. We recommend making listings accessible via platforms like the IGNITE website or the What's New in Contracting listserv to foster collaboration and increase awareness.

List of References

AFWERX Contracting Division. (2023, October). *Program Management Review (PMR)*, Air Force Research Laboratory.

Parts Life, Inc. (2023, April 3). *SBIR success: Conquering the valley of death and fueling mission readiness for the DOD*. <https://www.partslifeinc.com/post/sbir-success-conquering-the-valley-of-death-and-fueling-mission-readiness-for-the-dod>

Small Business Administration. (n.d.). *About*. SIBR.gov. Retrieved December 3, 2023, from <https://www.sbir.gov/about>



INTRODUCTION

Chapter I introduces our problem statement, research questions, methodology, limitations and scope, and the organization of this capstone.

A. PROBLEM STATEMENT

“The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are highly competitive programs that encourage domestic small businesses to engage in federal Research/Research and Development (R/R&D) with the potential for commercialization” (SBA, n.d., para. 1). The program has three distinct phases. The AFWERX commercial website provides an overview of Phase III SBIR/STTRs.

Phase III efforts include products, services, Research/Research and Development (R/R&D) or any combination thereof, including testing and evaluation of products, services or technologies for use in technical or weapon systems. Phase III refers to work that derives from, extends, or completes an effort made under prior SBIR/STTR funding agreements, but is funded by sources other than the SBIR/STTR program. This phase’s purpose is to transition a company’s SBIR/STTR effort into hardware or software products, processes or services that benefit the Air Force acquisition community or the private sector.

A key SBIR/STTR component is that once a company has received a Phase I or II award, sole-source Phase III awards may be made to the company since competition requirements were satisfied under Phase I and II. (AFWERX, n.d.-d)

“The “valley of death” refers to the gap between Phase II and Phase III of the SBIR program, where many products and companies struggle to bridge the divide between research and commercialization” (Parts Life, Inc., 2023). Obtaining financial support to commercialize their technology or prototype during this transition phase can be challenging for small businesses (Office of Assisted Acquisition Services [AAS], 2023).



An example of a requirement that experienced the valley of death is a Phase II effort awarded to Privoro, LLC by the Air Force Research Laboratory (AFRL). Privoro received an initial award for a Phase II agreement valued at \$1,500,000. Privoro went on to receive an additional award of a Phase IIB, Strategic Funding Increase (STRATFI) modification, from the AFRL Small Business Innovative Research organization (AFRL/SBR, now known as AFWERX), with a final value of \$18,299,904 in government funding and \$18,000,000 of private match funding for a total agreement value of \$36,299,904.

Privoro's SafeCase platform, commercially available since November 2018, is a secure cloud-based system for smartphones to use with all of their applications. This platform would allow the warfighter to be better protected from undesired tracking.

Michael Campbell, director of Government Solutions for Privoro, completed the questionnaire for this research effort. Specifically for the question, "What government challenges or difficulties in transitioning to a Phase III SBIR/STTR process did your firm encounter when an award was not made?" Mr. Campbell answered,

This challenge was with the SBIR Phase II contracts that was a multi-year contract with government funding that is matched by investor funding. Possibly uniquely challenging with the COVID challenges, our contract was not renewed for Option Year 1 with almost no notice. Investors had committed multiple years of funding, however. The two stakeholder groups should have improved communications methods as part of the process. (Respondent #4, research questionnaire response to authors, March 26, 2024)

In a follow-up conversation with the authors, he further explained that the effort's senior executive service (SES) sponsor was transferred to a new position and the acting GS-15 deputy did not have the same clout as the previous SES. When it came time to fund option year 1, the funding was lost. Campbell shared that he later found out that the COVID-19 pandemic put a financial strain on the two other agency partners wanting this technology as their available funding went to COVID-related efforts (interview with authors, April 11, 2024). He summarized that losing the SES with the power to obtain and push for funding, changes in technical points of contact (TPOCs) for all three government partners (Air Force, Defense Information System Agency [DISA], and



Army), and COVID positioned the effort in a no-win situation (M. Campbell, interview with authors, April 11, 2024). Eventually, this loss for the Air Force, DISA, and Army became a win for other organizations. Campbell disclosed on the questionnaire, specifically to the question, Describe your firm’s experience of transitioning to a successful Phase III award. Specifically, what went well and what was challenging? “We have been awarded a multi-year contract to deliver all aspects of our solution with the National Nuclear Security Administration, which is currently under negotiation for expansion. We have also been able to secure a sole source contract with U.S. Special Operations” (Respondent #4, research questionnaire response to authors, March 26, 2024).

This anecdote is one example of an SBIR/STTR program falling victim to the valley of death. In this instance, government turnover at key positions and the reallocation of resources for the COVID pandemic caused the insurmountable challenges Privoro faced in their attempt to achieve Phase III commercialization. Although the company eventually bridged the valley of death, the original government organizations that funded the research gained no benefit from the resulting production.

The use of the SBIR and STTR programs within the U.S. government continues to grow as the acquisition workforce strives to make the acquisition process more agile while also encouraging non-traditional defense contractors to do business with the government. The addition of non-traditional defense contractors—small businesses—has placed even more importance on the success of the SBIR/STTR program and the importance it has on the small business community at large, as depicted in Figure 1 (Miller, 2023).



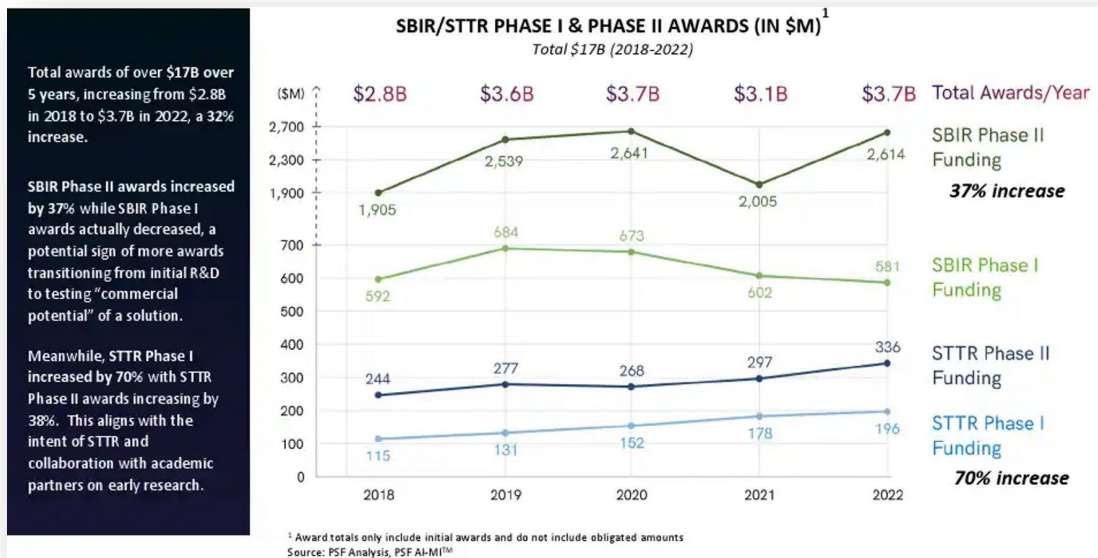


Figure 1. SBIR/STTR Impact to Small Business. Source: Miller (2023).

Within AFWERX, during fiscal year (FY) 2022 to FY2024 1,154 Phase I and Phase II contracts have been awarded and executed. However, at the October 2023 program management review for AFWERX, the organization reported less than 375 Phase III awards (AFWERX Contracting Division, 2023). Leaders within the AFWERX organization have questioned whether this lack of transition is due to inaccurate data, lack of education or awareness of the acquisition professionals on Phase III transition processes, or possibly a lack of access to information on the government side. The leaders also questioned what issues and concerns the small businesses face that prevent their pursuit of a Phase III award.

The problem we chose to investigate is, What barriers exist for both acquisition workforce professionals within the AFRL/AFWERX Technical Directorate and SBIR/STTR Small Business program participants that prevent the successful transition to a Phase III award and what potential solutions can be implemented to take full advantage of this agile process?

B. RESEARCH QUESTIONS

This capstone report focuses on two essential research questions:



- What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?
- What are the current Phase III reporting practices and are there potential gaps in data collection?

C. METHODOLOGY

A mixed-methods approach was determined to be most appropriate for the methodology used to conduct the research provided in this report. For the quantitative portion of the research, we analyze data retrieved from the Federal Procurement Data System – Next Generation (FPDS-NG) containing SBIR/STTR awards for AFWERX for FYs 2022–2024. In addition, data was retrieved from the AFWERX Organization. Data analysis is completed using the number of Phase I and II contracts compared to the number of Phase III awards.

This data is used to identify the research that is completed and then compared to the number of Phase III awards bringing the product or service to Air Force for commercial use. The analysis of this data also helps identify the information that is currently collected regarding all phases of the SBIR/STTR program and the identification of potential reporting gaps.

For the qualitative portion of the research, we collected information from acquisition professionals and SBIR/STTR small business participants using a questionnaire and interviews. There are two versions of our questionnaire.

One questionnaire is tailored to the acquisition professionals within AFWERX:

1. Describe the government organization’s experience of transitioning to a successful Phase III commercialization award; specifically, what went well and what was challenging?
2. What government processes, policies and/or regulations influenced the organization to award or fail to award a Phase III contract?
3. Describe what the government could do differently to address challenges and difficulties with respect to achieving a successful Phase III award.
4. What challenges or difficulties did the government organization observe with respect to the small business that hindered the transition to a successful Phase III SBIR/STTR award?



5. Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the commercialization needs of the Phase III award.
6. How were the needs of the government met if a Phase III was not awarded?
7. Regarding Phase II to Phase III transitions, is there anything that I did not ask that you would like to address?

The other questionnaire is focused on questions for the small businesses to answer:

1. Describe your firm's experience of transitioning to a successful Phase III commercialization award; specifically, what went well and what was challenging?
1. What government challenges or difficulties in the transition to a Phase III SBIR/STTR process did your firm encounter when an award was not made?
2. Describe what the government could do differently to address these challenges and difficulties with respect to achieving a successful Phase III award.
3. What challenges or difficulties within your firm hindered the transition to a successful Phase III SBIR/STTR award?
4. Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the commercialization needs of the Phase III award.
5. What commercialization opportunities did your firm successfully execute with all or some of the research outside of the SBIR/STTR program, if you did not receive a Phase III?
6. Regarding Phase II to Phase III transitions, is there anything that I did not ask that you would like to address?

On the questionnaire response, the respondents marked whether they consented to be contacted by the research team to provide more in-depth information or further explanation of their experience. In addition to conducting a follow-up interview with a questionnaire respondent, we conducted an interview with a subject matter expert (SME) within the AFWERX organization.

A root cause analysis is used to better understand what stopped the product or service from achieving commercial use by the Air Force.



D. LIMITATIONS AND SCOPE

Our study is focused on the AFWERX execution of SBIR/STTR awards during the time frame of FYs 2022–2024. Since FY2024 is still in progress, our research is limited to efforts awarded before March 12, 2024. This research specifically focuses on successful Phase I and II efforts that did not successfully transition to a Phase III contract. The data collected for the quantitative analysis on the government side is limited to records provided by the awarding office in their reporting to FPDS-NG. In addition, since companies have the ability but are not mandated by the SBA to enter information on SBIR.gov regarding their Phase III awards, data may be incomplete (Gallo, 2022). The timeframe for the study makes this information current but limited. The questionnaire and interview questions are limited by sufficient participant participation. The scope of this research is narrowly focused on AFWERX and the small businesses that have successfully participated in Phase I and/or Phase II SBIR/STTR efforts with the AFWERX organization.

E. ORGANIZATION OF THE CAPSTONE

Chapter I provides an introduction to the problem statement, research questions, research methodology, and the limitations and scope that this capstone addresses. The introduction gives the background for this capstone topic and explains why this topic is now relevant.

Chapter II sets the context for the research by providing a comprehensive background of the topic as well as the AFWERX organization. It includes historical information, definitions, and concepts relevant to the capstone.

Chapter III provides a literature review of previous capstone projects, theses, journal articles, Government Accountability Office (GAO) reports, and Congressional Research Service reports to accurately set the stage for the necessity of this research. The subject matter of SBIR/STTR and commercialization have been studied, but the literature review shows there is a lack of research in the problem statement of the pitfalls and barriers to achieving a Phase III effort.



Chapter IV provides the methodology, results, and analysis of the quantitative and qualitative research that has been conducted.

Chapter V provides an overall summary of the research, our recommended solutions to the identified problems, and opportunities for potential future research.



BACKGROUND

Chapter II provides background information of the SBIR/STTR programs and the AFWERX organization. We also provide our theoretical framework, conceptual framework, and discuss previous research done on this topic.

A. SBIR/STTR BACKGROUND

According to a white paper by the Small Business Technology Council (2017), “the SBIR program was introduced into law in 1982 to mobilize small business entrepreneurship and innovation to bridge a technology gap eroding American competitiveness and jobs” (p. 3). The SBIR program was crafted to leverage the technical skills of America’s entrepreneurs and small businesses into innovative solutions for important challenges facing America. Public Law No: 102–564, signed by President Bush in 1992 continued the authority of the SBIR program and strengthened the program with the inclusion of STTR.

Each year, Federal agencies with extramural research and development (R&D) budgets that exceed \$100 million are required to allocate 3.2% (since FY2017) of this extramural R&D budget to fund small businesses through the SBIR program. Federal agencies with extramural R&D budgets that exceed \$1 billion are required to reserve 0.45% (since FY2016) of this extramural R&D budget for the STTR program. (SBA, n.d., para. 17)

The SBIR/STTR program is meant to encourage small business participation in research and development (R&D) contracts. According to the Department of the Air Force Office of Small Business, the following eligibility standards are in place for SBIR/STTR programs:

SBIR:

- For-profit, U.S. small business
- Maximum 500 employees
- Work must be performed the United States
- Proposing firm must perform at least two-thirds of the effort during Phase I, and at least half of the effort in Phase II



- Principal investigator must be employed by the proposing firm more than half of the time

STTR:

- For-profit, U.S. small business
- Maximum 500 employees; no size limit on the research institution
- Research institution must be a U.S. college or university, federally-funded R&D center or non-profit research institution
- Work must be performed in the United States
- Small business must perform at least 40% of the work and the research institution at least 30%, in both Phase I and Phase II
- Small business must manage and control the funding agreement
- Principal investigator may be employed at either the small business or the research institution. (Department of the Air Force Office of Small Business, n.d.)

According to the Small Business Administration, the SBIR/STTR programs are structured in three phases:

- *Phase I.* The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R/R&D efforts and to determine the quality of performance of the small business awardee organization prior to providing further federal support in Phase II. SBIR/STTR Phase I awards are generally \$50,000 – \$250,000 for 6 months (SBIR) or 1 year (STTR).
- *Phase II.* The objective of Phase II is to continue the R/R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the project proposed in Phase II. Typically, only Phase I awardees are eligible for a Phase II award. SBIR/STTR Phase II awards are generally \$750,000 for 2 years.
- *Phase III.* The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I/II R/R&D activities. The SBIR/STTR programs do not fund Phase III. At some federal agencies, Phase III may involve follow-on non-SBIR/STTR funded R&D or production contracts for products, processes or services intended for use by the U.S. government. (SBA, n.d., paras 11–14)

These phases, depicted by the SBA, are shown in Figure 2.



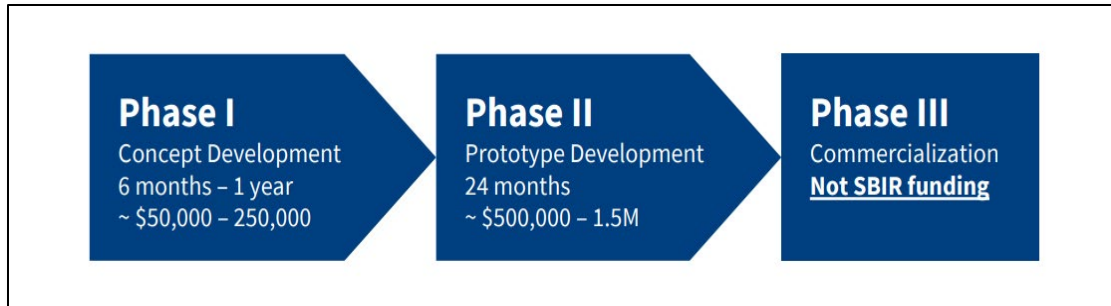


Figure 2. SBIR/STTR Three-Phase Process. Source: SBIR (2020).

B. AFWERX BACKGROUND

“Air Force Secretary Heather Wilson announced the launch of AFwerX July 21, 2017, during her visit to Nellis Air Force Base, Nevada. Based on a model used by Special Operations Command, AFwerX opens Air Force doors to highly innovative problem solvers with small amounts of money in ways that strip out bureaucracy” (Secretary of the Air Force Public Affairs, 2017, paras. 1–2). During the launch of AFWERX Secretary Wilson stated, “We have to move faster and be smarter” (Secretary of the Air Force Public Affairs, 2017, para. 6) and “We know there are people out there with answers to problems, with ideas and innovations, and we are going to look at what they have and help them help us” (Secretary of the Air Force Public Affairs, 2017, para. 6).

The AFWERX website describes itself:

As the innovation arm of the Department of the Air Force and powered by the Air Force Research Laboratory (AFRL), AFWERX brings cutting edge American ingenuity from small businesses and start-ups to address the most pressing challenges of the DAF.

The four core arms of AFWERX – AFVentures, Spark, Prime and SpaceWERX – serve to expand the defense industrial base for advanced technologies, empower Airmen and Guardian talent, and drive faster technology transition to operational capability.

AFWERX teams internationally across academia, industry and government to develop technology, expand talent and transition dual-use capabilities. (AFWERX, n.d.-a).



The website goes on to define the organization’s mission as “AFWERX accelerates agile and affordable capability transitions by teaming leaders in innovative technology with Airman and Guardian talent” (AFWERX, n.d.-a). The mantra of AFWERX is “Unleashing American Ingenuity” (AFWERX, n.d.-a). Finally, the AFWERX Vision is “Forge an innovation ecosystem that delivers disruptive Air & Space capabilities” (AFWERX, n.d.-a). By circumventing bureaucratic impediments and fostering collaboration, AFWERX pursues small businesses looking to develop solutions that align with the goals and needs of the Air Force.

Our interest is in the transition from a Phase I and/or Phase II effort to the commercialization, Phase III effort. The information in Figure 3 is from AFWERX, How the Program Works AFVentures Division Overview website (AFWERX, n.d.-b).

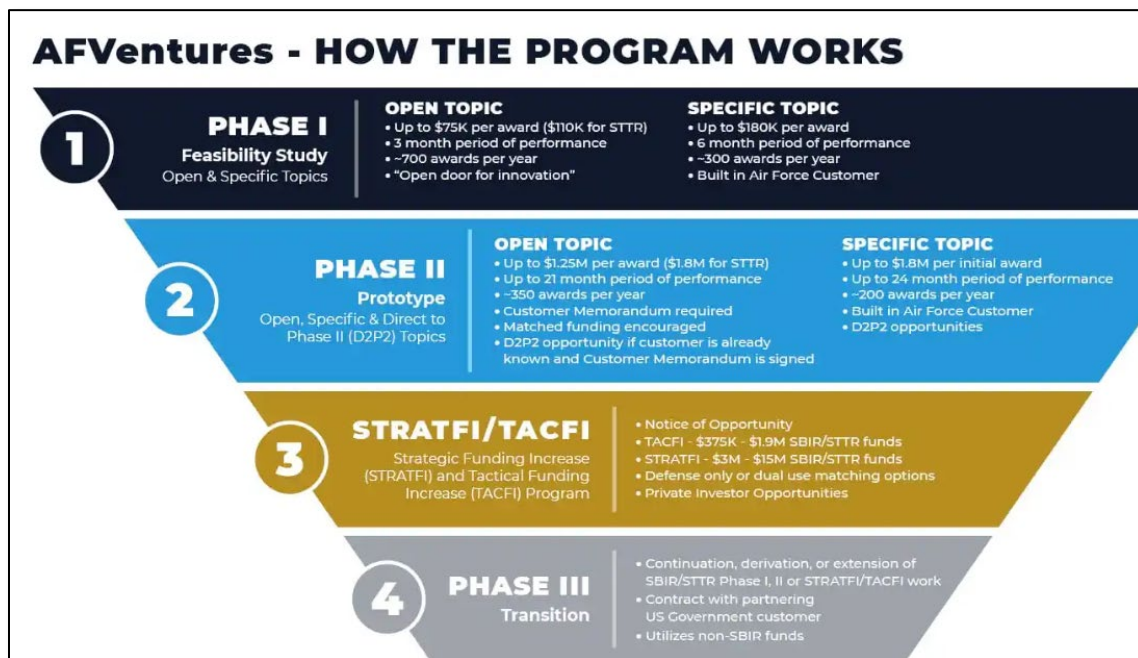


Figure 3. AFVentures SBIR/STTR Phases. Source: AFWERX (n.d.-b).

This commercialization phase is important for the DAF, as typically it can take upwards of 10 years for an acquisition program to get to this stage. For example, major system development of the F-35, which began in 1995, obtained full rate production authority on March 7, 2024. With the SBIR/STTR program, however, commercialization can occur within 6–24 months (U.S. Department of Defense, 2024). Utilizing agile



processes to achieve the commercialization phase benefits the DAF and most importantly, the warfighter.

The DAF investment of dollars annually is based on a tax on the DAF extramural R&D budget. The FY2023 budget was \$1.4 billion, and this budget will increase in FY2024 due to the DAF R&D budget increase (AFWERX Contracting Division, 2023). The SBIR/STTR innovation program with the stated objective of enabling the acceleration, adoption, and commercialization of these cutting-edge technologies is an important aspect of DAF R&D success.

The AFVentures overview on the AFWERX website, describes the purpose of their STRATFI/TACFI programs.

The Strategic and Tactical Funding Increase Programs catalyze relationships between Air and Space Force end-users and acquisition professionals, private sector innovators, and investors. The program bridges the capability gap between current SBIR/STTR Phase II efforts to achieve better technology transitions and de-risk development through syndication with multiple transition-focused partners and leveraging outside investment. (AFWERX, n.d.-b)

According to our research, we can determine that AFWERX is working to eliminate the valley of death. “The AFVentures program has developed the Strategic Funding Increase (STRATFI) and Tactical Funding Increase (TACFI) Programs. Small businesses that have been awarded a Phase II contract within the last two years are eligible to apply for this annual notice of opportunity” (AFWERX, n.d.-c).

These programs have various ways for the commercial sector to be involved by providing finance that matches the government funding as shown in Figure 4.



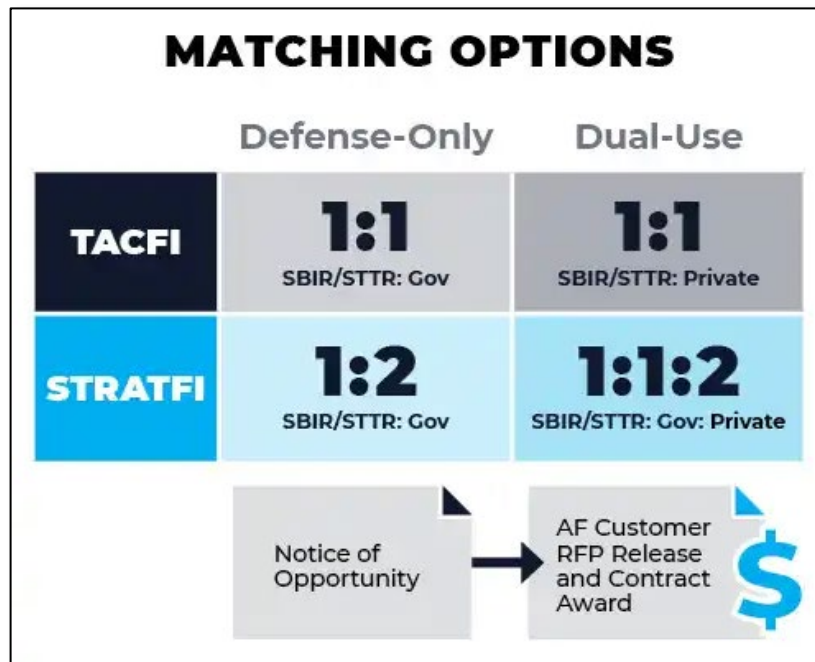


Figure 4. STRATFI/TACFI Matching Options. Source: AFWERX (n.d.-c).

The award amounts for the 2024 AFWERX STRATFI/TACFI programs are depicted in Figure 5.



Figure 5. Award Amounts for 2024 Annual STRATFI/TACFI Call. Source: AFWERX (n.d.-c).

Whether this strategy is successful remains to be seen and is discussed in more detail later in the research paper. Additionally, we delve into what other defense departments and government organizations are doing to try to bridge the valley of death.

C. THEORETICAL FRAMEWORK

This research is framed by the understanding that the SBIR/STTR policy directive definitions and processes can be inefficient, misunderstood, and ultimately improved. We explore the stopgaps and barriers of transitioning to Phase III and seeks to answer the following questions:

- Why are SBIR/STTR small businesses reporting difficulty in the transition to Phase III?
- What issues or concerns prevent small businesses from transitioning to Phase III?
- Are acquisition professionals aware of/educated in the ability to award a Phase III contract from a Phase I and II as a sole source?
- Does an open marketplace exist for DAF organizations to look at Phase I and II work/products?
- Are there avenues for SBIR/STTRs small businesses to advertise or connect with appropriate DAF organizations regarding their product/service?
- Are Phase III awards being coded accurately and timely in FPDS-NG and other required reporting? (If not, this may lead to underreporting of transitioned SBIR/STTRs to Phase III.)

D. CONCEPTUAL FRAMEWORK

This research is focused on identifying barriers preventing transition to Phase III from successful Phase I and Phase II SBIR/STTR awards. These barriers are broken down into two distinct categories: SBIR/STTR Phase I/II Small Business Participants and AFWERX Acquisition Professionals. We also review the current Phase III reporting practices to understand how this data is being collected and identify potential reporting gaps, incomplete data, and the negative effects of non-mandatory reporting. A pictorial representation of our conceptual framework can be seen in Figure 6.



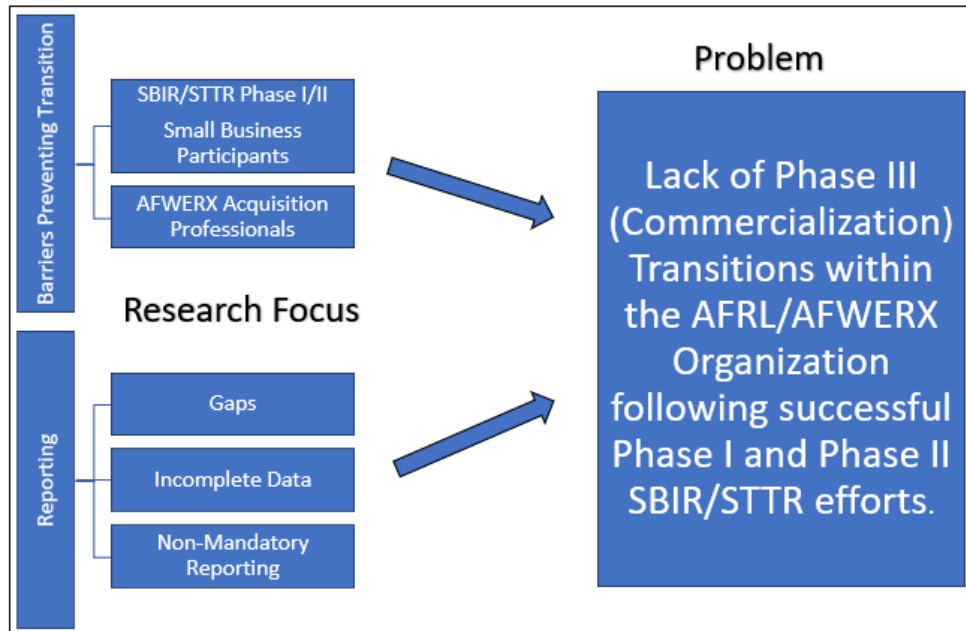


Figure 6. Conceptual Framework

E. PREVIOUS RESEARCH

There are many previous studies examining the SBIR/STTR program. The GAO (2021, 2022, 2023), in particular, took a great deal of interest in the program and conducted several studies. These high-level reports addressed broad program insight, giving a comprehensive view of research funded by the U.S. government. Several other studies used the GAO parameters for determining the success of reaching commercialization. Hayter and Link (2022) also completed a review of publications and patents to better understand the use of technology funded through the SBIR/STTR program. Additionally, an AFWERX study (Porter, 2023) centered on the percentage of Phase III awards, looking at the government’s processes, and procedures. Further research also looked at localities that foster successful SBIR/STTR Phase III awards and the economic ramifications of those awards.

LITERATURE REVIEW

In Chapter III we explore current literature on commercialization barriers and government policy and processes. We also identify gaps in the literature and provide a summary of the literature that we reviewed.

A. RESEARCH THEMES AND SYNTHESIS

1. Commercialization Barriers

Being agile in reaching the commercialization phase will benefit the DAF and, in the end, the warfighter. As mentioned earlier, due to the government's inability to move research to Phase III, the point where innovative solutions fail to be made commercially via the SBIR/STTR has become known as the valley of death (Renick & Espinoza, 2022). Porter (2023) stated that the main barriers to transition "are either political, bureaucratic or are due to a lack of understanding of how federal funding works" (p. 45).

Porter's (2023) also interviewed government personnel regarding their view of why research didn't go to Phase III; they provided three reasons: wrong organization, no funding available, or no military application. Porter identified that small businesses found the process of applying for an SBIR/STTR award complicated and hard to navigate, registration and use of multiple systems difficult, and motivated customer end users within the DAF were hard to locate.

The SBIR/STTR program is being leveraged by the Air Force to create a more agile path for new innovations by small business. However, this path requires the government's assistance in bridging the valley of death, the point where the innovative solution fail to be made commercially with the Phase III award (Renick & Espinoza, 2022). The pathway from innovation to commercialization is unique to each innovation and often is "significantly different depending on the presumed commercial versus research value of an innovation" (Van Norman & Eisenkot, 2017, p. 200). Although financing is a core barrier it may also be a scapegoat. Businesses seeking funding must delve deeper into the additional skills and management capabilities required to facilitate the transition effectively. Venture capitalists understand what a business needs to transfer



research to commercial products. Not funding the effort may have nothing to do with funding but with other factors. Examining these key factors alongside the previously identified barriers provides a deeper understanding of the valley of death and sheds light on other factors that may have been overlooked in the past.

Earlier research by Porter (2023) identified securing funding as a barrier, noting that even a memorandum of understanding signed by the end user to start work on Phase II doesn't mean that the effort has been included in the budget as budgeting is done 3–5 years in advance. While this is true, it is more important that the business is talking to the person who budgets the funding. Leaders need to understand the importance of the innovation and prioritize it appropriately and early. Porter also identified as a barrier the business not connecting with the correct contact to make the purchase. Phase I/II research starts with a sponsoring organization. This organization is involved from early development through testing. Businesses must consistently maintain awareness of the entities with whom they are collaborating. Early engagement with end users is invaluable for development; however, it is crucial to “work up the chain” by engaging with leadership throughout the research process. This ensures that when the innovation is ready for commercialization, securing funding becomes more feasible. Without following this approach, businesses may discover that the sponsoring organization lacks available funding, current funding levels are insufficient for procurement, or funding priorities have shifted. Phase III can also be plagued with funding inconsistencies driven by the U.S. budget process, namely when Congress does not pass the budget in a timely manner.

Prior studies identified the following obstacles to transition: they stem from political or bureaucratic hurdles or a misunderstanding of federal funding. Porter's (2023) investigation also delved into government personnel perspectives on why research failed to progress to Phase III which identified reasons such as contact with the wrong organization, lack of available funding, or absence of military applicability. Additionally, small businesses highlighted in Porter's (2023) research found complexities and challenges in applying for awards, navigating multiple systems for registration, and identifying motivated end users within the DAF. Sheerin et al.'s (2011) corresponding research regarding commercialization suggests that the traditional linear model used to describe commercialization oversimplifies the process; the process, when done



successfully, is considered from the start and throughout the research. Rask (2019) suggests that research efforts can also be affected by a loss of interest or priority over time.

Transitioning beyond Phase I/II, commercializing the research conducted in Phases I and II, is not simply a matter of constructing a prototype successfully. To advance to Phase III, businesses must secure financing and ensure that their leadership is aligned to develop the product or service at full production capacity. The SBIR/STTR structure does not specifically prepare the small business in any meaningful way for this transition. Industry experts have pinpointed additional aspects of the process, particularly when production was not initially included in the research planning from the outset. When transitioning from prototype to full-scale production, both industry and venture capitalists consider not only the product or service itself but also a multitude of other critical factors. Among these considerations are the strength of the management team, the scope of the market opportunity, the company's early traction, the founders' understanding of financial and key business metrics, the uniqueness of the company's technology, its intellectual property portfolio, potential business risks, and the realism of the company's financial projections (Harroch, 2019). Ensuring that the right individuals are in appropriate roles is crucial for facilitating this transition. While primarily focused on the return on investment, venture capitalists must also be sufficiently interested in the product to provide support for the endeavor. Like in private enterprise, the completion of a prototype or a successful Phase II in the case of SBIR/STTR does not inherently warrant the commercialization of the product or service. Successful completion of Phase I/II may not result in enough user interest or be a priority to the unit to allocate resources. Each of these factors can prevent the business moving to commercialize.

2. Government Policy and Processes

SBIR and STTR are government programs that focus on fostering innovation within the U.S. small business community. Recently, there has been an increased focus on tracking the number of Phase III awards that result from successful Phase I and Phase II efforts. On September 30, 2022, Public Law Number 117–183, the SBIR and STTR Extension Act of 2022, was enacted. In Section 7, paragraph (b)(1), Congress stated:



Not later than 1 year after the date of enactment of this Act, and annually thereafter for 3 years, the Comptroller General of the United States shall submit to Congress and issue a publicly available report comparing open topics and conventional topics under the SBIR and STTR programs that includes, to the extent practicable—an assessment of the percentage of small business concerns that progress from Phase I to Phase II awards, then to Phase III awards. (SBIR and STTR Extension Act, 2022)

Essentially, Congress wants to know how effective these programs are in helping small businesses achieve success through the commercialization of the R/R&D efforts they have developed during the first two phases of the SBIR/STTR programs. The GAO (n.d.) provides Congress, as well as other agencies and the taxpayers, with non-partisan fact-based information that can be used to improve government processes and ultimately help spend taxpayer dollars efficiently. In its capacity as a “congressional watchdog,” the GAO has prepared multiple reports since 2021 focusing on the SBIR/STTR programs.

One of the aspects the GAO studied was the effect of award timeliness on small business participants’ ability to be successful with their Phase I/II awards. They found via small business responses to a questionnaire that late awards had negative effects on their success. The GAO listed these effects which included:

- Needing to transfer employees to other projects
- Delaying project activities
- Impediments to their ability to hire or retain employees
- Impediments to the commercialization and launch of new products
- Needing to seek other sources of funding
- Needing to cut expenses to address financial difficulties
- Needing to raise overhead costs. (GAO, 2021, p. 21)

As we continue to seek out the causes behind a lack of successful transitions from Phase I/II to Phase III, we keep in mind that late awards might be a potential barrier to further research. A subsequent GAO (2022) report stated that:

In addition, a few of the company representatives said they found it difficult to transition to Phase III non-SBIR/STTR contracts. One company said that Air Force could have provided guidance or support for the certifications needed for a Phase III award, such as those needed before they can sell software products to the federal government. (pp. 15–16)



In light of this report, we take into account DAF guidance for small businesses when considering solutions to these barriers.

In addition to informing on potential barriers, reports from the GAO and the Congressional Research Service (CRS) speak directly to the challenges in tracking Phase III commercialization awards. As stated in the Research Questions section of Chapter I, our secondary question is to investigate Phase III reporting practices and potential gaps in data collection. While federal agencies are required to submit data regarding Phase I and Phase II awards, the process for reporting Phase III awards is not as automatic:

At the end of each Phase II award, the recipient is required to report the following: (1) data on revenue from the sale of new products or services resulting from R&D under the award; and (2) data on investments from any source other than the SBIR and STTR programs to further the R&D conducted under the award. Additionally, recipients are asked to voluntarily update the database annually for five years after completion of the Phase II award. Furthermore, when a small business applies for a new Phase II award, the small business is required to update the database for any prior Phase II awards. (Gallo, 2022, p. 26)

As this reporting is not required of federal agencies and is instead provided by the small businesses themselves, there is no way to know for sure if accurate reporting is occurring. The GAO (2023) also reported that “The SBIR/STTR programs do not fund Phase III awards, and there are limited requirements for small businesses to report commercialization metrics beyond the award term” (p. 24). In addition, the GAO (2023) stated,

According to several National Academies reports, finding links between federally funded R&D and any commercialization outcome is difficult. There are typically long gaps in time between research and the eventual impact the research creates. And certain outcomes may be unobservable or difficult to measure, such as acquisitions, creation of spin-off businesses by principal investigators, and knowledge spillover. (pp. 24–25)

As we work to identify Phase III reporting gaps, inefficiencies, and potential solutions, we utilize this research from the GAO and the CRS.



B. GAPS IN THE LITERATURE

This existing research literature is not without gaps. The primary gap within the research literature is factual data and information related to the barriers to a successful Phase III. While existing research literature may report on what is happening in the SBIR/STTR innovation program, limited research with this project's focus could be obtained on answering the primary question for this research effort, "What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?"

Most research has focused on the AFWERX program overall, including its structure and phases and the processes utilized within the program. The focus of the research literature to date has been primarily on whether the DAF, when creating this new AFWERX organization, is successful and what AFWERX has accomplished. This, in turn, has driven recent literature to focus on the program and its processes, successes, and failures. Now that the organization is getting ready to celebrate its fourth year of existence, and with close to 5,000 Phase I and Phase II awards granted, actual research can be accomplished on barriers to transitioning to a Phase III SBIR/STTR effort (AFWERX Contracting Division, 2023).

The secondary gap is in reporting, as factual Phase III transition awards are limited in numbers and dollar amounts. AFWERX recently started tracking, collecting, and reporting Phase III efforts within its annual reports. These numbers are somewhat notional, as AFWERX is relying on DAF customers and small businesses to communicate when they obtain a Phase III award. Additionally, the Federal Procurement Data System (FPDS; fpds.gov), relies on acquisition professionals to accurately select SBIR Phase III or STTR Phase III in the Competition section of the SBIR/STTR question. The only training for acquisition professionals to learn how to properly record this information is the Phase III Desk Reference, Version 2.0, which was last updated in January 2019 and provides no guidance or instructions on how to accurately enter the information for a Phase III in FPDS.

Lastly, a gap noted in other research literature is that small business input into the SBIR/STTR process has not been directly sought for feedback. As Porter (2023) noted,



very few small businesses he interviewed—15 out of 52 total—stated that they had been asked by a government employee to provide feedback about the SBIR process.

C. SUMMARY AND CONCLUSION

Our primary focus is the identification of causes and potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization. Previous research has documented the SBIR/STTR transition to Phase III as a difficult process, fraught with pitfalls as documented by numerous research literature. Each of these studies provides suggestions to bridge this transition and additional areas for research.

Recent legislative developments, such as the SBIR and STTR Extension Act of 2022, highlight a focus on tracking Phase III awards resulting from successful Phase I and II efforts. The GAO, in its role as a congressional watchdog, produces reports on program effectiveness, including the impact of award timeliness on small businesses. Challenges in transitioning to Phase III contracts and the need for guidance from entities like the Air Force were noted. Reports from the GAO and CRS also addressed difficulties in tracking Phase III commercialization awards and highlighted gaps in data collection practices.

Our secondary focus is investigating Phase III reporting practices and addressing potential gaps in data collection, with an emphasis on the voluntary nature of reporting by small businesses and limited requirements for reporting commercialization metrics beyond award terms. The GAO's findings indicate the complexity of linking federally funded R&D to commercialization outcomes. We aim to identify and address reporting gaps and inefficiencies, drawing on insights from GAO and CRS reports.

The existing research on SBIR/STTR Phase III transition within the AFWERX organization reveals significant gaps. The primary deficiency lies in the lack of factual data addressing barriers to successful Phase III transitions for small businesses and acquisition professionals. While previous literature assessed the AFWERX program overall, including its structure and processes, there is a notable absence of research on the causes of and potential solutions to impediments faced during Phase III transition.



Additionally, the reported scarcity of factual Phase III transition awards, along with reliance on notional numbers in AFWERX's annual reports and challenges in accurately recording information on FPDS, further highlights the need for comprehensive research and training for acquisition professionals. Another gap involves the limited direct feedback from small businesses in the SBIR/STTR process, emphasizing the necessity for increased engagement to address these research limitations.



METHODS, DATA RESULTS, AND ANALYSIS

In Chapter IV we provide the results to our two research questions:

- What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?
- What are the current Phase III reporting practices and are there potential gaps in data collection?

A. RESEARCH METHODS

1. Research Design

It was concluded that a mixed-methods strategy would work best with the study methodology described in this report. The authors examined data from the FPDS-NG that includes SBIR/STTR awards for AFWERX for the FY 2022–2024 in order to conduct the quantitative section of the study. Furthermore, information was obtained from the AFWERX Organization. The number of SBIR/STTR Phase I and II contracts in relation to the number of Phase III awards is used to complete data analysis.

The finished research is identified using this data, which is then compared to the quantity of Phase III awards that deliver the good or service to the DAF for commercial application. The information that is currently gathered on all stages of the SBIR/STTR program and any potential reporting gaps are also identified with the use of this data analysis.

Using a questionnaire and interviews, the authors gathered data from acquisition professionals and SBIR/STTR small business participants for the qualitative section of the study. Our questionnaire exists in two forms.

2. Participants

For the first research question, the questionnaire participants were selected based on awarded SBIR/STTR Phase I and II within the AFWERX organization during the specified timeframe. The demographic details include government personnel within the acquisition fields who served as a TPOC on an awarded AFWERX SBIR/STTR Phase I or II effort. Instead of determining a sampling size, the authors determined to go for



maximum potential participation and sent the questionnaires to all small businesses and acquisition professionals identified on the listing. These individuals came from the SBIR/STTR Phase I and II open topic and specific topic awarded contracts listing provided by the AFWERX organization, as a contractor point of contact was identified and a TPOC for each awarded SBIR/STTR Phase I and II.

For the second research questionnaire, a review of current policies was accomplished. Additionally, the authors attempted to pull data from FPDS-NG and SBIR.gov to compare Phase III data and determined this comparison was not possible as SBIR.gov does not track Phase III awards, only Phase I and II.

3. Data Collection Procedures

To complete the qualitative data analysis for the first research question, once the participants were identified, two questionnaires were created in SurveyMonkey. One was specific to the acquisition professionals and the second was specific to the small businesses. Content analysis and text analysis methods were utilized to study the themes, patterns, and trends the questionnaires displayed within each question. Various pie charts were created for numerous questions and helped the authors gain insights from the responses received. This method was especially helpful with the large volume of the small business responses received.

Additionally, the statistical analysis method was to be utilized based on the data pulled from FPDS-NG and SBIR.gov reports to complete the quantitative data analysis for the second research question. However, as SBIR.gov does not track Phase III data, this comparison was not possible.

4. Ethical Considerations

From the beginning of the research effort, the authors identified numerous potential ethical considerations. First, one of the authors is a DAF employee with the AFWERX organization. It was determined this individual would have no contact with AFWERX and all three (3) authors would only identify themselves as DAF, Air Force Materiel Command (AFMC) civilian employees when communicating with the acquisition professionals or the small business representatives.



Further, a determination was necessary to ensure the research did not include human subject research. The authors completed the Human Subjects Research (HSR) Determination Request Form and submitted it to the Naval Postgraduate School (NPS) Institutional Review Board (IRB) after receiving research advisor’s signatures and approvals. The determination request form stated no personally identified information (PII) or demographics was being obtained. Further, the questionnaire was seeking input with respect to the acquisition organization and the small business and not personal views. A determination by the IRB was received on February 1, 2024 (NPS.2024.0099-DD-N [CASE ID 5656]), that the study does not meet the federal definition of “research” as defined under 32 CFR 219 and therefore did not require IRB review and approval.

5. Limitations

The research effort consisted of the following limitations:

- Study focused on AFWERX only and not the DAF or the SBIR/STTR program as a whole,
- Study utilized data received from AFWERX, FPDS-NG and SBIR.gov,
- Phase III data is limited based on input accuracy into the FPDS-NG system,
- Focused on awards during the time frame of FYs 2022–2024. Since FY2024 is still in progress, our research is limited to efforts awarded before March 12, 2024.

B. WHAT ARE THE CAUSES AND THE POTENTIAL SOLUTIONS TO BARRIERS PREVENTING SMALL BUSINESSES AND ACQUISITION PROFESSIONALS FROM ACHIEVING PHASE III TRANSITION WITHIN THE AFWERX ORGANIZATION?

In this section, we provide the results to our questionnaires and interviews with Acquisition Professionals and Small Businesses.

1. Questionnaire Results

This section will detail the results of the two questionnaires sent to the acquisition professionals and to small businesses who were involved in a SBIR/STTR Phase I or Phase II with the AFRL/RG, AFWERX organization between FY22 and FY24. The AFWERX organization provided the authors a listing of TPOCs and small business



points of contact who received awards between this timeframe. Utilizing those listings, the authors sent individual email invitations seeking voluntary input to the questionnaire directed to them.

a. Participant Overview

As a result of our email requests, 26 acquisition professionals and 112 small business representatives responded to the email questionnaires. A breakdown of our participant information is detailed within this section.

(1) Email Response Rate

Figure 7 shows a breakdown of the number of emails sent, undeliverable notices, and questionnaire responses per category.

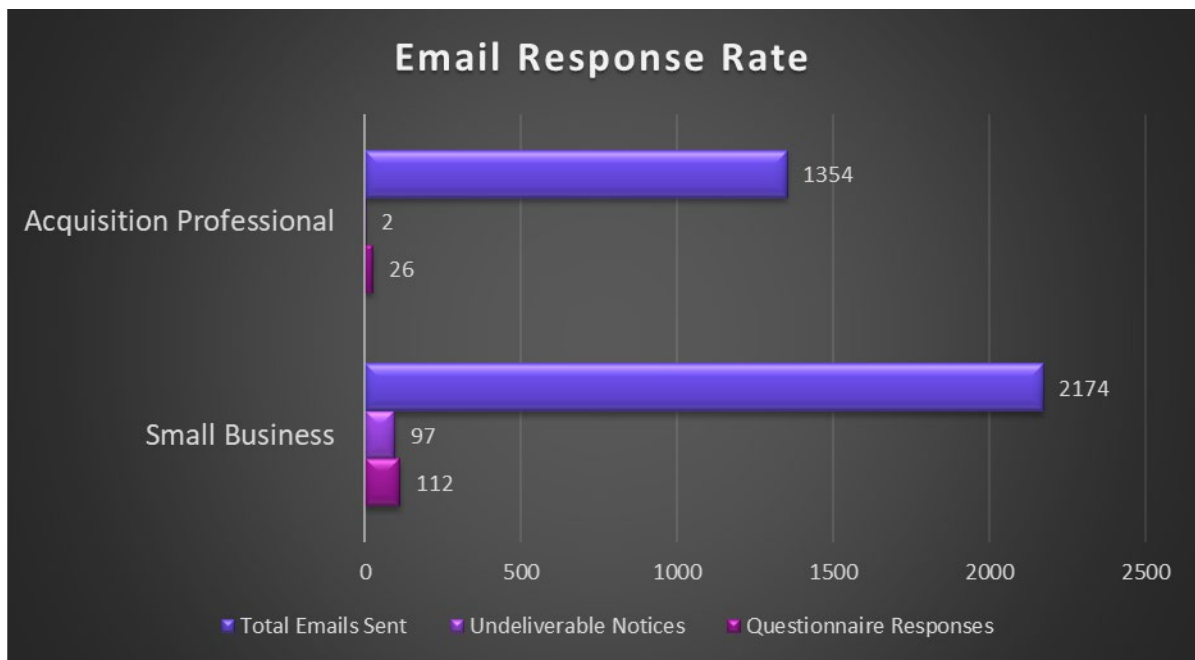


Figure 7. Email Response Rate

(2) Award Fiscal Year of Respondents

Figure 8 shows the breakdown of the award FY small businesses identified on their questionnaire responses.

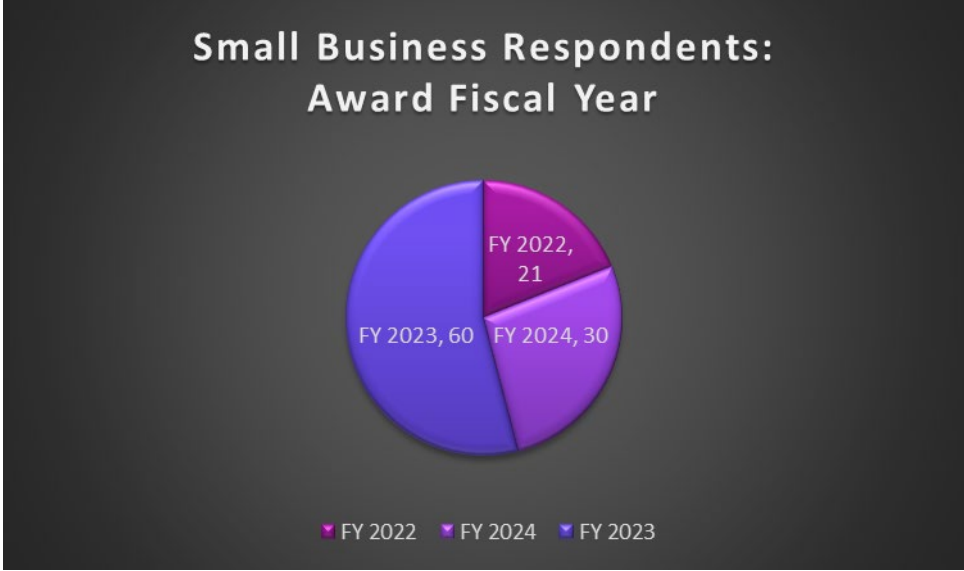


Figure 8. Small Business Respondents: Award Fiscal Year

Figure 9 shows the breakdown of the award FY acquisition professionals identified on their questionnaire responses.



Figure 9. Acquisition Professional Respondents: Award Fiscal Year

(3) Functional Area of Acquisition Professional Respondents

Figure 10 shows the breakdown of the functional areas the acquisition professionals identified on their questionnaire responses.



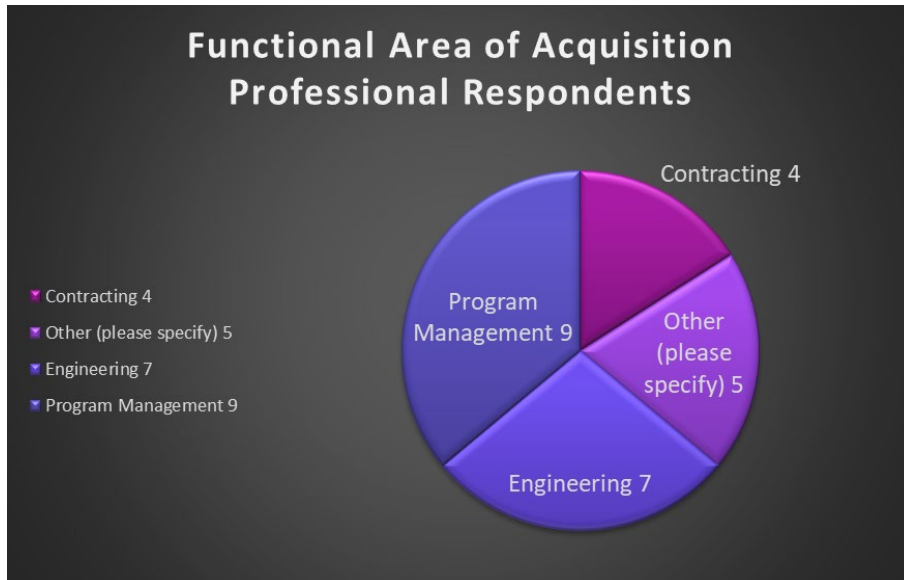


Figure 10. Functional Area of Acquisition Professional Respondents

Figure 11 shows the breakdown of the functional areas of the acquisition professionals who identified their functional area as “Other (please specify)” on their questionnaire responses.

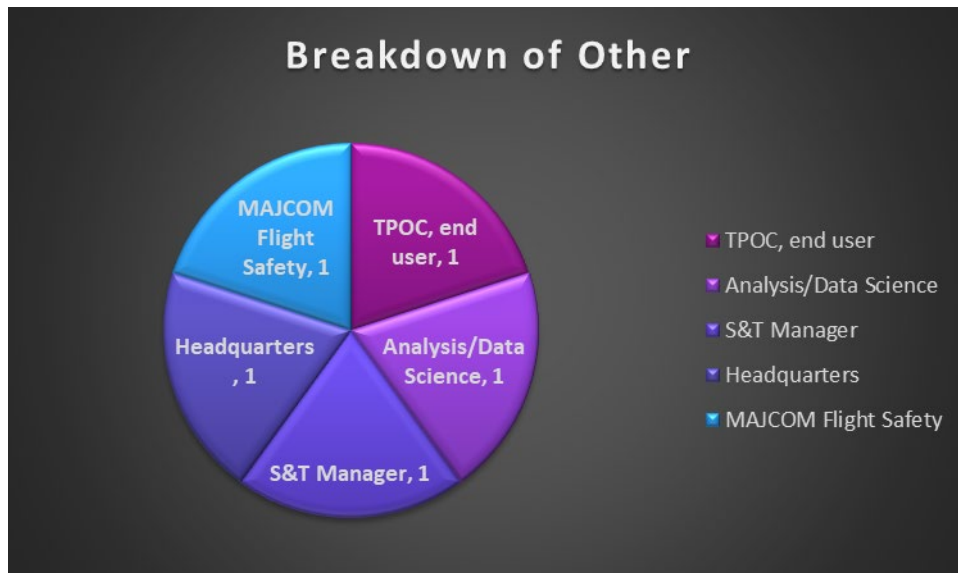


Figure 11. Breakdown of Other

b. Acquisition Professional Questionnaire Results

The following data received from acquisition professionals regarding transitioning SBIR research to successful Phase III awards has been summarized. While 26

participants responded, 9 stated that the research effort they were administering had not yet achieved a Phase III award. Although the data collected is not statistically sufficient, their responses give insight into what the government professionals in the field have observed.

- (1) Describe the government organization's experience of transitioning to a successful Phase III award. Specifically, what went well and what was challenging?

The responses offered insight into several positive points as well as some challenges that the government and small businesses face in transitioning research to Phase III. The participants noted that a successful transition to Phase III included alignment with Air Force priorities, innovative solutions, customer engagement, strategic partnerships, and prototype demonstration. The seventeen responses with successful transition of their research by the small business to a Phase III award, noted that transition was due to the continued support and knowledge of the government to groom partnerships that assisted the small business to move the innovation to Phase III. On the other hand, the government professionals noted challenges for transition to Phase III including funding uncertainty, barriers to entry for small businesses, difficulty of the small business understanding the government processes, and the need for long-term sustainability. The participants further enumerated that government processes, policies, and regulations including SBIR/STTR program policies, Federal Acquisition Regulations, technology readiness levels, mission relevance, and budgetary constraints influenced the "award" or "no award" decision for transition to Phase III contracts. Responses to the question regarding successful transition to Phase III highlighted the importance of the innovation being in alignment with the Air Force priorities. The acquisition professionals also keyed in on the importance of working to develop strategic partnerships and deliver a functional prototype. The responses also detailed the need for Phase II business to gather feedback and validation of their innovation and refine the solution as well as engage with industry, academia, and government agencies.



- (2) What government processes, policies, and/or regulations influenced the organization to award or fail to award a Phase III contract?

Responses for this inquiry outlined general policies and regulations that influence government processes and SBIR/STTR program requirements. Specifically mentioned were: Federal Acquisition Regulation (FAR) requirements, technology readiness level, linkage to strategic objectives and national security priorities, availability of funding, technical feasibility/commercial potential, intellectual property rights, and regulated technologies or application. However, no specific policy was listed as the barrier for Phase III award. Compliance with FAR requirements, such as competitive procurement procedures, cost principles and contract administration and contracting personnel training can also influence the award decisions. The participants noted that AFWERX has policies in place to encourage transition and have adopted programs to further facilitate the transition. In Figure 12, the pie chart depicts a summarization of issues notated within the responses.

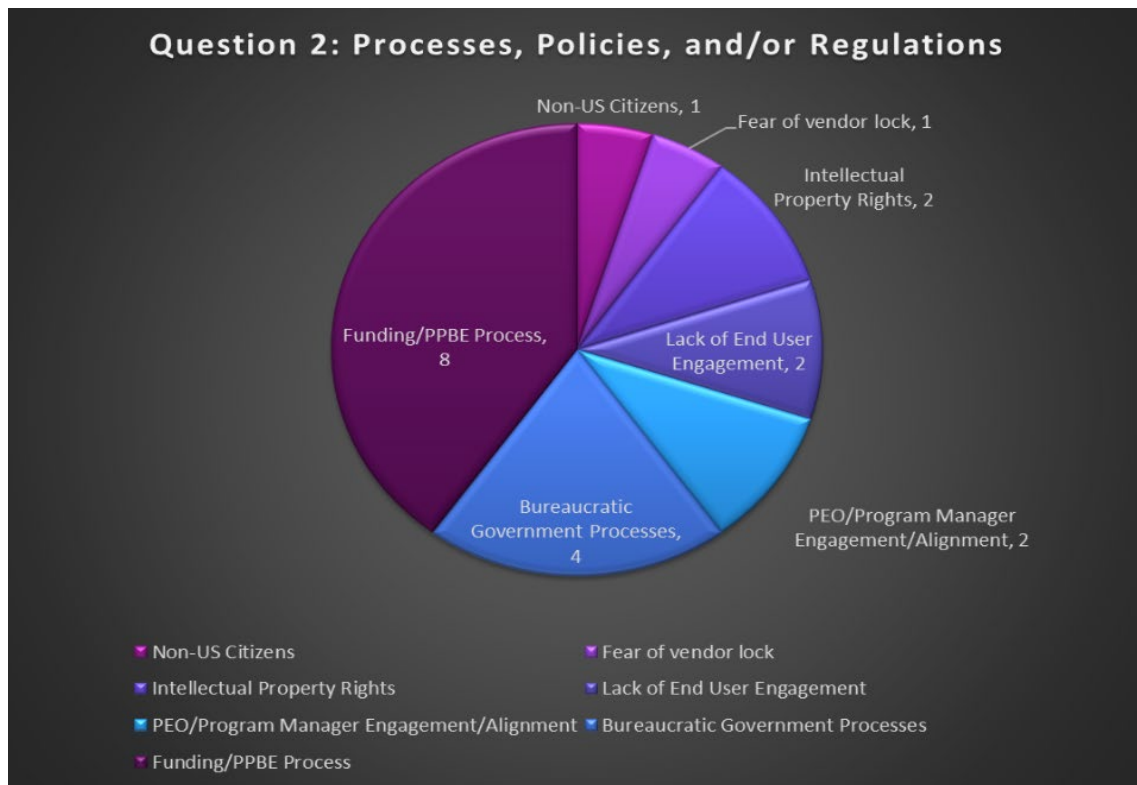


Figure 12. Question 2: Acquisition Professional Questionnaire Response Summarization

- (3) Describe what the government could do differently to address challenges and difficulties concerning achieving a successful Phase III award.

One of the most common challenges noted was the inconsistency or lack of government funding for Phase III awards. Acquisition professionals detailed the Planning, Programming, Budgeting & Execution (PPBE) process itself as part of the problem as well as the small businesses not understanding government budget process. The need to submit funding requests years in advance of the budget year makes it nearly impossible to fund an innovation that doesn't yet exist. A second challenge identified stated issues with a lack of funding at the program headquarters as well as the inability to reallocate funding which prevented the transition of the innovation. It was noted that working closely with the AFWERX office and developing a strong relationship is common to those who were able to transition the innovation to Phase III. There were several responses that advocated for consolidating the contracting for SBIR/STTRs to one office and the need for conversation with interested parties to make it clear that the transition will require investment. Also noted is the need to allow the extension of Phase II work to mature and align the requirement with specific program needs.

- (4) What challenges or difficulties did the government organization observe concerning the small business that hindered the transition to a successful Phase III SBIR/STTR award?

The government professionals observed several challenges concerning small businesses that hindered the transition to a successful Phase III SBIR/STTR award. These challenges include limited resources, lack of market validation, weak intellectual property positions, limited business development skills, and difficulties in understanding the cyber security policy and compliance requirements. Additionally, the government organization identified clean and concise wording of requirements, unforeseen technical challenges, and the transition of SBIR IP to a Department of Defense (DOD) prime contractor as factors that influenced the readiness and capabilities evaluation of small businesses for Phase III awards.



- (5) Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the needs of a Phase III award.

The government organization's evaluation of the readiness and capabilities of a small business for a Phase III award is influenced by several factors. The responses included the following, the technical maturity of the component being developed, the small business's ability to manage a larger effort, the time and resources needed to mature SBIR intellectual property for transition, the Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL) of the technology at the end of Phase II, and the applicability of the technology to an interested transition agent. They noted that the government organization needs to consider and plan for testing as well as the project's alignment with funding requirements during Phase II. These units also need to consider the potential for a new and different tool that will be more capable and cost-effective. The small business needs to have the ability to connect with program offices while the design of the product and the transition process are also crucial factors. Furthermore, the small business and organization need to involve researchers within the Technical Directorates (TDs) and streamline contracting options to expedite the process. It is also important to educate government Contracting Officers about sole source opportunities that exist with a successful SBIR platform.

- (6) How were the needs of the government met if Phase III was not awarded?

The feedback from this question reveals the respondent's organization's ability to meet government requirements in the absence of a Phase III contract award. Three reported that the objectives of the government were fulfilled during Phase I/II. Eleven respondents indicated that the government's needs remain unaddressed, are currently in Phase I/II of their research, or they did not respond. Additionally, five units mentioned resorting to alternative means, utilizing either existing or outdated technology. In Figure 13, the pie chart depicts how the government need was met if a Phase III was not awarded.



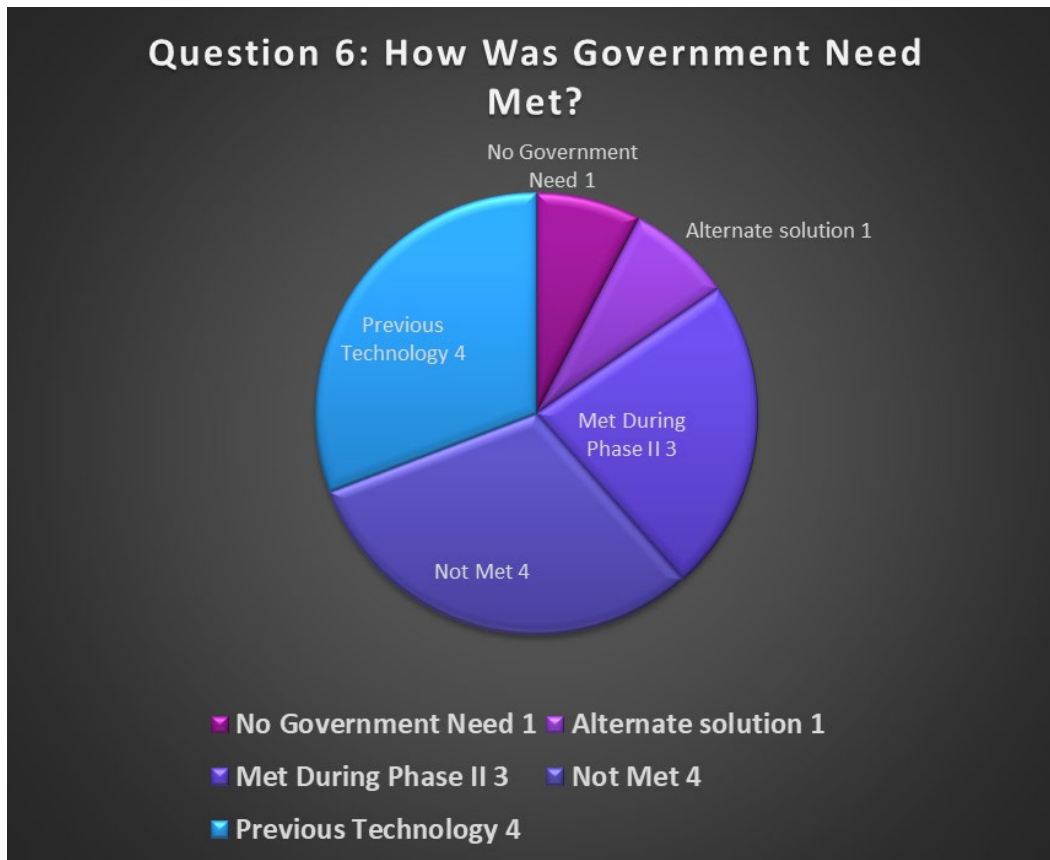


Figure 13. Question 6: Acquisition Professional Questionnaire Response Summarization

- (7) Regarding Phase I/II to Phase III transitions, is there anything you would like to address that was not asked?

The feedback on how the government could enhance the transition process offers valuable insights into the obstacles and achievements encountered when moving from Phase I/II to Phase III. The key points include the importance of customer engagement, the role of mentorship and support programs, the need for data and metrics, and the barriers faced by small businesses. The responses also highlight the need for government organizations to address these challenges and difficulties by streamlining funding mechanisms, increasing funding availability, and enhancing technical assistance and support.

c. Small Business Questionnaire Results

- (1) Describe your firm’s experience of transitioning to a successful Phase III award. Specifically, what went well and what was challenging?

The small business experiences of transitioning to a successful Phase III award involved both positive and challenging experiences. One of the key successes was finding customers and refining the offering. However, obtaining Phase III funding proved to be the number one challenge. Aligning funding was identified as the most challenging aspect, as it required competing for UFR (Unfunded Requirement) dollars with the rest of the customer’s organization and convincing the contracting office to take action. The time required to work with the government and secure sufficient funding was another challenge mentioned as a part of the funding process. A respondent shared, “Government funding occurs annually, and a small business must be able to survive through at least two government cycles or more to secure enough funding to deliver a substantial solution” (Respondent #4, research questionnaire response to authors, March 26, 2024).

The process of innovation in government was also highlighted as challenging. Specifically, it required finding a senior government advocate or sponsor who would recognize the problem and support the small business innovator’s solution. As one firm shared in their response, “The burden is on the small company to find a senior government advocate or sponsor who will advocate that the problem needs to be solved – become a requirement – and that the small business innovator has a solution worth investing in. This is almost impossible” (Respondent #4, research questionnaire response to authors, March 26, 2024).

Figure 14 depicts a summarization of the responses provided to this question.





Figure 14. Question 1: Small Business Questionnaire Response Summarization

- (2) What government challenges or difficulties in transitioning to a Phase III SBIR/STTR process did your firm encounter when an award was not made?

The small businesses shared various challenges and difficulties when transitioning to a Phase III SBIR/STTR when not receiving an award. These challenges include a lack of resources in the contracting office, a desire by government influencers to wait for the completion of a large contractor’s effort, lack of communication between stakeholders, difficulty in finding proper points of contact and funding, budgeting constraints, and difficulties in landing customers and key decision makers. Additionally, challenges were faced in dedicating key personnel, navigating the complexities of contracting offices and the contracting process, and finding funding streams. Lack of access to government contacts and knowing the right contacts also hindered the transition process.

Specifically, regarding the contracting process, multiple small businesses shared that many contracting offices are not familiar with SBIR Phase IIIs and this presented a

barrier to entry for small businesses that have an identified government end-user. The small businesses experienced pushback via the contracting office due to their lack of knowledge of the SBIR Phase III process. One respondent summarized it in one statement,

Contracting officers and Program Managers don't appear to understand that they can award Phase III efforts without any further competition, and they don't have funding to transition to Phase III efforts anyway and then blame Congress that they don't have funding to transition the projects. (Respondent #111, research questionnaire response to authors, March 12, 2024)

Another small business shared that the government decided to pursue a full and open competition solicitation instead of sole source for the solution the small businesses provided and have provided throughout the commercial industry. The small business went on to state in their response,

In doing so the government aggregated requirements such that a small business could not be competitive in the procurement. We teamed with a Prime and actually scored in the top category technically, but the team was eliminated even prior to technical demonstrations and evaluation of pricing suggesting a clear preference for contractors with prior established experience with the agency. (Respondent #30, research questionnaire response to authors, March 14, 2024)

A positive that was shared by one small business was even though they did not receive a Phase III award via the Air Force or AFWERX, their requirement was picked up by the Navy and Marine Corps for the same product.

- (3) Describe what the government could do differently to address challenges and difficulties concerning achieving a successful Phase III award.

The small businesses provided various suggestions on what the government could do differently to address challenges and difficulties in achieving a successful Phase III award. These suggestions highlight the need for better communication, funding support, streamlined processes, and increased awareness and education of the SBIR program to address challenges and difficulties in achieving successful Phase III awards.

One small business stated,



It's often extremely challenging to identify decision makers with transition authority. If the program required Government personnel to facilitate meetings and contacts with those Government personnel, there would be a lot more transition. Some TPOCS are very hesitant to share meaningful information about who in their organization can genuinely impact transition. Some TPOCs are almost secretive and hesitant to provide meaningful information. That was not the case with our TPOC on this effort, but it is very often the case. For the SBIRs that our entity has had transition it has always taken a lot more effort to transition than expected. In most cases the Phase III transition was with a different service or agency than the SBIR was funded and managed through. (Respondent #98, research questionnaire response to authors, March 12, 2024)

This response highlights the different experiences a small business can have while participating in the SBIR/STTR environment within the DAF and/or AFWERX.

Another small business suggested there should be consequences for not supporting the SBIR program/process since the White House, Congress and the Pentagon all talk to the importance of supporting the SBIR program. The small business was speaking to risk-averse acquisition professionals.

Figure 15 depicts a summarization of the responses provided to this question.



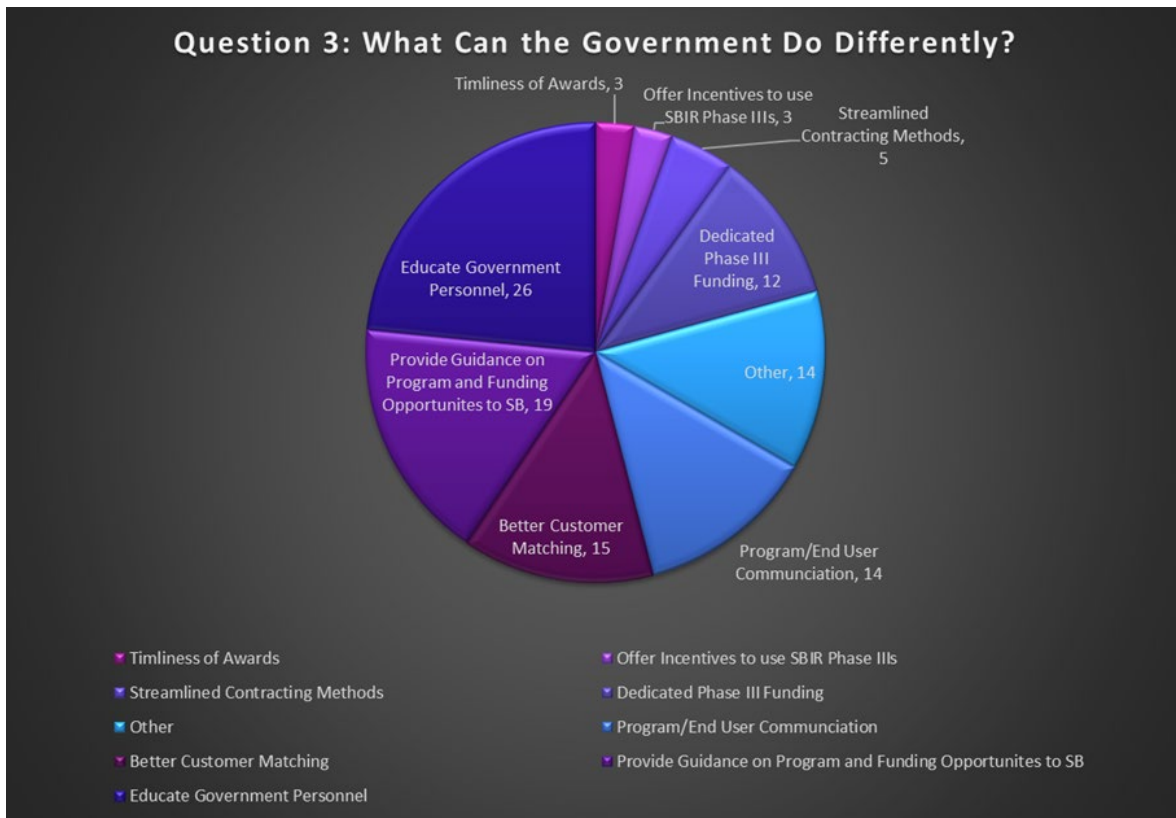


Figure 15. Question 3: Small Business Questionnaire Response Summarization

- (4) What challenges or difficulties within your firm hindered the transition to a successful Phase III SBIR/STTR award?

The small businesses mentioned several challenges and difficulties that hindered the transition to a successful Phase III SBIR/STTR award. These challenges include the inability to dedicate key personnel to support the proposal, the length of time required, navigating the complexities of Contracting Offices, the need for a funding stream, the lack of support from program offices or end-users, and the challenges in both the contract mechanism and funding. One small business stated they were willing and able to put forth the effort to meet customers and end users who might support a Phase III, but their Phase II TPOC could not help with this process. The small business realized they would have to do this entirely on their own, which required significant time and resources investment on the part of the small business.

Some small businesses also mentioned the uncertainty of which projects will be best received by end-users and the lack of access to the right government contacts.



Other challenges mentioned include the length of time required, budgeting constraints, and the need for clearer processes and guidance from the government.

- (5) Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the needs of a Phase III award.

The small businesses response to this question was wide ranging from Not Applicable (N/A), To Be Determined (TBD), Not sure while others provided insights into the factors that influenced the government organization's evaluation of the readiness and capabilities of small businesses for Phase III awards. Specifically, one respondent stated, "All factors were met. The money simply wasn't there to transition to phase III. Contracting and finance told us we were 12+ months too late" (Respondent #33, research questionnaire response to authors, March 14, 2024).

Some of the key factors mentioned by small businesses included filling a capability gap, end user utilization, established relationships with stakeholders, work and experience during Phase II, tailored solutions to specific needs, and the presence of a champion within the organization. The evaluation process and readiness criteria varied among the respondents, with some mentioning the lack of knowledge or evaluation of readiness in their specific cases.

- (6) If you did not receive a Phase III award by the Government, what Phase III commercialization opportunities did your firm successfully execute outside of the Government?

The small businesses shared the opportunities include executing a commercial line of business adjacent to the proposed concept, raising funds for commercialization, preparing for Phase III within the Air Force, selling technology directly to larger industry companies, and integrating changes developed under SBIR II into standard products.

Some small businesses have also expanded their commercial footprint and optimized complex systems for multiple entities. These include fortune 500 companies and allied partners as well as being on a strong pathway towards commercialization in the Army and Navy. One small business mentioned raising funds for commercialization, specifically, \$105 million to commercialize 100% recycled asphalt plants.



Other small businesses shared they either have received a Phase III or are in the process of being awarded a Phase III effort. This includes within the Air Force and other services.

Figure 16 depicts a summarization of the responses provided to this question.

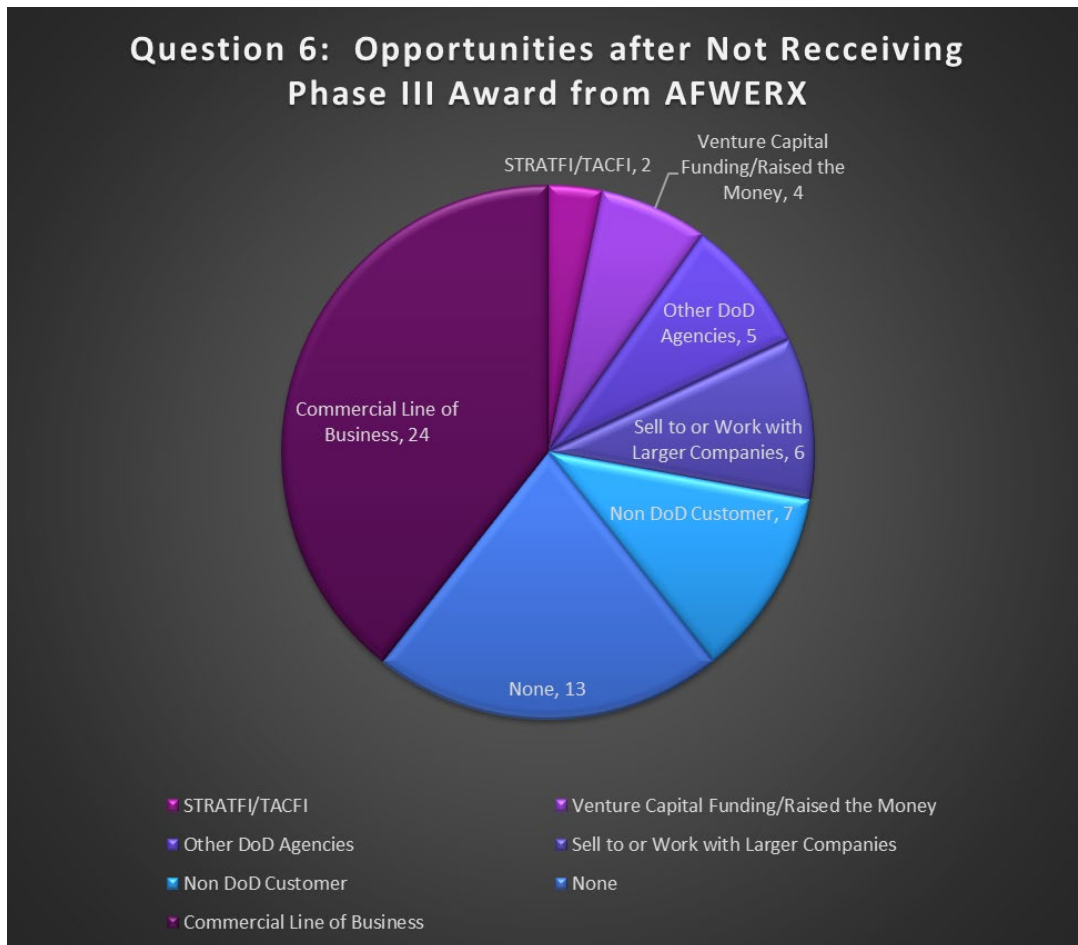


Figure 16. Question 6: Small Business Questionnaire Response Summarization

(7) Regarding Phase I/II to Phase III transitions, is there anything you would like to address that was not asked?

The responses to the question regarding Phase I/II to Phase III transitions highlight several key points. Some of the challenges mentioned by the small businesses include the need for guidance on the Phase III application process, the importance of having an acquisition organization in a sponsorship role to help lead small businesses through the process, and the difficulty of navigating the complexities of government

contracting. There is also a desire for better opportunities during Phase I for customer discovery and matching up with customers, as well as a need for clearer understanding of what Phase III entails. On the positive side, some firms have had success in transitioning to Phase III and have received support from end-users, but there is still a lack of awareness and understanding about the process and how to acquire innovation within the government.

Challenges mentioned include the need for guidance on the Phase III application process and the importance of having an acquisition organization in a sponsorship role. Some small businesses feel this is the responsibility of the AFWERX organization. One small business stated,

One of the toughest challenges in the SBIR process is accessing potential customers. Obviously, the best way to gain access is through a warm relationship. The issue is that even for well-connected organizations, there is such a high degree of turnover that relationships do not remain fresh. There is no operationalized way for the cyber phase 1 cohorts to get in front of potential end users and customers, despite what could be a perfect fit between defense need and the commercial provider. The dynamic is too “push oriented” from the company side and with a lack of “pull” from the customer side. It feels almost haphazard when there is a connection made unfortunately. (Respondent #20, research questionnaire response to authors, March 18, 2024)

Some small businesses have had success in transitioning to Phase III and have received support from end-users, but there is still a lack of awareness and understanding about the process overall.

2. Interview Summaries

a. Acquisition Professional

The following questions were asked during an interview on May 19, 2024, between the authors and Mr. John McCanney, Chief, AFWERX Innovation Contracting Branch, AFRL/RGKP, SME on SBIR/STTRs. Each question will be presented followed by a summarization of Mr. McCanney’s response.



- (1) What do you find to be the most common reason transition to phase three isn't achieved?

The primary obstacle to reaching Phase III in the development trajectory, based on experiences with SBIR companies and their government counterparts, is the preparedness of mission partners to elevate small businesses from the initial Phase I and Phase II stages. The progression appears simple: a company joins the SBIR Program, secures Phase I funding for feasibility studies and customer discovery, then progresses to Phase II for comprehensive prototyping and development. However, advancing to Phase III is more complex than it seems.

The heart of the problem is the lack of funding. Whether it's systems offices or expansive systems/services divisions, securing the necessary funds is a challenge. Companies that have made it through the SBIR program and stand ready to engage with mission organizations find themselves stalled due to insufficient financial support. The multi-year budgeting cycle is unable to swiftly allocate funds for unexpected, innovative program needs in the form of a Phase III award. As a result, even on this day, May 19th, 2024, without prior anticipation of the need several years in advance, the budget will not cover it. This financial shortfall on the mission end is why so few companies make the leap from Phase I and Phase II to Phase III.

- (2) Follow-on question was asked, if there is a way to relook at that if maybe Congress set aside a certain dollar amount or a certain amount of the SBIR funds for Phase III, would that help that or would that hurt the program more?

The essence is that setting aside funds for Phase III SBIR acquisitions, akin to allocations for various socioeconomic initiatives, seems beneficial and straightforward in theory. However, the actual execution of such a plan presents significant challenges. For instance, if Congress were to earmark a specific amount of money annually for Phase III acquisitions, the practical dilemma would be how the Air Force, or any department, would decide which companies are eligible for these funds and manage the transition process effectively. The concern is not about the potential harm to the program but about the complexities involved in the implementation of the funding allocation.



- (3) What, if any, education is taking place to train the Acquisition contracting Community on the phase three process, say, go back nine months or if there's anything coming up that you know about?

Within the DAF, and possibly extending to the DOD and beyond, there is a strong grassroots movement to educate and train personnel on SBIR Phase IIIs. This movement arises partly because the workforce is already heavily tasked with their immediate responsibilities, making deliberate training challenging. Initiatives like the Air Force Materiel Command Contracting Webinar series are part of this effort, providing a resource for future reference. Although not explicitly designed as training activities, events like the AFWERX open topic contracting sprints serve to familiarize the workforce with the process of integrating companies into the Air Force's portfolio, from Phase I feasibility to Phase II R&D phases. This creates a knowledge base for contracting officers, which can be leveraged to address unique organizational challenges. The overarching goal is to share knowledge and best practices widely, rather than keeping them within a closed group.

Additionally, the importance of disseminating the experiences and developments from the SBIR program within the DAF. To achieve this, initiatives like the AFWERX 'Ask Me Anything' Webinar series are conducted weekly, covering various aspects of the SBIR program, including Phase III. The goal is to ensure broad access to these webinars by broadcasting them to the widest possible audience and making recordings and presentations available afterward. This approach allows individuals who cannot attend the live sessions to access the information later, reflecting a deliberate and focused effort on training accessibility.

- (4) Follow-on question was asked, and are those focused mainly towards contracting or is it focused towards all of the Acquisition team to include program management and your engineers and your technical people?

The webinar series is meant for anybody and everybody. The training sessions designed by AFWERX are intended for a wide audience, regardless of their career field or whether they are from the government or industry sector. While the content may resonate differently with each individual, the trainings are created with the intention of being universally beneficial. Some sessions may target specific groups, such as industry



partners, but even those outside the primary audience, like contracting officers, can gain valuable insights. The overall aim is to provide a comprehensive understanding of the topics covered to all participants.

- (5) Do you know of any efforts that have been made to update the Phase III booklet since the 2019 issuance date or to share the booklet amongst the Acquisition contracting career field?

There is no current effort the interviewee was aware of to update the Phase III contracting booklet and creating one might be impractical due to the vast scope of Phase III, which can encompass any contract type or requirement. Instead, resources like Frequently Asked Questions (FAQs) and Tactics, Techniques, and Procedures (TTPs) provide general guidance on Phase III logistics. The focus is on increasing awareness of Phase III's versatility and ensuring a foundational understanding among all stakeholders. This is crucial as the number of Phase I and Phase II companies grows, with the hope that Phase III numbers will also rise. The aim is to familiarize acquisition people with the policy directives and available guidance on Phase III to make them more comfortable with its processes and potential. The essence is that while a comprehensive booklet might be desired, the dynamic nature of Phase III requires a more flexible approach to education and training.

- (6) Follow-on question – How do we fill this funding gap, that prevents us from being agile and purchasing for the technologically advanced force that we say we want?

There is a need for reform in the Planning, Budgeting, Programming, and Execution Model due to its outdated and inflexible nature. The suggestion is that organizations might benefit from having a reserve fund—colloquially referred to as a “slush fund”—to address unforeseen needs that arise outside of the planned budget. There are ongoing conversations about modernizing the budgeting and appropriations process to allow for more agile and responsive financial management. The current system often forces organizations to spend on lower-priority items that match the type of funds available, rather than on more critical needs that may require different funding categories, such as procurement funds. This highlights the challenges in aligning budget allocations with actual organizational priorities and needs.



The challenges in the appropriations process and laws are not due to a single factor but a combination of many variables. Despite these challenges, there is a collective responsibility to work with the available authorities to find solutions. The text suggests that organizations should not shy away from trying new methods, such as the Commercial Solutions Opening (CSO), which, while not entirely new, offers unique benefits and challenges. It emphasizes the importance of educating all relevant teams—requirements, finance, legal, and small business—about these new approaches. By doing so, organizations can equip themselves with alternative avenues for funding and contracting, which may prove useful in situations where traditional methods are not viable. This proactive approach can also facilitate Phase Three acquisitions with cyber companies, contributing to the Air Force’s goal of fostering stronger and more beneficial relationships with these entities.

- (7) Do small businesses have to show how when they’re submitting a proposal, how their subject aligns to an Air Force operational imperative?

Currently, for all CSO and Broad Agency Announcement (BAA) Air Force solicitations, including open topics and others, it is required that the proposal submission process includes a demonstration of the company’s alignment with one or more operational imperatives of the Department of the Air Force. This alignment is a crucial part of the proposal evaluation.

DAF and DOD include various Science and Technology (S&T) strategy documents in their solicitations to inform the industry about their interests and strategies. Specifically, the S&T 2030 strategy and other high-level policy documents are cited to provide guidance. These documents are intended to give industry an understanding of the Air Force’s operational imperatives and the broader technical areas they are interested in, especially for open topics where the requirements are not specifically defined. The goal is to offer enough information to help industry align their proposals with the Department of the Air Force’s objectives.

The DAF operational imperatives have been included in the CSOs since their inception, believe this was around the summer or spring of 2022.



- (8) During the interview, an author shared a response from a small business questionnaire. Specifically, the small business was saying that because they were such a small company, they could handle Phase I and Phase II. But like getting to that, the scale needed for phase III was just not practical for them. And that was the response, and I just didn't know if that was a discussion that it comes up or you know if there's been anything on that.

This highlights the challenges small businesses face in scaling up to meet the demands of large Air Force projects. It suggests that while small businesses may not individually have the capacity to deliver on a large scale, there are opportunities for them to partner with other companies. By pooling resources and collaborating, they can create an entity capable of operating at scale and maintaining eligibility for phase three contracts. Also, this touches on the flexibility of phase III contracts, which can be both advantageous and limiting. For some companies, the ability to deliver specialized services without the need to scale is beneficial and aligns with their niche operations. However, this may not be the case for all, indicating that the pursuit of phase III contracts must be evaluated on a company-by-company basis.

- (9) What new policies are being implemented in the next six months or year in regard to helping better count Phase IIIs that are being obtained? We noticed in the GAO report there was a mention that they are not always being accounted for when Phase III is awarded.

There is an ongoing emphasis on ensuring that contracting officers accurately record Phase III awards in the FPDS-NG, which serves as the federal government's data repository. There is a concern about the accuracy of the data in FPDS-NG, suggesting that there may be no immediate negative consequences if a Phase III award is not correctly coded in the system. This implies a potential gap in the tracking and accountability of such awards within the government's procurement data.

The interviewee was not aware of any changes to the policies officially other than continuing to emphasize the importance of coding things correctly for purposes of data, data integrity, and data validation.

- (10) In your years in the SBIR organization within AFWERX, we are sure you have been involved in numerous conversations and meetings where improvements to processes or procedures might have come up. Have there



ever been any suggestions that you felt would make a huge impact and have never been implemented in regard to Phase III?

The greatest one the interviewee ever heard was get rid of appropriations laws and just make money. Second, the “selectable but not funded” within the DAF’s evaluation process for Phase II projects. This status is given to proposals that meet the technical requirements but cannot be funded due to budget constraints. He suggested making the list of these companies available to everyone within the government could be beneficial. It would allow other parts of the DAF and other agencies, which may have R&D funding for a Phase II, to consider these companies for Phase II contracts, leveraging the work completed during their Phase I projects. This could potentially lead to an increase in Phase III awards, as it would help the entire acquisition community and the DAF to be aware of capable companies that were selectable but not funded in the Phase II process.

- (11) Follow-on question, do you know of any efforts currently where we share information as the DOD for Phase II to Phase III or in general?

The interviewee discussed the Ignite platform, which serves as a showcase for Phase II companies within the AFWERX ecosystem. He emphasized the need to be cautious not to endorse any specific company or solution. Ignite allows these companies to create a ‘storefront’ to display their capabilities, and it is accessible to any government user, not just those from the Air Force or DOD. Government users can create an account to explore and potentially collaborate with these Phase II companies. The platform has rules to prevent spamming and ensures that government users have the ability to control their interactions with the companies, whose access is described as more linear and focused. The interviewee clarified that his mention of Ignite is not an endorsement of the platform. Also, sbir.gov and AFRL Tech Connect was discussed.

The conversation encompassed various examples of AFWERX awarding a Phase I or Phase II, and companies receiving Phase IIIs not from the DAF, but from the Army, Navy, and other departments within the government. The interviewee shared that this was a common misnomer that awards had to remain within the department the Phase I or Phase II was awarded. The awarding organization does not even have to be within the DOD, they can be any agency or department within the government. An author shared



they knew of an AFWERX awarded Phase II and the company received multiple Phase IIIs within the Department of Commerce. The interviewee shared they knew of the National Institute of Health awarding a Phase III from an AFWERX award. The interviewee shared another Phase III award made by the Coast Guard for the mechanism that stopped the gurney from spinning on a helicopter rescue and it originated in the DAF.

- (12) Follow-on question, do you know of any funding that can be received from the SBA?

He does not believe the SBA actually has their own pot of money that is allocated to SBIR solutions. The SBA runs the program on the whole and the allocation to make awards is not allocated through the SBA.

- (13) If you had a magic wand and you could institute one or two or three policies to help expand the use of Phase IIIs, what would they be?

Going back to the awareness of who is in the SBIR portfolio, he would want to see some sort of universally recognized repository with all SBIR companies beyond just the SBIR website. Primarily because you still have to almost know who you are looking for to use the SBIR website (sbir.gov). Further, something where any user or requirements office or contracting officer could go in and just holistically now have at their fingertips every SBIR company that does anything and is able to get information like that. Second, I would look at the budgeting process and know how the budgeting process prohibits not only us from being able to be agile and nimble when it comes to SBIR, but really in general of what the need from the requirements side. Encouraging to see the push towards PPBE reform.

Finally, the interviewee emphasized the importance of advocating for real reform rather than just identifying flaws in existing systems. Specifically, addressing discovered challenges proactively to bring about meaningful change. While they don't propose a specific policy, they highlight the value of understanding and utilizing Phase III approaches, which offer flexibility and the ability to tailor responses to unique circumstances, such as budget constraints or time limitations. They envision a future



where everyone grasps the potential of Phase III strategies, seeing them as a tool for crafting effective solutions to complex problems.

b. Small Business Participant

The following is a summarization of the interview on April 11, 2024 between the authors and Mr. Michael Campbell, director of Government Solutions for Privoro, LLC, a Small Business with a STRATFI SBIR/STTR effort. The discussion covered various aspects of Mr. Campbell's response to the questions. This summary addresses Mr. Campbell's overall experience with the termination / ending of his effort.

Mr. Campbell elaborated that the effort's SES sponsor was transferred to a new position and the acting GS-15 deputy did not have the same authority or clout as the SES. Because of this, when it came time to provide the funding for Option 1, the funding was not available as it was redirected to other funding items that had more senior sponsorship. Mr. Campbell further elaborated that due to COVID-19 pandemic, the other two agencies involved experienced a funding strain as their funding went to support COVID-19 efforts. Mr. Campbell went on to express that the effort experienced a whole host of challenges that included multiple TPOC changes in all agencies, losing the SES clout that came with the position, and COVID-19 was a recipe for disaster.

C. WHAT ARE THE CURRENT PHASE III REPORTING PRACTICES AND ARE THERE POTENTIAL GAPS IN DATA COLLECTION?

Reporting current and accurate contract information is legislated by the Federal Funding Accountability and Transparency Act of 2006 (Pub L. 109–282) and enacted through FAR 4.603, for Federal Agencies when spending federal funds. DFARS 5304.604 requires that the process for reporting to FPDS-NG where possible, be automated by incorporating it into the contract writing systems.

Reporting for SBIR.gov is completed in the Company Commercialization Report (CCR). This report is completed by small businesses as part of the last deliverable under the funding agreement. The information on Phase I/II awards represents a contractual obligation. This mandatory reporting and verification provide for reliable data. Phase III reporting is voluntary as there is not contractual deliverable, and as such cannot be fully



relied on. The SBIR/STTR database is a repository of companies and seems to motivate many of the businesses to complete the information within the database.

Reporting of Phase I/II SBIR/STTR awards is correct and accurate and can be relied upon. The research conducted identified that there is a gap in reporting the Phase III awards. This gap is due to the nature of the Phase III award process and as identified in the GAO (2023), “there are limited requirements for small businesses to report commercialization metrics beyond the award term” (p. 24). The Phase III award is normally made by a separate unit/agency and reporting is dependent on the procuring contracting officer’s (PCO’s) knowledge that the award incorporates the Phase I/II research. FPDS-NG does not allow for or accommodate entry of the Phase I/II contract number. It is this gap connecting the Phase I/II research to Phase III that prevents a better understanding of the SBIR/STTR commercialization.

Figure 17 is an example of the FPDS-NG data entry screen PCO’s interface with when reporting award data.

The screenshot displays the 'Competition Information' section of the FPDS-NG data entry interface. It contains several fields and dropdown menus:


- Extent Competed For Referenced IDV:** A text input field.
- Extent Competed:** A dropdown menu with 'Select One' selected.
- Source Selection Process:** A dropdown menu with 'Select One' selected.
- Solicitation Procedures:** A dropdown menu with 'Select One' selected.
- IDV Type Of Set Aside:** A text input field.
- Type Of Set Aside:** A dropdown menu with 'Small Business Set Aside - Total' selected.
- Type Of Set Aside Source:** A text input field.
- Evaluated Preference:** A dropdown menu with 'Select One' selected.
- SBIR/STTR:** A dropdown menu with 'Small Business Innovation Research Program Phase III Action' selected. A list of options is visible below it, including 'Small Business Innovation Research Program Phase I Action', 'Small Business Innovation Research Program Phase II Action', 'Small Business Innovation Research Program Phase III Action' (highlighted), 'Small Technology Transfer Research Program Phase I', 'Small Technology Transfer Research Program Phase II', and 'Small Technology Transfer Research Program Phase III'.
- Fair Opportunity/Limited Sources:** A dropdown menu with 'Select One' selected.
- Other Than Full And Open Competition:** A dropdown menu with 'Select One' selected.
- Local Area Set Aside:** A dropdown menu with 'Select One' selected.
- Contract Opportunities Notice:** A dropdown menu with 'Select One' selected.
- A76 Action:** A dropdown menu with 'Select One' selected.
- Commercial Products and Services Acquisition Procedures:** A dropdown menu with 'Select One' selected.
- IDV Number of Offers:** A text input field.
- Number Of Offers Received:** A text input field.
- Number Of Offers Source:** A text input field.
- Small Business Competitiveness Demonstration Program:** A checkbox.
- Simplified Procedures for Certain Commercial Products and Commercial Services:** A dropdown menu with 'Select One' selected.

Figure 17. Screenshot of FPDS-NG Data Entry Example

SBIR.gov search functions prevent the user from searching the database for Phase III awards. This data is also hindered by the voluntary nature of collection of the Phase III award information. Figure 18 shows the SBIR.gov award data report filter options.



SBIR.gov is getting modernized! To try out the new user experience, visit the beta website at <https://beta.www.sbir.gov/>



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Award Data

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FILTER BY:

Agency

- Projects Agency (6493)
- Defense Health Agency (1174)
- Defense Logistics Agency (580)
- Defense Microelectronics Activity (129)
- Defense Threat Reduction Agency (1033)
- Missile Defense Agency (8772)
- National Geospatial-Intelligence Agency (231)
- Navy (26121)

Phase

- Phase I (144638)
- Phase II (63061)

Program

- SBIR (187877)
- STTR (19822)

Year

- 2024 (4)

! For best search results, use the search terms first and then apply the filters

! The Award database is continually updated throughout the year. As a result, data for FY24 is not expected to be complete until March, 2025.

! Download all SBIR.gov award data either **with award abstracts (290MB)** or **without award abstracts (65MB)**. A data dictionary and additional information is located on the **Data Resource Page**. Files are refreshed monthly.

! The SBIR.gov award data files now contain the required fields to calculate award timeliness for individual awards or for an agency or branch. Additional information on calculating award timeliness is available on the Data Resource Page.

Displaying 1 - 10 of 207699 results

PREFAB MODULAR LIQUID-COOLED MICRO DATA CENTER

SBC: Flexnode Inc Topic: 1

"To enable the future needs of efficient computing for edge data centers, Flexnode and its partners, the University of Maryland (UMD), Boeing, Iceotope, SHoP Architects, and Arup, propose to develop a prefabricated modular micro data center with unprecedented energy efficiency and power density. The proposed system leverages four key component and system-level technology advancements: (a) a novel, ...

STTR
Phase I
2024
Department of Energy
ARPA-E

Figure 18. Screenshot of SBIR.gov Award Data Report Filters

The limitations these data collection processes present prevent a meaningful comparative analysis of the data.



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CONCLUSIONS, RECOMMENDATIONS, AND POTENTIAL FUTURE RESEARCH

In Chapter V we provide our conclusions, recommendations, and potential future research for our two research questions:

- What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?
- What are the current Phase III reporting practices and are there potential gaps in data collection?

A. PRIMARY RESEARCH QUESTION CONCLUSIONS

Our primary research question was: What are the causes and the potential solutions to barriers preventing small businesses and acquisition professionals from achieving Phase III transition within the AFWERX organization?

1. Causes (Based on Findings)

The results of our questionnaires and interviews identified causes of barriers to Phase III transition from the perspective of both small businesses and government organizations. We consolidated the individual responses into broader categories to facilitate easier understanding.

a. *Acquisition Professionals*

The acquisition professionals' responses highlighted several barriers to Phase III transitions, including funding issues, bureaucratic government processes, lack of end-user engagement, challenges with intellectual property rights, and the insufficient involvement of Program Executive Officers (PEOs) as champions on the government side. Our review identified a few overarching causes. One primary barrier is the availability of funding, often constrained by the current PPBE processes, which lack the agility required for Phase III awards. Additionally, bureaucratic processes and insufficient engagement and alignment with end-users and PEOs stem from a lack of awareness and understanding among government acquisition professionals regarding the capabilities and needs of Phase III programs.



b. Small Businesses

The responses from small businesses revealed several barriers to Phase III transition, such as funding issues, lack of government interest or support, inconsistent TPOCs due to job rotation practices and communication from the government, and insufficient knowledge of the Phase III process within government agencies.

The authors examined these barriers and uncovered root causes. Like the findings from the acquisition professionals, one of the main barriers was the availability of funding, as the PPBE processes lack the agility required for Phase III awards. Additionally, the remaining barriers identified by small businesses primarily stem from their interactions with government personnel, or lack thereof, particularly in the case of inconsistent TPOCs. We found that these issues are caused due to government acquisition professionals' unfamiliarity with the Phase III process as well as what support small businesses need from the government to transition to Phase III programs.

2. Potential Solutions (Based on Findings)

The results of our questionnaires and interviews identified potential solutions to barriers to Phase III transition from the perspective of both small businesses and government organizations. We consolidated the individual responses into broader categories to facilitate easier understanding.

a. Acquisition Professionals

The acquisition professionals offered numerous potential solutions to these barriers. The top four recommendations included securing adequate funding, revising government policies and processes, instituting government training and education initiatives, and fostering program office comprehension and engagement with SBIR programs aiming to transition to Phase III

b. Small Businesses

The small businesses proposed potential solutions to their identified barriers. The top five recommendations included establishing dedicated Phase III funding, enhancing communication between the program offices and end users with the small businesses,



aligning small businesses capabilities more effectively with the needs of government end users, and providing guidance and education for both government personnel and small businesses regarding the Phase III process.

B. SECONDARY RESEARCH QUESTION CONCLUSIONS

Our secondary research question was: What are the current Phase III reporting practices and are there potential gaps in data collection?

1. Reporting Practices

The existing procedures for reporting Phase III awards involve the PCO selecting the correct category in the FPDS-NG tool. Small businesses self-report Phase III award information to the SBIR.gov database; however, the completeness of this data submission is not ensured.

2. Data Collection Gaps

The FPDS-NG search function accuracy for Phase III awards is dependent on the PCO's selection of the appropriate category. Additionally, Phase III awards are issued by the unit that adopts the research, not by the office that awarded the Phase I/II and separate from AFWERX. In almost all instances these will not be the same office. The report for Phase III awards simply provides a list of government wide Phase III awards that have been issued by all federal agencies. This limits the ability to identify or match up the Phase I/II awards to Phase III awards. It is noted that database also does not have a field for inputting the Phase I/II information when entering a Phase III award to advance this technology.

Upon review of SBIR.gov, it was discovered that the database does not have a search function that generates reports with Phase III information linked to the associated Phase I/II details. The SBIR program requests that small businesses receiving a Phase III award voluntarily enter the award information into the SBIR.gov database. However, since the data entry is voluntary, it cannot be considered a comprehensive source.



C. OVERALL CONCLUSIONS

The questionnaire respondents' experiences of transitioning to Phase III awards included several positive points and challenges. Successful transition to Phase III was achieved through alignment with Air Force priorities, innovative solutions, customer engagement, strategic partnerships, and prototype demonstration. Challenges for transition to Phase III included funding uncertainty, barriers to entry for small businesses, difficulty in understanding government processes, and the need for long-term sustainability. Government processes, policies, and regulations such as SBIR/STTR program policies, FAR, technology readiness levels, mission relevance, and budgetary constraints influenced the award or no award decision for transition to Phase III contracts.

Small businesses provided various suggestions on what the government could do differently to address challenges and difficulties in achieving a successful Phase III award. These suggestions highlight the need for better communication, funding support, streamlined processes, and increased awareness and education of the SBIR/STTR programs to address challenges and difficulties in achieving successful Phase III awards. A notable point of contention is the reluctance of some TPOCs to divulge critical information that could influence the transition process. Also, it was suggested there should be consequences for not supporting the SBIR/STTR programs/processes since the White House, Congress, and the Pentagon all talk to the importance of supporting the SBIR/STTR program.

The challenges in the appropriations process and laws are not due to a single factor but a combination of many variables. It is important to educate all relevant teams about new approaches, including requirements, finance, legal, and small business. By doing so, organizations can equip themselves with alternative avenues for funding and contracting, which may prove useful in situations where traditional methods are not viable. This proactive approach can also facilitate Phase III acquisitions with cyber companies, contributing to the Air Force's goal of fostering stronger relationships with these entities.

It was also noted that the nomenclature used to describe the path for research within the SBIR/STTR portfolio oversimplifies a complex system into a linear equation.



It assumes that all the phases are used and are part of a defined path with the end goal of Phase III, commercialization of the research. However, the data we received from the acquisition professional as well as from an interview with Mr. McCanney revealed that research in SBIR/STTR is driven by the Department of the Air Force strategic level priorities on R&D and S&T. Commercialization may be a potential outcome for SBIR/STTR research, but it's not always the prescribed or beneficial course for the DAF, especially if the deliverables of the Phase I/II meet the government needs. There are instances when the government's requirements are satisfied with the completion of Phase II. Alternatively, the progress achieved by the small business in Phase I may warrant a direct transition to Phase III. Furthermore, there are times when, after Phase II, there is no clear advantage or imperative to proceed to Phase III. The phases suggest various pathways for research development, but the traditional linear approach mistakenly assumes that commercialization is an obligatory and critical endpoint, resulting in a commercial product or service.

There is an ongoing emphasis on accurately recording Phase III awards in the FPDS-NG, which serves as the federal government's data repository. However, there is a concern about the accuracy of the data in FPDS-NG, suggesting that there may be no immediate negative consequences if a Phase III award is not correctly coded in the system. The data did not reflect an awareness of any changes to the policies officially, but there is a continued emphasis on the importance of coding things correctly for data integrity and validation purposes.

The current Phase III reporting practices rely on the selection of the appropriate category by the PCO in the FPDS-NG search function. Phase III awards are issued by the unit that adopts the research, not by the office that awarded the Phase I/II. This means that the Phase I/II and Phase III awards will usually be issued by different offices. The report for Phase III awards provides a list of government-wide Phase III awards issued by all federal agencies, but it does not allow for the identification or matching of Phase I/II awards to Phase III awards. The SBIR.gov database also does not have a search function that generates reports with Phase III information linked to the associated Phase I/II details. Small businesses receiving a Phase III award are requested to voluntarily enter the award information into the SBIR.gov database, but this data entry is not



comprehensive. These limitations make it difficult to conduct a comparative analysis of the data to answer the question about Phase III reporting practices and potential gaps in data collection.

In terms of improving the use of Phase IIIs, the data suggests creating a universally recognized platform that goes beyond the SBIR/STTR website to showcase all SBIR/STTR companies and their capabilities. This would allow users, requirements offices, and contracting officers to easily access information about SBIR/STTR companies. Additionally, the data highlights the need for reform in the budgeting process to enable more agility and flexibility in SBIR and overall requirements. Data also emphasizes the importance of advocating for real reform rather than just identifying flaws in existing systems.

In conclusion, our research identified clear recommendations that can be made for AFWERX, and ultimately the DAF. These recommendations address some of the barriers identified by our questionnaire respondents. These barriers will continue to widen the valley of death if left unresolved.

D. RECOMMENDATIONS

1. Funding

A recurring theme emerged in the responses to both our acquisition professional and small business questionnaires: the lack of dedicated Phase III funding and the difficulty in obtaining the appropriate funding type significantly hinder the ability to successfully award a Phase III contract following a successful Phase I or Phase II award. Both small businesses and the government often agree on the importance of advancing to Phase III for specific efforts, but the current PPBE process is not agile enough to meet these funding needs unless the requirement was identified years in advance. As the DAF aims to enhance its agility in acquisition activities to better support the warfighter, addressing funding challenges will be crucial to fully realize the benefits of this increased agility.

Our team has two recommendations to help overcome this barrier to Phase III transitions.



- Recommendation 1: Encourage Air Force leaders to establish an Agile Innovation Fund at the agency, center, or program level. This fund would support innovative awards, such as SBIR/STTR Phase III and other agile acquisition programs, by allowing for funding requests on a significantly shorter timeline than the current PPBE process. By earmarking funds specifically for agile and innovative acquisitions, this initiative would streamline the process and enhance the ability to swiftly capitalize on promising opportunities.
- Recommendation 2: Encourage Air Force leaders to support the recommendations released in the March 2024 Commission on PPBE Reform report. In this report, one of the recommendations Congress made was to reform how the colors of money work:

Recommendation #11C: Align Program and Program Office Funding to the Predominant Activity of the Program: Finally, the Commission recommends aligning funding for a program and program office to a single color of money, recognizing the timeline and intensive effort required to implement the budget structure transformation from Recommendation #4. (Commission on Planning, Programming, Budgeting, and Execution [PPBE] Reform, 2024, p. 88)

This recommendation would enable program offices to use a single color of money for all their activities, allowing them to make funding decisions based on their current urgent needs and priorities. Previously, if they had Operations & Maintenance (O&M) money, they would have to prioritize activities that could be accomplished with O&M funds, even if those activities were not top priorities for the office. By consolidating funding into a single color of money, programs could promptly decide to use their available funds to award a SBIR/STTR Phase III, eliminating the need to delay awards while waiting to secure a specific type of funding.

2. Awareness and Education

Based on the questionnaire responses and interviews, a frequently mentioned opportunity was the need to increase awareness and education within the contracting workforce about the SBIR/STTR policy, procedures, and phases. Understanding the value of the SBIR/STTR acquisition and contracting phases, particularly what a Phase III can contribute to DAF programs, is crucial. During a solicitation for a specific topic, the program can define areas where it seeks more agility or innovation. This allows the



program to select the contractor that best meets these needs. Essentially, the acquisition process becomes a whiteboard where programs can draw and achieve their desired outcomes. It is vital to make this process appealing and comprehensible to the contracting workforce to foster greater interest and understanding of SBIR/STTR.

The authors investigated existing specialized training and found there is no concerted effort made to ensure the DAF contracting workforce is trained across the board on SBIR/STTR. There are trainings offered once or twice a year by AFRL/SB on SBIR/STTR and if you participate in an AFWERX Contracting Sprint, as a participant, you receive training on Phase I or Phase II SBIR/STTRs but not Phase IIIs. Defense Acquisition University (DAU) has a Small Business Professional Credential that expands knowledge of small business legislation, policies, practices, and procedures which touches on SBIR/STTR topics but is not dedicated to SBIR/STTR. DAU currently has 21 different contracting credentials, however, none with a focus on SBIR/STTR.

- Recommendation 1: Add a DAU contracting credential specifically for SBIR/STTR that DAF contracting professionals can work to obtain. By DAU having a credential specifically for SBIR/STTR, this places an emphasis on SBIR/STTR.
- Recommendation 2: DAF, SAF/AQC create a well-defined awareness and education campaign on SBIR/STTR with an end result of all contracting professionals have a working knowledge of SBIR/STTR and the value of utilizing the various phases.
- Recommendation 3: Create an AFWERX SBIR/STTR Center of Excellence (comparative to the Acquisition Center of Excellence [ACE] for Services Contracting) with the focus on overall SBIR/STTR program execution. Currently, the AFWERX SBIR/STTR Contracting Branch executes the majority of DAF Phase I and Phase II contracts. The AFWERX SBIR/STTR Center of Excellence could be implemented as follows:
 - The contracting professionals within AFWERX are fully trained on SBIR/STTR contracting and it makes the most sense to utilize them as SMEs. These SMEs would serve a similar function to that of the ACE for Services Contracting, as advisors, coaches, and educators of SBIR/STTR phases and processes.
 - AFWERX could offer it's execution services on a reimbursement basis to organizations that do not have the capacity to award a Phase III.
- Recommendation 4: It is recommended that the DAF work with the SBA to update the Small Business Dynamic Search to allow for SBIR/STTR to be selected as a category much like selecting a specific socioeconomic



category during routine market research inquiries. Leveraging this existing procurement tool will provide additional visibility to completed SBIR/STTR efforts without additional workforce tasking. This additional attention to the program leverages the small businesses' new and budding technology and improves the DAF agility and ability to incorporate cutting edge research.

3. FPDS-NG Additional Data Collection

Linkage of Phase I/II and Phase III awards will provide better tracking for agencies and congress to further understand the development of the research provided by SBIR/STTR programs. This process will leverage existing data reporting to better understand and track the success of SBIR/STTR programs.

- Recommendation 1: It is recommended that the DAF work to have a field added to the FPDS-NG to be able to capture Phase I/II award data at the time of Phase III award. Linkage of Phase I/II and Phase III awards will provide better tracking for agencies and congress to further understand the development of the research provided by SBIR/STTR programs. This process will leverage existing data reporting to better understand and track the success of SBIR/STTR programs.
- Recommendation 2: It is also recommended that SAF/AQC release a policy memorandum to update SBIR/STTR processes to include Phase III coding. This change will enhance accuracy and effectiveness in reporting and capturing Phase III successes.

4. Selected/Not-Funded Tool

Selected/Not Funded was an opportunity the authors learned during the interview with the Acquisition SME, Mr. McCanney on 19 May 2024. During an AFWERX CSO solicitation, the AFWERX SBIR/STTR has a budget they must adhere to when making award decisions. Mr. McCanney shared there are times when a proposal meets the technical requirements but there is not enough funding to fund all the selected proposals. Hence, the small business receives a Selected/Not Funded notice via a memorandum.

The memorandum communicates to the small business if there are other government agencies or departments who have the available funds, the agency or department is able to utilize the competition and solicitation from the original proposal and make an immediate award. The authors and the SME felt these are missed



opportunities that should not put all the responsibility of funding on a small business. The authors are making two recommendations:

- Recommendation 1: Make the listing of the Selected/Not Funded available to the entire acquisition community within the DAF searchable via a website such as the IGNITE platform within the AFWERX online website. The SME shared he was not personally endorsing the company or platform, just the mechanism is provided. This mechanism is a way for small businesses and defense customers such as the DAF to connect and collaborate.
- Recommendation 2: If the first recommendation is not easily implementable, then it is suggested to use the What's New in Contracting listserv which is distributed to all contracting professionals within the DAF with the recent listing of Selected/Not Funded to make them aware of the possibilities that exist and just need funding.

E. POTENTIAL FUTURE RESEARCH

Our research highlights several critical barriers to Phase III transition within the SBIR/STTR programs at AFWERX. Given the importance of these programs in fostering innovation and supporting small businesses, it is crucial to investigate the obstacles that impede their progress.

While our study specifically targeted AFWERX, future research should expand to encompass the DAF and ideally the entire DOD. Additionally, ongoing research is necessary to identify and address the challenges in securing Phase III funding and to evaluate the systemic issues within the current funding process.

Furthermore, comparing government processes with how venture capitalists fund and execute similar innovative programs could provide valuable insights. Lessons learned from the commercial sector might offer improvements to our own processes.

Also, a recent DAF, SAF/AQC Memorandum for All Major Commands, specifically Contracting, (Contract Policy Memo 24-C-08) was signed on April 11, 2024, by Major General Alice W. Trevino, Deputy Assistant Secretary (Contracting), Assistant Secretary of the Air Force (Acquisition, Technology & Logistics). The subject of the memorandum was Interim Department of Air Force Federal Acquisition Regulation Supplement (DAFFARS) Change – Part 5307 – Acquisition Planning, made a change to the DAFFARS which previously spelled out actions that did not require a written



Acquisition Plan or written Streamlined acquisition strategy, afforded the SBIR/STTR program to not require the completion of said documents. With this recent policy change, it lines through and eliminates this waiver essentially (Trevino, 2024). The question for future research is, does this change widen the valley of death for transition to Phase III?

By addressing these barriers, we can enhance the effectiveness of the SBIR/STTR programs, ensuring they continue to drive innovation and deliver significant benefits to the DAF.



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APPENDIX A: RAW DATA: ACQUISITION PROFESSIONAL QUESTIONNAIRE RESPONSES BY QUESTION

- (1) Describe the government organization’s experience of transitioning to a successful Phase III award. Specifically, what went well and what was challenging?

A	2024-03-28 14:24:10	Team was able to successfully brief to senior leadership. However they were late to need in the budget planning cycle.
B	2024-03-28 11:56:48	N/A
C	2024-03-28 11:44:02	<p>What Went Well:</p> <p>Alignment with Air Force Priorities: The project’s objectives and outcomes closely align with the technology focus areas and strategic priorities outlined by the USAF. A strong alignment enhances the project’s competitiveness for Phase III funding and support from AFWERX and other USAF stakeholders.</p> <p>Innovative Solution: The project presents a novel and innovative solution to address a specific challenge or opportunity identified by the USAF. This innovation is a key driver for securing Phase III funding and demonstrates the project’s potential to deliver significant impact for the Air Force mission.</p> <p>Customer Engagement: The project team actively engages with end-users and stakeholders within the USAF throughout Phase I, gathering feedback and validation to refine the solution. Strong customer engagement enhances the project’s credibility and increases the likelihood of successful adoption and transition to Phase III.</p> <p>Strategic Partnerships: The project leverages partnerships with industry, academia, and other government agencies to accelerate development and enhance the solution’s capabilities. These partnerships bring complementary expertise, resources, and networks to support the project’s transition to Phase III.</p> <p>Prototype Demonstration: The project successfully develops and demonstrates a prototype or proof-of-concept during Phase I, showcasing the feasibility and technical merit of the solution. A well-executed prototype demonstration strengthens the project’s case for Phase III funding and mitigates technical risk.</p> <p>Challenges:</p> <p>Funding Uncertainty: Despite the promising outcomes of Phase I, securing Phase III funding may still face challenges due to budget constraints or competing priorities within the USAF. Uncertainty surrounding funding availability and timing can impede the project’s transition to Phase III.</p> <p>Regulatory Compliance: Compliance with Air Force regulations, standards, and acquisition processes can pose challenges, particularly for projects involving sensitive technologies or classified information.</p>



		<p>Navigating regulatory requirements effectively is essential to ensure a smooth transition to Phase III and successful implementation within the USAF. Scale-Up and Integration: Transitioning from a Phase I prototype to full-scale deployment within the USAF operational environment requires careful planning and consideration of logistical, technical, and interoperability challenges. Scaling up the solution and integrating it into existing systems and processes may encounter obstacles that need to be addressed during Phase III. Mission Relevance: Demonstrating the solution’s direct relevance and value to Air Force missions and operational needs is crucial for securing Phase III funding and support. Project teams must effectively articulate the solution’s benefits and impact in addressing specific Air Force challenges, ensuring buy-in from key stakeholders and decision-makers. Competitive Landscape: The competitive landscape within the defense innovation ecosystem is dynamic, with Demerging technologies and alternative solutions vying for attention and funding. Project teams must differentiate their solution effectively, highlighting its unique advantages and value proposition compared to competing offerings.</p>
D	2024-03-22 09:26:14	Transition is still tough because of budgets but also because the technology has been through required testing to receive N authority to operate so we can’t use it
E	2024-03-21 08:08:44	Since the contract is the build a specific extension on an established platform, phase III does not make sense
F	2024-03-21 06:41:15	Contracting was major major headache
G	2024-03-18 20:26:36	It is very hard to transition to a phase III. The only way for these smaller companies to go to a phase III is to work together, which is still a financial difficulty due to the cost of transportation to space. The other option is to work with the bigger aerospace companies, but then they will be at the mercy of those titans.
H	2024-03-15 21:03:09	I only participated in phase 1
I	2024-03-15 08:52:12	We took a Ph 2 effort to Phase 3 through our strong customer contacts (made well before we did the SBIR, largely through “running into each other at DARPA meetings.” The cost match funding was from a venture capitalist, so unclear if/how they’re using the technology.
J	2024-03-14	We were able to award a Phase III for the prototype of a virtualized OFP for the B52 Simulator. The award process was welcomed from sims leadership and buy in was achieved from the user and customer.



	18:07:46	Challenges include securing funding, using SBIRs in an office that doesn't usually do so and potential issues with later competition.
K	2024-03-14 14:44:04	There is very rarely a budgeted Phase III. Only a few topics ever can meaningfully consider going to a phase III and that usually requires Phase II extension or enhancement funds that no longer exist in order to get to a point where an organization is willing to say the technology is properly scoped for insertion into their program.
L	2024-03-14 14:51:13	The government's streamlined process was great, but the contractor's seemed to really struggle with the initial documents and proposal.
M	2024-03-14 07:55:37	Our SIBR has not transitioned to Phase III yet. I can see that it's going to be tough to identify shortcomings in the results of Phase II that could possibly be addressed during a Phase III effort. For our purposes, a Phase III effort may not be required.
N	2024-03-14 10:40:11	I submitted two specific topics in 2024 call for phase 1, this does not apply yet. But all topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go first.
O	2024-03-13 08:25:22	I have two key experiences to share. One successful transition into a TACFI effort and 3 successful Phase II activities that are yet to transition into Phase III for various reasons. The TACFI transition had a few advantages, including executive support for the activity and a willing partner in a Program Management Office. This allowed for human resources to show up and meet timelines and for contracting expertise to be applied for the RFP/Proposal/Evaluation process. Additionally, there are many program management activities and having a background in Acquisition allowed me to navigate the hurdles, without that background it would have been challenging. There were still challenges to gaining TACFI approval include finding the right customer partner and coordination; which is a tangible element of program management that many people are unaware of. The other Phase II activities that have not transitioned have many more challenges. Lack of program funding at USSF Headquarters to effectively transition, inability to reallocate funding in the timeframe of determining success in a Phase II until Phase III is expected, and lack of access to mission data at headquarters leave Phase II activities representative of space activities rather than directly connected. Additionally, given the fact that most of the tools, systems, and developments made in AFWERX, Guardian capabilities to use these systems lag the implementation.
P	2024-03-14 05:55:17	I have never seen a SBIR or STTR move past Phase II. In some cases multiple Phase II, but never Phase III.
Q	2024-03-13	Typically a lack of interest by the time the P3 comes up leaves to a low track record in my organization



	18:48:2 2	
R	2024-03-13 12:03:3 2	We are still working through Phase II
S	2024-03-13 10:52:5 4	I was a technical POC backup to the main TPOC. Anytime there was an adjustment to the contract me or the main TPOC had to approve it. The changes were so minimal most of the time I question whether it should have go through the additional hurdle of needing me to sign it. There was always some quick deadline and scramble to get things signed.
T	2024-03-13 10:42:1 0	At time of writing my organization is still in Phase 2.
U	2024-03-13 09:25:3 2	Our SBIR has not transitioned to Phase III yet.
V	2024-03-13 07:14:5 3	I believe one of the most significant challenges to a successful transition to a Ph III SBIR is the fact that, with respect to Open Topics, AFWERX is making funding decisions that don't necessarily coincide with technology gaps identified by AFRL subject matter experts. Technologies are selected by AFWERX personnel for sponsorship which don't necessarily line up to address known technology gaps. When this happens, it should come as no surprise that AFRL and other organizations aren't leading the charge for Ph III transition contracts.
W	2024-03-13 07:00:2 3	Difficult. We had strong customer pull but trying to transition SBIR products to the customers prime contractor was a challenge. Additional dollars needed. A second STRATFI with less matching fund requirements would have helped. Customer and Labs are short on matching funds in this current budget environment.
X	2024-03-13 06:38:2 9	Phase I and II efforts are funded primarily through AFWERX. Transitions are successful when the SBIR closely aligns with an internal AFRL effort for which AFRL has internal funds to continue or when there is a customer willing to fund. The biggest challenge to Phase III SBIRS is that 1) AFRL programs do not usually have multiple millions of uncommitted funds to put towards a Phase III effort and the technologies may not be well enough aligned to or mature enough for System Program Offices (SPOs) to fund.
Y	2024-03-13 05:17:3 1	We are very appreciative and have had some success because of the hard work of our SBIR office and their relationships with contracting. It really helps me being able to tell leadership that we have potential to get matching funds. However, the number one difficulty is a very complex problem, which I try but may fail to do justice. It is timing between the SBIR to BAF, CIP, Emerging Research, etc., funds. We go into SBIR



		trying to drive innovation, so how do we start CIP not knowing if we are going to successful and not knowing all the hurdles. I wish there was a way to go after “tentative” funding through our department, so we coordinate BAF, CIP, etc. “group” funding to match the timing of successful SBIR completion.
Z	2024-03-13 04:57:38	The AFWERX construct has been disappointing an seemingly equivalent to random selection. As such, transition has fared little better (and probably worse) than the much-criticized (but at least methodological) approaches of the past.



(2) What government processes, policies, and/or regulations influenced the organization to award or fail to award a Phase III contract?

A	2024-03-28 14:24:10	Failure to do the following: Align w/POM cycle; not an adequate or central end user and customer aligned to advocate; no engagement or clear PEO alignment.
B	2024-03-28 11:56:48	
C	2024-03-28 11:44:02	<p>1. Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Policies: SBIR and STTR programs have specific guidelines and requirements for transitioning successful Phase II projects to Phase III contracts. Agencies typically have policies in place to encourage and facilitate the transition of SBIR/STTR-funded technologies into commercial products or government applications.</p> <p>2. Federal Acquisition Regulations (FAR): FAR governs the acquisition process for federal agencies, including the awarding of contracts. Compliance with FAR requirements, such as competitive procurement procedures, cost principles, and contract administration, may influence the decision to award a Phase III contract.</p> <p>3. Technology Readiness Levels (TRLs): Government agencies often assess the technology readiness level (TRL) of a project to determine its maturity and readiness for transition to the next phase of development or deployment. Projects with higher TRLs, indicating greater technical maturity and lower technical risk, are more likely to receive Phase III contracts.</p> <p>4. Mission Relevance and Strategic Priorities: Government organizations prioritize projects and investments based on their alignment with agency missions, strategic objectives, and national security priorities. Projects that address critical mission needs or support strategic initiatives are more likely to receive funding for Phase III contracts.</p> <p>5. Budgetary Constraints and Appropriations: Availability of funding within agency budgets and appropriations can impact the decision to award Phase III contracts. Budgetary constraints or competing priorities may limit the funding available for transitioning SBIR/STTR projects to Phase III.</p> <p>6. Program Performance and Evaluation: Agencies evaluate the performance and outcomes of Phase II projects to assess their success and potential for further development. Projects that demonstrate technical feasibility, commercial potential, or operational utility are more likely to be selected for Phase III contracts.</p> <p>7. Intellectual Property (IP) Rights and Licensing: Ownership and protection of intellectual property rights can influence the negotiation and awarding of Phase III contracts. Government agencies may require assurances regarding IP rights, licensing agreements, or technology transfer arrangements before awarding contracts for commercialization or production.</p> <p>8. Regulatory</p>



		Compliance and Certification: Projects involving regulated technologies or applications may require compliance with specific regulatory requirements, standards, or certifications. Adherence to regulatory guidelines and assurance of safety, security, and compliance can impact the awarding of Phase III contracts.
D	2024-03-22 09:26:14	None
E	2024-03-21 08:08:44	N/A
F	2024-03-21 06:41:15	Issues associated with non-us citizens was an issue. The work ia not itar, but contracting perception was that it was
G	2024-03-18 20:26:36	There are so many small companies, but so few government employees who can help them which forces them to go into the private sector to get funding. Also, the government doesn't have the ability to fund every single small company.
H	2024-03-15 21:03:09	Unsure
I	2024-03-15 08:52:12	They awarded Phase III because there was a clear signal of interest from multiple customers.
J	2024-03-14 18:07:46	To award: SBIR policy directive influencing agencies to award PIII. Small business goals in our directorate. Push back for not awarding: Limiting competition. The prototype we are getting could go into full scale production and be a massive contract so our leadership is concerned the SBIR could vendor lock us.
K	2024-03-14 14:44:04	Because an organization is required to self-fund a Phase III or transition a Phase III, the planning required is at the limits of the FYDP and certainly beyond the scope where planning budgets can be relied on. Additionally, SBIRs are often scoped so that the Phase II output is sufficient for a single organizations needs. At best SBIRs tend to be "nice to have" technology so any Phase III plans are often an early cut or delay when budget cuts happen. Additionally, uncertainty in the SBIR process through continuing resolutions, changing policy, inconsistent contracting availability have increasingly made a SBIR an unattractive choice to use in technology development.
L	2024-03-14	All of the packages I received passed the technical evaluations, and we were hard pressed to award ASAP. It really was just holding the SBC's



	14:51:1 3	hand through the documents and getting answers on the price analysis portion of the proposal, in a timely manner.
M	2024- 03-14 07:55:3 7	None
N	2024- 03-14 10:40:1 1	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.
O	2024- 03-13 08:25:2 2	The PPBE process does not adjust quickly to the demand signal of a successful Phase II. Realignment of funding to meet that need is a challenge inside of standard PPBE processes. No other processes identified as a problem yet
P	2024- 03-14 05:55:1 7	n/a
Q	2024- 03-13 18:48:2 2	Lack of buy in from the program manager on the gov side. From my experience the one drafting the topic is rarely the one completing the SBIR work to award and sustain. This means the topic is often orphaned by the topic creator and little interest carries after the creator moves on.
R	2024- 03-13 12:03:3 2	We are still working through Phase II
S	2024- 03-13 10:52:5 4	The project I was attached to failed because they could not get signatures in time. This seemed like a total waste. A very neat technical solution to a problem was stopped in its track's because someone took a day off and wasn't able to sign a form. The deadline to get multiple signatures was only a couple days after we were notified signatures were required. I do not like the fact that happened and have no interest being a part of future projects because of unnecessary hurdles like that.
T	2024- 03-13 10:42:1 0	Please refer to question 4.
U	2024- 03-13 09:25:3 2	Our SBIR is not at Phase III.
V	2024- 03-13 07:14:5 3	I think the biggest current policy failure is that AFWERX performs all Open Topic final decisions behind closed doors with limited input from AFRL personnel who may/may not be intimately familiar with the technology needs of the transition agent. Sometimes what SME's



		perceive as the best projects are selected, but too often they are not. When this happens, AFRL isn't going to champion a Ph III award.
W	2024-03-13 07:00:23	In my experience, most transitions of technology are to large corporations that develop DOD weapon systems. Transitioning SBIR developed products and technology requires an extra step due to SBIR data rights and large corporation tendency to "harbor" SBIR IP as their own.
X	2024-03-13 06:38:29	The processes, policies, and/or regulations for phase III SBIRS are incredibly relaxed when compared to traditional contracts. The roadblocks are more financial versus policy.
Y	2024-03-13 05:17:31	See #4. Timing seems to be my biggest hurdle. Only when the SBIR is successfully completed, can I submit for various funds. i.e. CIP may take 3 years and gets racked and stacked against other group needs. "If" the CIP is approved, we've already went through possibly 1-2 changes in leadership. which means we have leadership we have to explain the vision again and hope they don't have their own areas of focus.
Z	2024-03-13 04:57:38	nothing. There are no fundamental barriers. Lack of transition is simply lack of demand signal, concern of risk / risk aversion, budget limitations, etc.



- (3) Describe what the government could do differently to address challenges and difficulties concerning achieving a successful Phase III award.

A	2024-03-28 14:24:10	Educate on the PPBE process for the team; add places where end user and customer can search emerging tech;
B	2024-03-28 11:56:48	Have a way to connect TPOCs, End Users, Research Laboratories, Program Offices, and Innovation Offices, whether that is a platform, database, commons, etc. The beauty of a Phase II is the speed and flexibility to prove or prototype a concept. To get to Phase III, different entities and authorities are involved, and finding the right people can be impossible. Program Offices are primarily responsive to the requirements process, which takes too long to catch up to what companies are doing on Phase IIs; most end users (and their chains of command) won't even be aware of a capability in the prototype stage to drive the requirements process, while the company is submitting for a Phase III. End user education is also key--most military people think it's absolutely crazy that "...anyone can come up with a wild idea and get almost a million dollars for it?" And refuse to participate in the process.
C	2024-03-28 11:44:02	Streamline Funding Mechanisms: Simplify and expedite the process for accessing Phase III funding, reducing bureaucratic hurdles and administrative burdens. This could involve establishing dedicated funding streams or mechanisms specifically for transitioning Phase II projects to Phase III, with clear guidelines and criteria for eligibility. Increase Funding Availability: Allocate additional resources and funding to support the transition of Phase II projects to Phase III, especially in areas of strategic importance or emerging technologies. This could involve increasing budget allocations for SBIR/STTR programs or creating incentives for agencies to invest in Phase III commercialization efforts. Enhance Technical Assistance and Support: Provide targeted technical assistance, mentoring, and commercialization support to Phase II awardees to help them navigate the transition to Phase III. This could include access to expert advisors, business development resources, and assistance with market research, regulatory compliance, and intellectual property management. Facilitate Partnerships and Collaborations: Foster collaboration and partnerships between government agencies, industry partners, academic institutions, and other stakeholders to support the transition of Phase II projects to Phase III. This could involve creating networking opportunities, matchmaking events, and collaborative funding mechanisms to facilitate technology transfer and commercialization efforts. Promote Flexibility and Innovation: Encourage flexibility and innovation in the Phase III contracting process, allowing for alternative contracting mechanisms, such as Other Transaction Authority (OTA) agreements or non-traditional procurement approaches. This could enable faster decision-making, greater flexibility



		in contracting terms, and increased opportunities for small businesses and non-traditional contractors to participate in Phase III projects. Improve Communication and Transparency: Enhance communication and transparency throughout the Phase III award process, providing clear guidance, timelines, and expectations to Phase II awardees and stakeholders. This could involve regular updates, workshops, and outreach activities to keep stakeholders informed and engaged throughout the transition process. Evaluate and Learn from Best Practices: Continuously evaluate and learn from best practices and lessons learned in transitioning Phase II projects to Phase III across different agencies and programs. This could involve conducting post-project evaluations, collecting feedback from stakeholders, and sharing successful strategies and approaches to inform future initiatives and improvements. Address Regulatory and Policy Barriers: Identify and address regulatory and policy barriers that may impede the transition of Phase II projects to Phase III, such as outdated procurement rules, complex intellectual property regulations, or barriers to technology transfer. This could involve advocating for policy reforms, developing guidance documents, or establishing working groups to address specific regulatory challenges.
D	2024-03-22 09:26:14	Incorporate mandatory milestones in Phase 2 that can help with transition like FCL and ATO. Employ TABA funds
E	2024-03-21 08:08:44	N/A
F	2024-03-21 06:41:15	Consolidate the contracting for all of afrl under 1 roof
G	2024-03-18 20:26:36	The way I see it, phase III helps mature a technology to TRL 6/7+, which makes it a fully tested product, but when it comes to space, the only way to get to that high level of a TRL is to actually demonstrate and test it in space. If we can somehow provide more ride share options into space, or simply make it really cost effective to get into space, then that will lower the cost of entry for these smaller companies who may not have that much capital.
H	2024-03-15 21:03:09	Connect with vendors who have the capabilities the USG wants and fund them to avoid the valley of death! A small trickle of funds will not keep small businesses afloat. The IGNITE platform is not helpful.
I	2024-03-15 08:52:12	Early conversations with interested customers that make it clear that transition will require some investment beyond their attendance at meetings.



J	2024-03-14 18:07:46	Database of SBIR P3 awards for teams to use for market research. Would be helpful to have a way to track others success. Currently only way to do that is through filtering down FPDS data and this is unreliable and tedious.
K	2024-03-14 14:44:04	Restart enhancement/extension funding for Phase II to buy time to mature better align SBIRs with specific program needs. Reduce open topic awards to ensure topics are initially aligned with program needs. Eliminate pitch day type reviews that promote fraud, waste, and abuse through insufficiently detailed proposals that overpromise without demonstrating an understanding of the topics actual challenges or allow the government to pay for what should be IRAD.
L	2024-03-14 14:51:13	Possibly provide clearer instructions on what the documents require. Maybe a short, recorded, tutorial before they submit their proposal.
M	2024-03-14 07:55:37	Requiring extensive technical POC support for driving award requirements/specifications. I know there isn't a standard form for all topics, but dictating some minimum level of KPP's, and a their acceptance criteria to evaluate them, would be a start.
N	2024-03-14 10:40:11	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.
O	2024-03-13 08:25:22	The first thing that would add value is a published architecture for technology development. It would define technology areas and relate them to strategic goals. By establishing the architecture, each AFWERX activity can be understood in terms of the architecture and organizations can understand where and how their activity fits within the whole. Then, publishing the title, synopsis, and sponsor of ongoing AFWERX activities would give the broad innovation community an understanding of what activities are "in the WERX." There may be activities that people in other organizations are championing that would be good fits for a Phase III for another organization. For the USSF, we can and should Identify dedicated positions inside of Field Commands to steer activities from outside of the organization to the right office inside the Command. They could also capture activities inside of the Command and scale them across their organization. Additionally, a carrot could be used to entice organizations to advance into a Phase III activity. Matching funding like a TACFI effort or funding held in reserve that offers an opportunity to scale Phase III successes for multiple organizations. Perhaps a remote human asset to handle admin activities of the Phase III or an innovation advisor service could accompany a Phase III award. Maybe simply contract support. Some carrot that makes delving into Phase III activities easier on organizations.
P	2024-03-14	n/a



	05:55:17	
Q	2024-03-13 18:48:22	Leaving less idle time could provide critical time for work and keeping interest on the government side. The more buy in and energy around the topic the more likely it is to be successfully carried on.
R	2024-03-13 12:03:32	We are still working through Phase II
S	2024-03-13 10:52:54	Really evaluate what signatures are actually truly required in the entire process and eliminate most of them. If you want to get new technology to the field and projects are failing because of something silly like paperwork, then I want no part of it. I also recommend to give more time and eliminate drop-dead dates for signatures. Why not give some leeway if it takes two extra days past the deadline to get a signature? We're just shooting ourselves in the foot by thinking if the contractor can't get a signature in time then they can't do a good job on a project.
T	2024-03-13 10:42:10	Please refer to question 4.
U	2024-03-13 09:25:32	The main concern is funding.
V	2024-03-13 07:14:53	Place more emphasis on Specific Topics and allow AFRL SME's to do what they do best – define technology gaps and identify reasonable solutions.
W	2024-03-13 07:00:23	Raise the D2P2 award amount. Most of the D2P2's I've worked were capped at \$1.25M even though the ceiling was \$1.92M (I think). In today's inflationary environment, \$1.25M doesn't get you anything but a final report. In order to develop a product, I've had to craft a way to get a SBIR company multiple D2P2 in order to develop a "draft" product to try in garner interest by the DOD community.
X	2024-03-13 06:38:29	The reason for the financial issue is that AFWERX funding is taxed from the AFRL budget, meaning the funds that could be used for Phase III SBIRs are being pulled to fund the Phase I and II SBIRs. A conscious decision needs to be made to fund less Phase I and II SBIRs in order to free up funding for Phase III SBIRs.
Y	2024-03-13 05:17:31	I do NOT know. Initially, I am thinking SBIR office and group office works with CIP office and develop a "tentative" CIP, so if SBIR is completed successfully funding could drop right in. This would require a major change in the way the ALC's do business. My knowledge and



		visibility of all the interactions is very limited, so please understand I am only typing my truth based on my limited perspective.
Z	2024-03-13 04:57:38	Combination of better topic curation, more maturity in AFWERX program officers, better mechanisms for obtaining “skin in the game” by would-be TPOCs, managers, dedicated incentive pools to promote Phase III’s in particular, etc.



- (4) What challenges or difficulties did the government organization observe concerning the small business that hindered the transition to a successful Phase III SBIR/STTR award?

A	2024-03-28 14:24:10	Understanding of the cyber security policy
B	2024-03-28 11:56:48	Small businesses are often not prepared for the amount of compliance requirements that come with a Phase III. Part of a Phase II should be education about next steps, to include requirements for Phase III.
C	2024-03-28 11:44:02	<p>Limited Resources: Small businesses often have limited financial resources, technical expertise, and operational capacity, which can hinder their ability to scale up and commercialize the technology developed during Phase II. Insufficient funding or personnel may prevent the business from effectively executing a Phase III transition plan or meeting the requirements of government contracts. Lack of Market Validation: The small business may struggle to demonstrate market demand or commercial viability for the technology developed during Phase II, making it difficult to attract private investment or secure partnerships with commercial entities. Without clear evidence of market potential, government agencies may be hesitant to award Phase III contracts for commercialization efforts. Weak Intellectual Property (IP) Position: Inadequate protection of intellectual property rights or unclear ownership of key IP assets can undermine the small business's ability to commercialize the technology and attract investors or partners. Without robust IP protection strategies in place, the business may face challenges in monetizing its innovations or defending against competitors. Limited Business Development Skills: Small businesses may lack the necessary business development skills, marketing expertise, and industry connections to effectively commercialize the technology and navigate the complexities of the commercial marketplace. Poorly developed commercialization plans or ineffective marketing strategies can impede the transition to Phase III and limit the business's growth prospects. Regulatory Compliance Challenges: Compliance with regulatory requirements, quality standards, and certification processes can pose significant challenges for small businesses, particularly in highly regulated industries such as healthcare, aerospace, or defense. Failure to meet regulatory obligations or obtain necessary approvals can delay the commercialization timeline and hinder the business's ability to secure Phase III contracts. Limited Access to Capital: Small businesses may struggle to access the capital needed to fund the transition to Phase III, including investment in manufacturing capabilities, marketing initiatives, and business expansion efforts. Difficulty securing financing from traditional lenders or venture capitalists can constrain the business's</p>



		growth potential and limit its ability to compete for government contracts. Uncertain Path to Revenue Generation: The small business may face uncertainty regarding the path to revenue generation and profitability, particularly if the technology requires significant investment or has a long lead time to market adoption. Lack of clarity around revenue projections and return on investment can make it challenging to attract investors or secure financing for Phase III commercialization efforts. Operational Challenges: Operational inefficiencies, organizational deficiencies, or management issues within the small business can hinder its ability to execute a successful Phase III transition plan and deliver on contractual obligations. Poor project management, communication breakdowns, or inadequate infrastructure can lead to project delays, cost overruns, and dissatisfaction among government stakeholders.
D	2024-03-22 09:26:14	Lack of funding and plan for how they incorporate the technology into an existing program of record and lack of ATO and FCL pathway
E	2024-03-21 08:08:44	N/A
F	2024-03-21 06:41:15	None
G	2024-03-18 20:26:36	One of the most common hindrance is simply finding a PEO that will sponsor that project since there are so few PEO, and thousands of these smaller companies. Those that manage to get it win out by chance of being in the right spot at the right time on meeting a PEO.
H	2024-03-15 21:03:09	Na
I	2024-03-15 08:52:12	None.
J	2024-03-14 18:07:46	Cost inflation and schedule delays due to complexity and size of effort. We have had almost a 50% increase in cost and the company is looking to hire 20 additional engineers to meet the governments schedule.
K	2024-03-14 14:44:04	Security clearances required to work with necessary transition partners (i.e., a contracting officer would not process a DD254 to allow a vendor to talk with a potential Phase III sponsor during Phase I) and potential foreign national limitations, cash flow being insufficient to bridge a vendor between Phase I and Phase II, let alone a Phase II to Phase III



		transition. Unfamiliarity with AF e-business tools (i.e. WAWF) and the required actions to utilize them.
L	2024-03-14 14:51:13	Active Phase I and II awards. Legal challenges.
M	2024-03-14 07:55:37	Maintaining work schedule was the biggest issue. I would guess it produced almost a year delay, total. Technical competency was over-rated and caused performance delays.
N	2024-03-14 10:40:11	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.
O	2024-03-13 08:25:22	The lack of cleared developers on the side of the small business did hold up some activities and caused hesitation on the side of the government about which government data can be shared. Perhaps a guide for industry on how to posture for government work could benefit that problem.
P	2024-03-14 05:55:17	n/a
Q	2024-03-13 18:48:22	Lack of gov PM buy-in or effort to sell the topic. Supreme lack of any involvement from acquisition centers in any way.
R	2024-03-13 12:03:32	We are still working through Phase II
S	2024-03-13 10:52:54	Paperwork process. Seemed confusion and a lot of unnecessary stress and time was put into jumping through all these hoops.
T	2024-03-13 10:42:10	Please refer to question 4.
U	2024-03-13 09:25:32	Clean and concise wording of requirements.
V	2024-03-13 07:14:53	If a solid technology from a small business is selected, typically it has unforeseen technical challenges that hinder transition.



W	2024-03-13 07:00:23	Again, transition of SBIR IP to a DOD prime contractor.
X	2024-03-13 06:38:29	Phase I and II contracts and negotiations are pretty straightforward. Phase III contracts are very open ended since they no longer have the boundaries/cost caps that Phase I and II efforts do. This means that companies may have to deal with additional cost account or other oversight requirements that they are not normally used to dealing with.
Y	2024-03-13 05:17:31	I have been heavily engaged for several years with SBIR and AFWERK. I have been blessed with the small businesses that were selected. Two challenges come to mind. 1. Driving the cost to a point of ROI. 2. Miss judgement of the TRL level
Z	2024-03-13 04:57:38	lack of access / connection to primes that would have adopted technology (in addition to the aforementioned barriers of adoption).



- (5) Describe what factors influenced the government organization’s evaluation of the readiness and capabilities of the small business to meet the needs of a Phase III award.

A	2024-03-28 14:24:10	Program documentation and testing data or lack there of.
B	2024-03-28 11:56:48	
C	2024-03-28 11:44:02	<p>Technical Competence: The government evaluates the small business’s technical expertise, capabilities, and track record in developing and commercializing innovative technologies relevant to the Phase II project. This includes assessing the qualifications of the business’s technical team, its experience in the relevant industry or technology domain, and its ability to execute the proposed Phase III project. Commercialization Strategy: The government assesses the small business’s commercialization strategy and market readiness to transition the technology developed during Phase II into commercial products or government applications. This includes evaluating the business’s understanding of market needs, competition, and target customers, as well as its plans for product development, marketing, sales, and distribution. Financial Stability: The government evaluates the financial stability and resources of the small business to support the execution of the Phase III project. This includes assessing the business’s financial health, funding sources, access to capital, and ability to finance the project without undue risk or reliance on government funding. Intellectual Property (IP) Position: The government assesses the small business’s IP position and protection strategies to ensure that the technology developed during Phase II is adequately protected and has clear ownership rights. This includes evaluating the strength of the business’s IP portfolio, its ability to defend against infringement or misappropriation, and its plans for licensing or commercializing IP assets. Past Performance: The government considers the small business’s past performance and track record in executing government contracts, including Phase II SBIR/STTR awards. This includes evaluating the business’s adherence to project timelines, quality standards, contractual obligations, and overall performance in delivering successful outcomes. Organizational Capacity: The government assesses the organizational capacity and management capabilities of the small business to effectively execute the Phase III project. This includes evaluating the business’s internal processes, project management capabilities, workforce capacity, and ability to mobilize resources to support project objectives. Risk Management: The government evaluates the small business’s ability to</p>



		identify, mitigate, and manage risks associated with the Phase III project, including technical, financial, operational, and regulatory risks. This includes assessing the business's risk management processes, contingency plans, and ability to adapt to changing circumstances or unforeseen challenges. Collaborative Partnerships: The government considers the small business's ability to establish and maintain collaborative partnerships with other stakeholders, including government agencies, industry partners, academic institutions, and research organizations. This includes evaluating the business's networking capabilities, collaboration experience, and ability to leverage external resources and expertise to support project objectives.
D	2024-03-22 09:26:14	It's usually based testing during Phase 2
E	2024-03-21 08:08:44	N/A
F	2024-03-21 06:41:15	
G	2024-03-18 20:26:36	Most of Phase III is to build the actual prototype that will then be used to test the project into space. If they have a plan, to get into space, and it already received funding, then it is most likely going to be an easy target that will be awarded. If the government doesn't have to do anywork, and the plan is laid out cleared, who wouldn't want to award that project for phase III?
H	2024-03-15 21:03:09	A lot of Government Contracting Officers do not know about sole source to a successful SBIR platform. Educate our PCOS!
I	2024-03-15 08:52:12	A plethora of case studies had established the readiness.
J	2024-03-14 18:07:46	The consideration of awarding another P3 for additional work.
K	2024-03-14 14:44:04	



L	2024-03-14 14:51:13	Unsure.
M	2024-03-14 07:55:37	Same factors as above.
N	2024-03-14 10:40:11	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.
O	2024-03-13 08:25:22	Have not made it to Phase III yet
P	2024-03-14 05:55:17	n/a
Q	2024-03-13 18:48:22	Question is unclear- technical progress to date I guess?
R	2024-03-13 12:03:32	We are still working through Phase II
S	2024-03-13 10:52:54	Had to connect the small business with people at program offices to get them to be interested in the project they were making. The product was designed in a relatively small stovepipe, not for security reasons. Once the project was complete the small business was sorta thrown to the wolves and on their own about actually getting a program office to even know about their good work.
T	2024-03-13 10:42:10	Please refer to question 4.
U	2024-03-13 09:25:32	New and different tool that will be more capable and cheaper when complete.
V	2024-03-13 07:14:53	TRL and MRL of the technology at the end of the Ph II. Applicability of the technology to an interested transition agent.



W	2024-03-13 07:00:23	More time and more dollars needed to mature the SBIR IP for transition.
X	2024-03-13 06:38:29	Primary factor would be technical maturity of the component being developed. Second factor would be the confidence in the small business being able to manage a larger effort.
Y	2024-03-13 05:17:31	Return on investment. Timing of funding paths doesn't help with matching funds. Leadership changes.
Z	2024-03-13 04:57:38	i am not sure. seems like a dumb question.



(6) How were the needs of the government met if Phase III was not awarded?

A	2024-03-28 14:24:10	It isn't being met
B	2024-03-28 11:56:48	They weren't
C	2024-03-28 11:44:02	<p>Alternative Funding Sources: The small business could explore alternative funding sources, such as private investment, venture capital, or non-governmental grants, to continue the development and commercialization of the technology. By securing funding from other sources, the business can independently pursue its objectives and potentially meet the needs of the government in the future. Technology Transfer or Licensing: The small business could engage in technology transfer or licensing agreements with other entities, including government agencies, industry partners, or research institutions. By transferring or licensing the technology to a third party, the business can enable further development or commercialization of the technology while still meeting the needs of the government indirectly. Collaborative Partnerships: The small business could establish collaborative partnerships with other organizations, such as larger companies, academic institutions, or research organizations, to jointly pursue the development and commercialization of the technology. By leveraging the resources, expertise, and networks of collaborative partners, the business can enhance its capabilities and potentially meet the needs of the government in a collaborative context. Reevaluation and Resubmission: The small business could reevaluate its approach, address any deficiencies identified in the Phase III evaluation process, and resubmit a revised proposal for Phase III funding in the future. By improving its readiness, capabilities, and alignment with government needs, the business can increase its chances of securing Phase III funding in subsequent application cycles. Pursue Other Opportunities: The small business could explore other opportunities for government contracting, collaboration, or commercialization outside of the SBIR/STTR program. By diversifying its sources of funding and pursuing a broader range of opportunities, the business can continue to develop and commercialize innovative technologies while potentially meeting the needs of the government in different contexts.</p>
D	2024-03-22 09:26:14	Old technology



E	2024-03-21 08:08:44	N/A
F	2024-03-21 06:41:15	
G	2024-03-18 20:26:36	The government will help them find an alternative to solution, since it can't give out awards to every single company. Although, it would still be a challenge since there would be more risk involved.
H	2024-03-15 21:03:09	Na
I	2024-03-15 08:52:12	N/A
J	2024-03-14 18:07:46	N/a yet
K	2024-03-14 14:44:04	Most SBIRs are scoped so that a Phase II deliverable meets the immediate needs of a sponsoring organization or is sufficient to move on to an open market product.
L	2024-03-14 14:51:13	Unsure.
M	2024-03-14 07:55:37	Phase I and II were sufficient to produce a working system. The system is functional, but not 100% efficient or productive at the end of Phase II.
N	2024-03-14 10:40:11	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.
O	2024-03-13 08:25:22	The needs of the government were met throughout my Phase II activities by showcasing the power of Digital Modeling and Digital Twins. The government lacked examples of how these tools could be useful and seeing them come to life was eye opening from a strategy, Guardian competency, and standards definition perspective. At the conclusion of these activities, the government had increased knowledge and was



		prepared to define strategy, policy, and handbooks regarding the technology areas.
P	2024-03-14 05:55:17	n/a
Q	2024-03-13 18:48:22	Often not identified as a need per se. No real metric for impact of not awarding a P3. Very little negative consequence for failure to matriculate to a P3
R	2024-03-13 12:03:32	We are still working through Phase II
S	2024-03-13 10:52:54	The govt was more concerned about signature deadlines than a needed capability. My small business did not get signatures in time. Seemed like they only had a couple days and therefore their project was failed off.
T	2024-03-13 10:42:10	Please refer to question 4.
U	2024-03-13 09:25:32	There is a legacy tool that is currently being used.
V	2024-03-13 07:14:53	How is this a meaningful question? If a Ph III is not awarded, obviously the technical needs of the government were not met. This could be due to lack of Ph III funding or the technology is not perceived to address a technology gap or is too immature.
W	2024-03-13 07:00:23	As of today, needs of government have not been met.
X	2024-03-13 06:38:29	A lot of SBIR efforts are technology pushes. Typically, the companies will submit in future Phase II solicitations to make up for not getting a Phase III follow-on.
Y	2024-03-13 05:17:31	Business as usual. Continuing to have unnecessary funding waste.
Z	2024-03-13 04:57:38	probably existing technologies. Most real programs do not require “unobtainium” to be successful. We push innovation, but better is the enemy of good enough.





(7) Regarding Phase I/II to Phase III transitions, is there anything you would like to address that was not asked?

A	2024-03-28 14:24:10	
B	2024-03-28 11:56:48	Lack of awareness of the process across the spectrum (apparently there's a Phase III guidebook??? That I just found out about 2 minutes ago...), and lack of ways to network to find the right people/offices. We need better awareness on the military side so that we can connect small businesses with the right people and resources at the right time to be successful and expand the defense industrial base, while improving capabilities for the warfighter. At the same time, small businesses need education (and sometimes a little help) on what to expect as they move into contracting with the government beyond just a prototype.
C	2024-03-28 11:44:02	Importance of Customer Engagement: Engaging with end-users and stakeholders throughout the Phase I/II process is crucial for understanding their needs, validating the technology's utility, and ensuring alignment with government priorities. This customer feedback can inform the development of a Phase III proposal and increase the likelihood of successful transition and adoption. Role of Mentorship and Support Programs: Mentorship and support programs offered by government agencies, incubators, accelerators, and industry associations play a vital role in helping small businesses navigate the transition to Phase III. These programs provide guidance, networking opportunities, and resources to support commercialization efforts and enhance the business's readiness for Phase III. Importance of Data and Metrics: Collecting and analyzing data on project outcomes, technical milestones, commercialization progress, and market traction are essential for evaluating the success of Phase I/II projects and informing decisions about Phase III transitions. Metrics such as technology readiness levels (TRLs), market validation, revenue projections, and customer feedback can provide valuable insights into the project's readiness for Phase III. Addressing Barriers to Entry: Government organizations should strive to reduce barriers to entry and create a more inclusive environment for small businesses and startups to participate in Phase III transitions. This may involve streamlining procurement processes, providing targeted funding opportunities, offering technical assistance and mentorship, and promoting collaboration between government, industry, and academia. Long-Term Sustainability: Ensuring the long-term sustainability and impact of Phase III transitions requires ongoing support, monitoring, and evaluation beyond the initial award period. Government agencies should continue to engage with small businesses, track project outcomes, and provide follow-on support to maximize the technology's benefits and address any challenges that arise post-transition.



D	2024-03-22 09:26:14	No
E	2024-03-21 08:08:44	Not really
F	2024-03-21 06:41:15	
G	2024-03-18 20:26:36	Phase I and II are really easy for companies to get award when it comes to space, however, the hardest part in then getting it into space, and it doesn't matter if it gets a phase III award or not as most of these projects die out.
H	2024-03-15 21:03:09	Why are the small business standards so small? The current small business for many defense companies hovers around 1200. However, major defense primes have hundreds of thousands of employees. A "large" business with 1500 employees is at a huge disadvantage compared to the large primes.
I	2024-03-15 08:52:12	No
J	2024-03-14 18:07:46	N/a
K	2024-03-14 14:44:04	
L	2024-03-14 14:51:13	No.
M	2024-03-14 07:55:37	No
N	2024-03-14 10:40:11	All topics should be put back into the hands of researchers within the TDs and AFWERX should just perform contracting options so that these go fast but already have subject matter experts within AFRL that will care about transition.



O	2024-03-13 08:25:22	
P	2024-03-14 05:55:17	n/a
Q	2024-03-13 18:48:22	No
R	2024-03-13 12:03:32	We are still working through Phase II
S	2024-03-13 10:52:54	Remove all unnecessary hurdles to getting through phase I/II. Take a hard look at so-called “necessary” parts of the process and try to eliminate things that don’t add value to the process and end goal we’re trying to achieve.
T	2024-03-13 10:42:10	Please refer to question 4.
U	2024-03-13 09:25:32	None.
V	2024-03-13 07:14:53	No
W	2024-03-13 07:00:23	A new technique for SBIR transition is needed. STRATFI and TACTFI are good, but something new is needed. I’ve been part of 2 STRATFI’s that did not have an immediate transition. Transitions are happening, but not what was originally planned, at a lesser degree and a later time.
X	2024-03-13 06:38:29	Nope
Y	2024-03-13 05:17:31	This seems to work well.
Z	2024-03-13	Abolish AFWERX. It’s a failed construct. To demonstrate this try an A/B experiment with 30+ projects in each cohort. A=AFWERX, B=random



	04:57:38	selection. Monitor results. I would bet A and B have about the same success rate.
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APPENDIX B: RAW DATA: SMALL BUSINESS QUESTIONNAIRE RESPONSES BY QUESTION

- (1) Describe your firm’s experience of transitioning to a successful Phase III award. Specifically, what went well and what was challenging?

1	2024-04-08 13:54:27	It went well finding customer / refining the offering but was unable to get Phase II.
2	2024-04-06 09:39:36	Aligning funding is the most challenging. You can have the most active end-users and advocates, but especially when you are trying to transition from a 9-month D2P2 award to a Ph 3, you are essentially fighting for UFR dollars with the rest of the customer’s organization, as well as trying to get their contracting office to take action.
3	2024-04-04 14:05:27	After successfully completing our Phase I to study designing and manufacturing a Nuclear Response Trailer for Explosive Ordnance Disposal AF Units, we are currently in the Critical Design Review Phase of our Phase II effort. Thus, we have not yet sought Phase III funding, but certainly plan to apply. Any Phase III guidance is greatly appreciated.
4	2024-03-26 08:46:20	Challenge first. Innovation in government is challenging. If you create a solution to a problem that is assumed cannot be solved, then the acquisition process does not have an easily identifiable process to use your solution. The burden is on the small company to find a senior government advocate or sponsor who will advocate that the problem needs to be solved – become a requirement – and that the small business innovator has a solution worth investing in. This is almost impossible. Other challenges include the time required to work with the government. Government funding occurs annually and a small business must be able to survive through at least two government cycles or more to secure enough funding to deliver a substantial solution. What went well. The entry into the SBIR program, once successful, creates an opportunity for sole source contract awards. The small business, assuming they have navigated the sponsorship and requirements process well enough to have government agencies set aside funding or identify an acquisition path, benefits from opportunities to be awarded contracts without competition for any component of the total solution, with unlimited contract value. This is powerful. My company, Privoro, is in the initial phases of this sole source contract benefit. We have been awarded a multi-year contract to deliver all aspects of our solution with the National Nuclear Security Administration, which is currently under negotiation for expansion. We have also been able to secure a sole source contract with U.S. Special Operations.
5	2024-03-26 02:38:26	Had much trouble, End User support is not valued by Customer organization



6	2024-03-22 07:38:33	It is challenging to find Customers with funding to transition to a Phase III. We were able to find a customer within the DON, however, customers and Contracting Offices are still not knowledgeable on Phase III contracts.
7	2024-03-22 06:23:59	We have yet to transition any of our awards to PIII
8	2024-03-20 13:59:55	What went well – during our Phase 2 the customer was very interested in our technology and worked well with us in voicing to their contracting and budgeting office their need for our technology. What was challenging – Budgeting constraints, specifically due to our technology being a new line item rather than an alternative/replacement to a current technology. Contracting, specifically training contracting officers on what a Phase 3 was.
9	2024-03-20 10:44:06	We have only been awarded a Phase I STTR at this point, so I cannot comment on the successful transition to Phase III. However, what has been challenging this far is the additional legal documentation and reviews required to partner with a Research Institution for STTR. That cost comes out of the business, not the university or the government. So, it's a disincentive overall,... not to mention the future possibility of IP disputes.
10	2024-03-20 09:31:31	We have three. These are tremendously hard work and you have to have a USAF champion which are extremely difficult to find. Everyone is busy and don't want to take on something above and beyond.
11	2024-03-20 07:16:51	We have not transitioned to P3 yet
12	2024-03-20 05:19:59	We have not yet transitioned to a Phase III award. We are still executing Phase II of the effort.
13	2024-03-19 15:41:49	We have not been able to transition to a phase III from a Phase II SBIR.
14	2024-03-19 12:54:53	It is uncertain on who/what office will specifically be interested in extending a successful Phase II to Phase III. Support for the science during Phase II has been productively supported.
15	2024-03-19 08:59:10	We have yet to transition any technologies to phase III. It is still unclear what a phase III is or how to get it. Also selling to the Air Force after technology development is a complicated process and unclear.
16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week.
17	2024-03-19 08:24:24	We have two projects that are directly transitioning during the AFWERX Phase II program to Robins AFB. Thus, no Phase III funding was secured to support those transitions. Both projects are related to in-process inspections of C130 propeller bores with tools that leverage our award-winning Fastener Measurement Tool, currently sold through our affiliate Edare LLC.



18	2024-03-19 07:25:57	We are currently in the process of executing two separate Phase II projects. Their Period of Performances don't conclude until early to mid 2025
19	2024-03-18 12:42:46	Have not been able to get to a Phase III after Phase II
20	2024-03-18 10:48:39	We've not transitioned to Phase III.
21	2024-03-18 08:21:27	We are roughly half way through the Phase I award so it is not yet clear if we will succeed in reaching a Phase II or Phase III award. One of our major issues is that our contract wasn't awarded until halfway through when the Phase I should nominally run. Thus support such as the YUDO experts expired only a few weeks after we started the program. It also seems like there aren't enough YUDO experts to cover the breadth of the subdisciplines or cover communications with all of the Phase I cohort individuals. This might be different for company's with employees who already worked for the USAF and thus don't depend as much on the YUDO fellows.
22	2024-03-18 07:43:43	We received great support from the end-users, but there was a complete lack of leadership engagement at higher levels. There was no procurement bridge of knowledge of how to acquire our innovation.
23	2024-03-17 09:03:25	Despite having multiple Phase I and Phase II SBIRs and STTRs (open topic, specific topic, sequential, direct-to-phase-2, etc.) we have not yet won a Phase III with the DOD. We have been awarded a TACFI and have been selected for a STRATFI in the most recent cycle (going through contracting now).
24	2024-03-15 13:15:38	Technical success was achieved. It takes time and funds to complete specific approvals necessary for transition. End user has to reprogram budget.
25	2024-03-15 11:54:06	We have not had a Phase III transition.
26	2024-03-15 08:00:49	Although there is much interest, the process was not well understood and resulted in failed transition.
27	2024-03-15 05:01:49	Our firm has an outstanding record of transitioning to Phase III; in fact we have had over \$130M in Phase III sales. We are in process of being awarded a Phase II; we anticipate continued success transitioning to a Phase III in two years.
28	2024-03-14 12:52:00	We haven't transitioned yet. The main thing that's been challenging is understanding what we should be asking of our TPOCs vs. what AFWERX can help with. Furthermore, enabling companies to win awards but then not having a way for them to hold clearances – either instead of or in advance of getting their own FCLs – is extremely challenging and creates unintended moats for previous SBIR winners.



29	2024-03-14 11:40:41	It was initially challenging to find sources of funding to align with a customer who desired our product. We have since gained enough market traction that the customer and the funding are available, but units are purchasing through DLA TLS as their contracting offices are not familiar with/comfortable using SBIR Phase III contracts.
30	2024-03-14 10:23:31	
31	2024-03-14 07:57:32	We are not in Phase III yet. Our technology is a new kind of quantum photonics chip for cybersecurity. Not ready for sale yet.
32	2024-03-14 07:41:31	We credit our success to transitioning to the fact that we spent several months directly working with our end users to understand their needs and jointly conceptualize a solution prior to ever proposing for a Phase I topic. So when we submitted the proposal we already knew who our customer and end user would be.
33	2024-03-14 07:05:31	AFWERX's involvement in Phase III transitions still needs work. DOD stakeholders do not understand the time nor the effort necessary to increase budgetary spending for the fiscal year their Phase II technologies will transition to Phase III. If AFWERX provided the necessary education & training to help them understand how to advocate to their leadership and effectively increase their squadron, group, wing etc., budget for their Phase III transition, there would be a MUCH higher success rate of transitioning Phase II's.
34	2024-03-14 06:33:38	What went well – other agencies leveraging Phase II's. Phase II's opening door to interest with other offices. Challenging – finding KOs for procurement, helping ensure program transition offices are tracking Phase II and budgeting for transition and providing a clear set of steps/next steps.
35	2024-03-14 06:17:52	This has not occurred.
36	2024-03-14 04:02:21	We are still in phase i
37	2024-03-13 18:28:05	We have only just completed phase I and will be applying for a phase II
38	2024-03-13 18:15:40	We have not yet transitioned our Phase II to a Phase III. We are currently in the process with working with one of our Air Force customers to make this transition happen.
39	2024-03-13 16:09:15	We have experiences in which we were able to successfully and (reasonably) quickly transition to a successful Ph III award as well as having struggled to transition to Ph III awards. Where we were successful, we were able to effectively engage with the relevant System Program Office (F-22 in this case) throughout and after completion of the Ph II effort. During the Ph II effort, this facilitated effective dialog and decision-making relative to use,



		utilization, and qualification of the item in question. Toward the end of the Ph II effort and extending beyond the Ph II PoP, the SPO was instrumental in designating and authorizing the use of the item in the field and in initiating the contracting efforts to execute the Ph III award(s). More recently (2023) we have been successful in delivering positive Ph II results, but without (to date) transitioning the developed items into Ph III awards. Both recent cases relate to the F-35 platform (A model specifically, but with (mostly) direct translation to B/C models as well) in which we attempted to engage directly with the F-35 Joint Program Office (JPO). In one case we were able to establish a very strong connection into the JPO, but which then became limited/hindered by difficulties in obtaining support and resources from the aircraft manufacturer (who is presumably responsible for definition of requirements for the item in question (a protective cover in this case) as well as for acceptance of qualification data and authorization for use). Following the Ph II PoP for this effort, we continue to engage in dialog with the JPO and are exploring options to work through final acceptance/authorization for use. The second recent effort also relates to F-35(A). In this case we were not able to secure direct and focused support from the JPO, although the effort established a familiarity within the JPO due to the previously described (protective cover) effort. This lack of engagement has hindered the support for this simultaneous effort (a set of protective covers to be used during aircraft wash cycles) from the JPO and manufacturer sides. That said, we have received outstanding support and significant awareness to the program from the field via our TPOCs and their connected units (Eglin AFB generally). This support and engagement acted to dramatically accelerate the Ph II development efforts (for both the protective cover and the “wash” covers) and familiarize the larger USAF of the development activities and results.
40	2024-03-13 15:00:20	We have no experience. In my previous startup I had a D2PhaseII canceled due to shifting priorities on the customer (AFSOC) side.
41	2024-03-13 14:53:36	We have successfully transitioned to Phase III on several of our technologies. Having a good technology fit with DOD needs was the most critical factor. The challenges are real and navigating the DOD bureaucracy is a challenge, but with the right support and product to market fit it is possible.
42	2024-03-13 14:45:58	Our firm has an outstanding record of transitioning to Phase III; in fact we have had over \$130M in Phase III sales. We are in process of being awarded a Phase II; we anticipate continued success transitioning to a Phase III in two years.
43	2024-03-13 14:18:22	We have not been successful yet in transitioning to a Phase III award. We are on our 4th Phase II (three were D2P2). There is significant misunderstanding among the contracting community about their authorities to award a Phase III as a direct or non competitive award. The real challenge is that most units that are interested in the new technology are blocked out by existing contracts that are broad enough that our capability is considered as competing with what has already been awarded.



44	2024-03-13 14:14:28	We have had several AFWerx PI and PII D2P2 awards. Others were prior to the earliest date of the selection menu (2019, 2021). The 2021 is D2P2 and still active. I am answering about a 2024 D2P2 that was selected but not funded, whatever that means, since that is the only one in the range of the 3 years available in the pull down.
45	2024-03-13 14:11:06	None, AFWERX is stellar at getting Phase I and Phase II awards into the hands of innovation there is next to zero effort, support, pathway, or funding to get beyond the valley of death and into a Phase III effort.
46	2024-03-13 14:04:51	Company is currently engaged in developing a Phase III IDIQ through the 767th ESF supporting AFGSC. Finding a contracting office with sufficient bandwidth has always been a challenge with awarding SBIR contracts that are selected by AFWERX but not funded. When the selected D2P2 is transferred to the requesting MAJCOM, the MAJCOM must conduct all contracting requirements themselves. The same is true for a follow-on Phase III or TACFI/STRATFI. From the SBC perspective, the govt does not move quickly to fund or award Phase III contracts which puts SBCs in a vulnerable position.
47	2024-03-13 13:54:12	The biggest challenge was getting under contract. Unfortunately, the contracting office was severely over assigned, and it took us a long time to get and RFP issued and then ~4 months to get under award.
48	2024-03-13 13:36:39	We have never transitioned to a phase III. In our cases, we feel the TPOC did not have the time, resources, authority or network to advocate for the product proven in the SBIR Ph II. Advocacy of the product was left to us to find our way.
49	2024-03-13 13:23:00	We are in the process of transitioning now to Phase III, but the difficult in identifying and accessing AF and other DOD personnel to make them aware of our Phase II success has made it challenging.
50	2024-03-13 13:14:58	We are completing a Phase II this year. We attempted to get a TACFI to help bridge to a Phase III, but failed to meet all of the hurdles. The things that went well are that we got have won the support of several folks at AFRL, even high-level OUSD persons. There is one person at AFWERX who has been a great help with our Flight Test Plan, and there is a super helpful person at the Air Range where we will do the demo. However, our recent experience with our TPOCs in USAF End-Customer has been unacceptable. Our original TPOC very enthusiastic about our effort, but was reassigned a year ago. The new TPOC appears to be taking our project on as an extra task, and it is not in their area of expertise. The consequence of this is that, while the TPOC may be great at the other projects on their plate, they have given us minimal support. In order for us to have a chance at a Phase III, we need to complete our TRL 6 Demo, a UAS test flight on a USAF Air Field. This is a HUGE undertaking. For this, we have had ZERO assistance from our TPOC. I had to call a half dozen air ranges on my own having zero knowledge of whom to call, or even sometimes how to reach to find an air range. In the end after much hit or miss fumbling, I managed to find one person who became a champion of the effort. But why did we have no support? Our team assesses that it is because the TPOC did not have the



		experience or training to help us, but we do not really know why. All we know is that we had no assistance. I want to be very careful how I say this because I am very cognizant of the heavy loads that people have, people are different and not all people show any emotion. But my team and I think that the TPOC was surprised that we found an air range. We have never heard any positive acknowledgement that we found the range. Further, the TPOC has not committed to attending the demo. How can we complete our Demo if the TPOC does not attend? My board of directors is up in arms about this. My position and my company are at stake, and the TPOC, at least so far, can't be bothered to attend a mandatory milestone. This is beyond frustrating, discouraging, and worst of all embarrassing in front of my team, partners and board of directors.
51	2024-03-13 13:08:11	Our submission just closed out Phase 1 so we haven't yet officially pursued the Phase III; however, in initial discussions with the Lead Command for the PEC they immediately indicated that no POM funding exists to support new efforts and that they can only prioritize sustaining existing systems.
52	2024-03-13 12:48:54	We have not transitioned to a Phase III despite high levels of flight test success and end-user support – we have not given up and we have strong support from HQ AFSOC, but we hear over and over from everyone we encounter that they dont have any money.
53	2024-03-13 12:26:13	In order to fund a Phase III award, the sponsoring Space Force group required approval from senior leadership, due to the total funding amount, who were reluctant to allocate that much funding given their other priorities, despite the Phase II being very promising and initially prioritized. It seems possible to win a Phase II on the basis of “this is very promising and related to what we’re interested in,” however to win a Phase III you need to be extremely well-aligned with the small number of high priority mission needs, which seemed to have changed at a relatively quick pace as Space Force is establishing itself.
54	2024-03-13 12:11:00	We’ve had customers transition to Phase III but it has been complicated. They’ve asked us to try and get on the GSA schedule and/or IDIQ and there is no assistance on that front. ATOs also continue to be a challenge
55	2024-03-13 12:00:49	We have not yet been able to transition to Phase III
56	2024-03-13 11:19:17	We have completed a Phase I effort and are hoping to successfully transition to a Phase II
57	2024-03-13 10:57:21	we have had excellent engagement from TPOCS which is helping us modify the product for AF use, but the “pull” is not there yet from a customer for phase III.
58	2024-03-13 10:32:23	So far our challenges as a first time SBIR Phase I awardee has been how to connect and reach the appropriate PEO’s and units that would possibly sign a customer memorandum for a Phase II. We have heard of the opportunity to go after a Phase III but it has not been made clear to us how we can approach



		this opportunity. We feel our current TRL state and expertise would warrant a direct to phase III
59	2024-03-13 10:17:25	Still in process to obtain Phase III. Funding within fiscal year budgeting is a challenge. Education/experience with Phase III contracting is not prevalent.
60	2024-03-13 10:14:40	We haven't transitioned
61	2024-03-13 10:08:32	We were awarded a Phase III IDIQ. This came after success in a Phase II SBIR to develop a technology, then a Phase III to demonstrate the technology in an Air Force exercise. The challenge is now is no entities seem able to add funds to the IDIQ in a meaningful amount to continue development.
62	2024-03-13 10:04:46	It has been a nightmare, we literally have a TRL 5 diagnostic platform that all the federal agencies and AFRL are researching as "vital future capabilities," but they won't give us additional contracts.
63	2024-03-13 10:04:08	We have yet to transition to Phase III. We have a D2P2 that we will complete in Q224, a Phase 1 that completed in Q323, and a D2P2 that has just begun. The challenge is that few if anyone knows how to transition. Further complicated by the fact that we need an ATO due to technical nature of our system. If there is an entity in USAF tasked with assisting in ATO and/or transition our TPOCs are not aware of it, the Spark Cell is not aware of it, and we are not aware. So everyone is trying to navigate this chasm without a map.
64	2024-03-13 09:48:02	We have not transitioned to a Phase III award. The challenge is that we are a satellite hardware company, and we need to demonstrate our capabilities before payload providers are willing to partner with us on programs of record. The SBIR/TACFI/STRATFI path has been incredibly helpful towards that end, as we developed a virtuous cycle whereby private VC investment validates our business model for DOD, and SBIRs of increasing size validate DOD's interest to our investors.
65	2024-03-13 09:39:56	We haven't transitioned yet – we're executing on our Phase II under Open Topic now
66	2024-03-13 09:33:17	We didn't try to apply for Phase III programs. Instead, we directly commercialize the SBIR technologies into commercial products.
67	2024-03-13 09:21:59	We have not yet successfully transitioned to a Phase III award.
68	2024-03-13 09:19:51	We are so far unsuccessful in transitioning to SBIR Phase III. Despite: exceeding every task deliverable, successfully commercializing, having been recommended for SBIR III by AFSC/EN, AFSAC, HAF A4 Innovation WG, and recommended to present to OSD Asset Visibility WG. Nobody is willing to begin the SBIR III process, even for a low starting value.



69	2024-03-13 09:17:38	Horrible. No PEO or SPO contact
70	2024-03-13 09:05:28	I have never received a Phase III award. I have worked for four companies in 27 years with over 50 SBIR awards to various people and I have never seen a Phase III award. I think they are Unicorns.
71	2024-03-13 09:02:34	I see three challenges with attaining a Phase III: a) The people who do research in the AF, or are interested in engaging in R&D are very different (in mindset, vision, *and physical location*) from the ones who buy things for the AF. R&D people are looking to the future, where as sourcing individuals are very much looking to support that which is already exist (and have a much lower risk tolerance, which is understandable). b) Those with the money to engage on a Phase III are few and far between, meaning getting their attention is hard, even if you have a value-add technology, due to the multitude of others also looking for support. Finally, c) on multiple occasions we have gotten to people who would want to do it, but are scared of the process. Within the AF people fear contracting and the complexity of the process. This is true even at senior levels.
72	2024-03-13 09:00:18	We have not transitioned to a Phase III. Our lone Phase II was successful in proving out our technology, but more time and funding is required to develop a fieldable product. The Phase II money allowed us to grow the company, rent office space, and develop multiple contacts in Government and Industry. However, our technology was too new (i.e., the TRL was too low) to have a realistic chance of creating a fieldable product within the time and budget constraints of the Phase II.
73	2024-03-13 08:56:55	We have not yet transitioned to a phase 3. This was our first SBIR win.
74	2024-03-13 08:52:42	We were able to leverage our D2P2 with the AF into a phase III with DHS. The biggest challenge by far was finding a customer who would go through the effort to use the Phase III method. Most of our customers were unaware of the capability and not familiar with the process. There wasn't a lot of help from AFWERX in the process. Plenty of briefs telling us to goal is to get to phase III but very little in the way of a roadmap showing what that actually means and how you get there.
75	2024-03-13 08:36:51	- KOs/COs either don't understand what a Phase III is, are too risk-averse to use it, or are too busy to spend time learning about it – The bright spot is when the rare CO is supportive of small businesses and cares enough to learn about Phase III contracting – There's often confusion about what a Phase III "is." Many believe it has to be a contract vehicle, not realizing that a Phase III is any purchase – regardless of format or vehicle – that results from a Phase I or II.
76	2024-03-13 08:18:22	Working on looking for opportunities now.



77	2024-03-13 08:10:22	We are currently establishing our first Phase III award; a small \$315k follow-on with AFRL/RSX. We are also working on an open topic Phase II in which our customer has requested funding in FY25 to support transition. The primary challenge is finding organizations with 1) near-term money to commit to a Phase III, and 2) contracting officers who are comfortable navigating the Phase III contracting process. I always thought #2 would be easy, but I've discovered that people don't like doing something new in general.
78	2024-03-13 07:52:19	We have not progressed to a Phase III yet as both of our Phase IIs are in progress.
79	2024-03-13 07:52:03	We have not yet been able to transition to a Phase III award. Our Phase II Award has been delayed in completion due to many factors.
80	2024-03-13 07:49:44	Phase II was successful. Even though there was an apparent need, obtaining funding and an award for a subsequent Phase III project took some time. Likewise, another related Phase III project is pending an award for over a year.
81	2024-03-13 07:32:57	We have not transitioned to a Phase III award and are currently in the valley of death for the project. We were awarded a Phase I STTR for feasibility to showcase our portable X-ray imaging technology. A subsequent Phase II SBIR was awarded to build a prototype system named Gen2 for fluoroscopic and radiographic imaging of the chest and pelvis weighing a fraction of current technologies. All milestones and deliverables were accomplished with a working prototype demonstrated to the end user Dr. Cox (Trauma Surgeon) at UAB Birmingham. We applied unsuccessfully for CDMRP who was looking for a research project (not prototype development) and have also applied to MTEC to an RPP in the combat casualty care group for prototype development. The current challenge is knowing how to obtain a phase III or funding to further development of the Gen2 system from TRL5 Alpha prototype to TRL7 Beta prototype. We have letters of support from our military partners but don't know the interest of the Air Force or DOD as a whole. This makes planning challenging for a small business and where to spend time and resources.
82	2024-03-13 07:20:23	We have not successfully transitioned to Phase III. Securing funding has been the biggest challenge because the TPOC and end user often do not have access to the funds required to further develop or procure the solution.
83	2024-03-13 06:55:29	N/A
84	2024-03-13 06:54:12	We have not transitioned to a Phase III
85	2024-03-13 06:41:32	Still struggling here. User-level discovery is pretty straight forward because of the bottom-up nature of an SBIR build process. The biggest roadblocks are: ATO and connecting to a program manager. Those (relevant)



		stakeholders do NOT make themselves available to small businesses – completely ignore direct attempts. Even the TPOC is ignored.
86	2024-03-13 06:39:02	We have struggled because of a lack of budget, and stakeholder turnover.
87	2024-03-13 06:33:27	We depend upon critical customer feedback to deliver a solution that is superior to the alternatives for the use cases covered by the project. However, we struggle to collect this feedback due to the limited exposure we have to the target customers.
88	2024-03-13 06:14:23	Our firm has successfully transitioned technology to commercial deployment in the past. The technology transitioned is core to the commercial activities now performed. Recent contracts have been a challenge due to the increased complexity of the application areas we have succeeded in pursuing. Deploying our technology at full system level requires field testing of a scope that is not supported by current funding levels and allowable periods of performance.
89	2024-03-13 05:55:51	We have not yet transitioned to Phase III. We have a NOAA SBIR Contracting Officer you is ready to develop the Phase III contract but it has not happened yet.
90	2024-03-13 05:42:15	We have had a couple of different STTR projects in distinct areas: rocket propulsion and quantum computing. We have had significantly more success with quantum computing – we have formed a spin-off company that has raised \$4.7M in a see round from a group of VC funds.
91	2024-03-13 05:39:24	The best thing was the ability to leverage the STRATFI program to incentivize the government program offices to move towards a Phase III (due to the matching funds). The most challenging thing was that many contracting officers have never done a Phase III before --> the most beneficial thing would be to have example (notional) Phase III contracting documents available on the AFWERX website. They need a starting point for these contracts.
92	2024-03-13 05:28:41	With two Direct to Phase 2 Open Topic SBIRs we have yet to get a phase 3. The reason is because it's challenging to get interest generated in continuing a project when the government team we deliver to changes and their successors have little to no interest in the original project. This, in spite of high value of the project.
93	2024-03-13 04:17:26	I have had three phase I AFWERX (SBIR / STTRs) (182-005, 20D and 21B) 20D and 21B converted to phase II and a direct to phase II 23.4 . I have never had an effort to purse a follow on phase II or a direct to phase III initiated because USAF personnel did not know how to do it and no finding was available. Efforts were technically successful
94	2024-03-13 04:12:12	We are in the process of transitioning now. We are attempting to create a smaller contract with a unit who was interested in a TACFI that did not get awarded.
95	2024-03-13 03:21:08	It was extremely challenging finding our own end user and they had to find their own funding. The contract process is also very difficult.



96	2024-03-12 22:48:48	We have not been able to do that yet for any DOD related product. Our first product to transition to PIII was a DOT funded program for commercial markets, and it went well (multi-million \$ sales). DOD is much more difficult. The product is usually designed specifically for DOD uses with little cross-over to commercial markets. Additionally, once money runs out on SBIR, it is difficult to get money to get the product across the finish line for numerous reasons. Some reasons include TPOC continuity (very critical as you need a strong inside advocate to get good insight on what is actually needed and to navigate the funding system on the inside), NEED funding and training for the TPOC as well (they don't have any money to work on these projects, so its all on their own time and very few are experts in how the SBIR system works, so it take a lot of effort on their part, and they have a day job), the people who write these don't have a good idea of what is really needed and how it will get funded once "free" SBIR money runs out (the projects are usually not very realistic in terms of what they want and the funding available), product is usually not mature enough once it reaches PIII (usually needs additional funding to get it verified as a truly trustworthy/realiable product), timelines are very long, team continuity on the small business side is difficult as well.
97	2024-03-12 18:45:02	It took us a while to find the team that was the right customer. There was a lot of terminology and organization info that we had to learn, and it was difficult to find people who would explain. Once we found the right customer it turned in to a much more straightforward sales process which was great, although it still moves surprisingly slow.
98	2024-03-12 18:20:02	Nokomis has transitioned SBIR technology and has had multiple Phase III awards including two current Phase III awards, but the contract described in 2023 through AFWERX has not yet transitioned. With the contract in 2023 there was a lot of support to collect data at Robins AFB on operational systems that was compelling, but the challenges of transitioning within the Sustainment Center were clearly in defining funding availability or Programs that would pay to operationalize the technology.
99	2024-03-12 18:15:24	STill ongoing. Biggest challenge is the long gap between TacFi cycle
100	2024-03-12 18:13:00	Had an amazing Phase II experience but have not been able to transition. Fell into a dark hole....
101	2024-03-12 18:10:33	A lack of engagement with end users during the process and execution of phase 2, leading to low likelihood of being picked up beyond AFRL.
102	2024-03-12 18:08:29	Very challenging; no successful Phase III award...yet SBIR Phase II contracts have 12-18 month PoPs, so thinking about (more like actively working) Phase III transition must start very early in a Phase II. However, it takes time to develop credibility with the customer & end users and deliver tangible capability. In reality, Phase III transition efforts don't begin in earnest until late in the Phase II PoP.



103	2024-03-12 18:06:50	Acquisition Professionals and Business Offices are not familiar with SBIR Phase III. Many have never read the Policy Directive and have a vague understanding of the flexibilities. The contracting officers who become proficient, don't stay around long because of lack of upward mobility. As a result, each SBIR Phase III is like starting all over again. A lot of people in the community rely on urban myths. For example, a Phase III can be awarded any time during performance of a Phase I or Phase II. Many believe that it is sequential and there must be a Phase I followed by conclusion of a Phase II before a Phase III can be initiated.
104	2024-03-12 17:54:58	We are in the process of getting a Phase III award with our customer under our Phase II award and also a number of other Air Force Squadrons. We are not there yet, but are optimistic. So on the plus side, we have receptive audiences. On the minus side, there is a lack of awareness about how the process works, who the customer should talk to for guidance, and logistical details like that.
105	2024-03-12 17:49:40	None have transitioned thus far.
106	2024-03-12 17:38:59	We haven't yet made the transition to a Phase II award. We have developed a game plan with the most informed person in our network (Jeff Decker, Stanford Hacking for Defense) but it's all just theory right now. IF YOU HAVE RESOURCES FOR U.S., WE ARE ALL EARS AND WILL FOLLOW UP OFFLINE.
107	2024-03-12 17:33:38	We have yet to transition to Phase 2, however we already have a customer with a plan to get to Phase 3 with that customer.
108	2024-03-12 17:32:52	It is still too early to comment on Phase III transition but each of our Phase II efforts is structured for transition to commercialization. As a provider of a novel electrolyte component, we have to partner with a battery manufacturer with the capability to respond to a specific DOD need. As such, a successful technical effort on either or both of the Phase II's establish a solid rationale for a commercialization by NDE's strategic partner (battery company).
109	2024-03-12 17:29:48	We were able to quickly get a Phase III award due to connections with a contracting office at the 611th AOC. Once our initial demonstration was complete, it was a challenge to get follow-on commitments and extend the Phase III contract.
110	2024-03-12 17:17:51	I have supported multiple efforts to Phase 3 and even more languished in Phase 2 – the fundamental challenge is threefold: 1) SBIR focuses on TRL advancement at the expense of MRL, but Phase 3 is dependent upon actually being able to produce the solution 2) the available funding is insufficient to advance technology – the best that can be done is “round out the edges” vs. develop something truly new. The NRE is significant to build a better mousetrap and bring it to market 3) Customer buy-in is challenging – the COTR is not incentivized towards adoption – it is in many cases an extra duty. Also there is no direct way to engage with sets of customers that could



		benefit from the solution – i.e., the path to Phase 3 is a traveling salesman problem
111	2024-03-12 17:10:06	Program officers don't appear to be that interested in transitioning Phase II projects into Phase III or Programs of Record. Mostly due to the federal budget constraints.
112	2024-03-12 17:07:06	It has been difficult transitioning to a Phase III contract. Even though our partner bases have been pleased with our Phase II work and all of our contacted bases want to purchase our systems, they are unsure of how to pursue a Phase III. All of the base contracting officers we have spoken to do not seem to have experience executing a Phase III. Even our current Phase II contracting officers have minimal information on potential next steps. It has been unclear on who to contact in Afwerx for more information. We have been trying to find partners in AFCEC on our own per our base partners' advice and have had limited success. I am just being honest that the transition experience has been difficult and it does not feel like this is a priority of the program.



(2) What government challenges or difficulties in transitioning to a Phase III SBIR/STTR process did your firm encounter when an award was not made?

1	2024-04-08 13:54:27	Company invested hundreds of hours towards Phase II submission which cannot get recouped.
2	2024-04-06 09:39:36	Lack of resources in the contracting office to execute, and a desire by government influencers to await the completion of a large contractor's \$250M effort, instead of funding our prototype that was already operational.
3	2024-04-04 14:05:27	Not applicable
4	2024-03-26 08:46:20	This challenge was with the SBIR Phase II contracts that was a multi-year contract with government funding that is matched by investor funding. Possibly uniquely challenging with the COVID challenges, our contract was not renewed for Option Year 1 with almost no notice. Investors had committed multiple years of funding however. The two stakeholder groups should have improved communications methods as part of the process.
5	2024-03-26 02:38:26	End User support across installations falls on "deaf ears" with Customer organization, thus there is a breakdown in operational level enhancements between End User and Customer (procurement organization)
6	2024-03-22 07:38:33	We are still in the process of transitioning a Phase II to a Phase III award.
7	2024-03-22 06:23:59	Being an open topic awardee we have found it a bit challenging to find the proper points of contact and pools of money to bridge the PII to PIII gap.
8	2024-03-20 13:59:55	Budgeting constraints, specifically due to our technology being a new line item rather than an alternative/replacement to a current technology.
9	2024-03-20 10:44:06	N/A
10	2024-03-20 09:31:31	Very very difficult to land Customer, end-user and TPOC for the required Ph II memo. This last round even spoke to our assigned Sage's but never heard back.
11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	We are still in Phase II execution. That said, there was a 9 month delay in a Phase II award which made keeping our project team cohesive a challenge with the gap in contracts.
13	2024-03-19 15:41:49	There are processes the government goes through that we aren't aware of. The funding or drive to utilize it did not or has not as of yet materialize.



14	2024-03-19 12:54:53	Access and organization to key decision makers.
15	2024-03-19 08:59:10	As a startup company, we are pretty reliant on SBIR/STTR funding until we can reach profitability from commercial sales. Pauses in funding are difficult.
16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week.
17	2024-03-19 08:24:24	In this case, none. We had planned to complete the transition of the technology during the AFWERX Phase II program and are on track to do so for both projects.
18	2024-03-19 07:25:57	We've yet to transition to a Phase III award, though we are looking forward to it.
19	2024-03-18 12:42:46	Lack of funding opportunities
20	2024-03-18 10:48:39	NA
21	2024-03-18 08:21:27	NA. We are still in Phase I.
22	2024-03-18 07:43:43	Lack of feedback and no connection to who reviewed our SBIR. The review process is shrouded in mystery. The only feedback we get is a letter stating how we scored in 3 areas.
23	2024-03-17 09:03:25	There are often organizations interested in the Phase II results and wanting to see the work continue in a Phase III, but they don't have budget allocated to fund a Phase III
24	2024-03-15 13:15:38	
25	2024-03-15 11:54:06	We have had numerous Phase I and II awards which have been very successful. We have a variety of interested stakeholders and mission owners; however, Operations in the Information Environment or IO work is handled by numerous organizations throughout the services and combatant commands, with no decided ownership and therefore, program lines across the FYDP which makes a transition difficult.
26	2024-03-15 08:00:49	We had 4 government entities contributing money for a PIII transition. I entity did not get the right signatures because of confusion by the Gov POC. This resulted in a non award. The other three would have provided funding and were VERY frustrated over the process. The one time per year without flexibility was a liability.



27	2024-03-15 05:01:49	N/A; we have not completed a Phase II
28	2024-03-14 12:52:00	N/A haven't lost a submission yet
29	2024-03-14 11:40:41	
30	2024-03-14 10:23:31	The government decided to pursue a full and open competitive solicitation instead of sole source for the solution that we provided in a Phase II project and have provided throughout the commercial industry. In doing so the government aggregated requirements such that a small business could not be competitive in the procurement. We teamed with a Prime and actually scored in the top category technically but the team was eliminated even prior to technical demonstrations and evaluation of pricing suggesting a clear preference for contractors with prior established experience with the agency. Seems that the Government has many ways to ignore innovative small business solutions while entertaining incumbent large businesses. The reality is that it is hard to break through, even with technical superior technology.
31	2024-03-14 07:57:32	Have not applied for Ph III, but have received a TACFI sequential follow on which has been outstanding to assist us to move up the TRL.
32	2024-03-14 07:41:31	The hardest thing we have experienced is finding a contracting office to take on work that may have funding available. For example, we have folks interested in supporting a potential TACFI / STRATFI pursuit at the moment, but we do not know how to contract it given AFWERX / AFRL will not bear that burden.
33	2024-03-14 07:05:31	Our Phase II did not transition to Phase III because our DOD stakeholder did not understand how to increase their fiscal budget to support additional technology costs. They relied solely on SBIR dollars and didn't understand how to appropriate funding within their leadership, contracting officers finance personnel. As soon as the Phase II is awarded to the small business, AFWERX should be sending DOD stakeholders information on how to successfully appropriate funding because this process often takes 12+ months.
34	2024-03-14 06:33:38	We were successful in transition to an outside agency, U.S. Customs. We are currently discussing a possible Phase III transition with AF. However, we had to dramatically reduce scope in order to meet budget/procurement needs.
35	2024-03-14 06:17:52	Obtaining funding



36	2024-03-14 04:02:21	We are still in phase 1
37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	Availability of funding is the primary challenge, followed by contracting teams' not being fully up to speed on the with Phase III contracting process.
39	2024-03-13 16:09:15	As described above, the primary challenge/difficulty has been in being able to engage with the relevant decision making entities (JPO, manufacturer, etc.) to achieve final acceptance and/or authorization for use of the finished item. Additionally, even when there has been interest and support for the finished item, the pathways toward procurement via a Ph III award have been complex, confusing, and/or unnavigable. Especially in the case of F-35, there seems to be a very tangled web of systems, pathways, and logistical hurdles that hinder (or at least dramatically slow) the efforts the move toward Ph III awards.
40	2024-03-13 15:00:20	Aligning interests over multiple levels of military management, changing posts and servicemembers. By the time you build a rapport with your POC they may be reassigned, a new commander or general may shift priorities and hence eliminate otherwise fruitful Phase II efforts. Keeping motivation on customer side over 2+ year Phase 2 efforts and through Phase 3 contracting vehicle. Limited contracts awareness on Phase III vehicles on both government and small business side.
41	2024-03-13 14:53:36	The timing is slow in some cases and the contracting process can be difficult for a small business to bridge. Many people in the government are also not very familiar with the SBIR / STTR process.
42	2024-03-13 14:45:58	N/A; we have not completed a Phase II
43	2024-03-13 14:18:22	People rotate out of units faster then a normal SBIR contract timeline and therefore are no longer available when it comes time to advocate for funding. We see the same thing to some degree with TPOCs etc. Lastly, End of Year funds is not a sustainable way to fund a capability that a unit needs to depend on year over year. Even after a TACFI or STRATFI, if there is not a follow on Prime with an IDIQ it is next to impossible to sustain. Only way is to get very senior (Air Staff level GOs) to agree the capability is a priority and direct funding.
44	2024-03-13 14:14:28	In our example of selected but not funded FY24 D2P2 topic, there was no useful information provided about what to do with this unclear situation. Does this mean maybe we can still get AFWerx funds if money shows up some time in the future? Or does if mean we had a decent proposal, but it was not good enough to get funding? If that is the case how is ours any different than just not getting selected. I think the selected not funded category should come with at least an AF/SBIR and unfunded firm Teams



		meeting follow up to give a detailed review of what caused us to be not funded versus those selected and funded proposals. Even better, an offer for the AF to actively help the selected / unfunded group find some funding. A lot of effort goes into the MOU process associated with the AFWerx D2P2. Our MOU TPOC had no funding to provide to recover from this not funded situation. I am not sure how to advance this selected not funded status to funded.
45	2024-03-13 14:11:06	We have eager end users and customers but they have little to no experience in transitioning into a Phase III. Another issue we ran into was having a source of additional funding that a customer wanted to apply to the Phase II immediately and was not able to do so because of restrictive contracting issues. Overall there seems to be no clear path for any transitions.
46	2024-03-13 14:04:51	N/A; still in the process of finalizing a Phase III IDIQ. The Phase II effort ended in February and we do not expect a Phase III award until May / June.
47	2024-03-13 13:54:12	N/A
48	2024-03-13 13:36:39	The product was not adopted for use by the government. However, it definitively improved our capability to support the commercial space sector and we have been able to advance the capabilities and speed of operations for many of commercial customers.
49	2024-03-13 13:23:00	Our AF partner had changes during our Phase II not related to us, but that impacted our plan. The SBIR has limited mechanisms for contract changes and this impacted our results to promote Phase III.
50	2024-03-13 13:14:58	Lack of support from our TPOC. The TPOC did try to get the support of their end-user on the TACFI. But we ran out of time. This is not all on the TPOC. We could have been more timely ourselves. A huge part of the reason we ran out of time is that the TACFI process has too many hurdles that are too high, and often not clear in advance. For our TACFI proposal, we did not understand the O-6 level signature until days before the submission deadline. We ended up getting an agreement form an O-6 level DAF person in OUSD no less, but with literally less than an hour before the deadline. There was no way to get a letter of support written and submitted in time. Had I only known a day earlier, we might have made it. So much effort writing the proposal, and the effort expended to get a corporate/strategic investor to commit an investment all down the drain. After all this work to come so far, I feel like I am back to square one having to find the end-user entirely on my own.
51	2024-03-13 13:08:11	The acquisition process and budgetary constraints favors the status quo over innovation and modernization. While AFWERX may provide initial seed funds, lead commands know that it is easier to secure programmatic sustainment funding on decades old systems regardless of effectiveness, than to modernize through open competition for new capabilities. They



		would rather have a marginal capability than risk not getting funded for a new program and have no capability.
52	2024-03-13 12:48:54	The Phase III challenge is finding anyone with money – we still have no clear idea who is supposed to fund a Phase III that we could share our customer AND end-user success stories with.
53	2024-03-13 12:26:13	There is a fair bit of bureaucracy required of the Government sponsor to make a Phase III happen. They need to get the budget allocated and fill out a fair number of forms and get approval from senior leadership in their organization, which seemed to be a far greater burden than for awarding Phase II. There is a limit to how much the contractor can help with those processes, as they tend to be intra-Government, and thus if your sponsor is not particularly savvy with the bureaucracy side of things, getting a Phase III award may be very difficult.
54	2024-03-13 12:11:00	Lack of ATO
55	2024-03-13 12:00:49	We have yet to apply for phase III because we have yet to find an air force customer who wished to continue to phase III after phase II
56	2024-03-13 11:19:17	We have not yet transitioned to a Phase III. We will be proposing a Phase II
57	2024-03-13 10:57:21	Our challenge is finding that combination of 1) customer need, 2) product fit, and 3) budget to purchase
58	2024-03-13 10:32:23	We are trying to explore how to approach a Phase III as this is very opaque process.
59	2024-03-13 10:17:25	Still working on first Phase III. Funding is number 1 challenge. We are working inside of fiscal budgeting.
60	2024-03-13 10:14:40	It wasn't clear to our TPOC on avenues to find funding for continuing our work
61	2024-03-13 10:08:32	We have two Phase IIIs, one of them was operational testing, which was a huge success. Now the IDIQ languishes as the MAJCOMs are focused on budget shortfalls and continuing resolutions challenging current readiness, they aren't able to give attention, never mind funding to fill an IDIQ. Our program is of a dollar scale that is too large to be meaningfully impacted by Phase IIs, or TACFIs. A fully funded STRATFI is about the smallest meaningful injection of capital.
62	2024-03-13 10:04:46	AFRL SME invited us to participate in AFRL biotech days and asked us for product details and pricing information, then never responded.



63	2024-03-13 10:04:08	We were denied a Phase 1 to Phase 2 transition even though we had a credible customer MOU, broad documented USAF interest, and a tech team that is world-class. So, that was a surprise.
64	2024-03-13 09:48:02	The biggest difficulty is reaching the right people within the DOD/DAF without access to the email global address list. Excepting those at AFWERX which function well, organizational mailboxes are sketchy, with responses either not coming, or coming very late.
65	2024-03-13 09:39:56	Haven't done this yet but I know a key issue is going to be finding funding source or primes that have IDIQs applicable to us. There is no easy place to ID these.
66	2024-03-13 09:33:17	If government could contribute a certain amount of funding in the Phase III process, as done in Phase I and Phase II, it would encourage small businesses to pursue a Phase III.
67	2024-03-13 09:21:59	We haven't had an explicit "no" to a Phase III, rather its been a "not yet." So, it's difficult to answer this question.
68	2024-03-13 09:19:51	There appears to be a lack of willingness to own the SBIR III contract and program. We frequently hear that when our lead (448th SCMW) initiates SBIR III, others will join, but they wait for someone else to initiate the SBIR III. We are in a loop where every voice is positive, the need is articulated (by AF) in closed AF meetings. All agree, but none wish to be "first"
69	2024-03-13 09:17:38	No support
70	2024-03-13 09:05:28	We were not even offered the Phase III award or how to get there. Phase II awards are generally proof of concepts. Even if they go well transition appears to far off. I am not sure who is even supposed to be the champion to take it to the next level. There are so many times the Phase II outcome is different than expected since this is research.
71	2024-03-13 09:02:34	In one instance a person setting up a Phase III with us moved positions and his replacement did not continue the process.
72	2024-03-13 09:00:18	Our firm has had to prioritize other efforts since the Phase II ended, so our product development will remain stagnant while we seek other sources of funding. We are actively seeking additional funding from a follow-on Government project or commercial engagement to progress toward something that could be procured in a Phase III. The most likely outcome is that a commercial engagement will result in our technology being integrated into another firm's offerings, which then may (or may not) transition to a Phase III.
73	2024-03-13 08:56:55	N/A



74	2024-03-13 08:52:42	n/a
75	2024-03-13 08:36:51	- Lack of familiarity with SBIRs and unwilling/unable to learn
76	2024-03-13 08:18:22	I think the most important thing would be utilizing some way of sharing the SBIR with other entities.
77	2024-03-13 08:10:22	It basically boils down to unfamiliarity with the process or risk in working with a small business vs. a big. I promoted one of our SBIR technologies to an AF SPO. They were very interested in and enthusiastic about the tech. I told them that it's eligible for sole source contracting, but the SPO was concerned about our ability as a small business to execute a \$10M project, so they put it out for bid on an OTA. We had to team with another company (as a sub), and the SPO made a multi-award. I see this as a wasted opportunity, as the USAF is spending several millions of dollars more than if they had just Phase III with us to buy down extremely low risk.
78	2024-03-13 07:52:19	NA
79	2024-03-13 07:52:03	Specific to the government, our Technical PoC has been deployed and unavailable to us or reassigned multiple times throughout our execution of the Phase II. There have been multiple cycles of months of no or very limited contact, making executing on an award that was designed to be a collaboration between two entities: us and a government entity, difficult. We have recently changed locations for the physical portion of the Phase 2 because the original location no longer has supporting personnel due to the above. This is necessitating a rework of some of the core elements of the project.
80	2024-03-13 07:49:44	Government funding and requirements decision making. Government has difficulty "nailing down" the requirements for the project causing the contract award to be delayed. The Government apparently spends a lot of time excessively analyzing and debating the technical requirements of the project.
81	2024-03-13 07:32:57	We are spending resources of proposals without a clear path of funding for Gen2. These resources could be leveraged on other projects and products with a clear commercial path and ROI.
82	2024-03-13 07:20:23	Getting people to commit has been extremely difficult. Another challenge is restriction on the use of funds; we had a solution that the customer was highly interested in and wanted to fund, but didn't have the right type of funding.
83	2024-03-13 06:55:29	Identifying POCs willing to sign on with us.



84	2024-03-13 06:54:12	We are still in the Phase II performance. The end user is looking for funding sources for follow on work
85	2024-03-13 06:41:32	still in our first attempt.
86	2024-03-13 06:39:02	Lack of budget, lack of committed deal champion.
87	2024-03-13 06:33:27	The phase 2 project lasted more than a year. In that year, priorities had shifted and stakeholder attention had shifted as well. Thus, our project did not remain relevant.
88	2024-03-13 06:14:23	Our firm has traditionally not pursued commercialization when DOD funding did not support the effort. The company is closely held, with limited appetite for engaging outsiders for capital to support unfunded commercialization activities. We are currently engaged in doing this on a limited basis with technology demonstrated in a SBIR P2 project. This project supported basic testing of the concept but did not support system level testing necessary for Air Force customers to agree to field the technology. An alternate system level testing platform is being investigated, along with a marketing roll out supported by membership in a manufacturer's association not directly applicable to our core business. We anticipate that this could be an issue with a SBIR phase 1 we recently submitted to AFWERX as well.
89	2024-03-13 05:55:51	Contracting Officers are either reluctant to use Phase III contract vehicle or do not know about. If SBIRs are developed to enable the entire Federal government to benefit from the new tech, there needs to be a Federal Wide contract vehicle to support it.
90	2024-03-13 05:42:15	Our quantum computing technology has had one small Phase III contract from SOCOM (via Liberty Alliance). One of the challenges is that we are using relatively new physics, and there is still some research that needs to be done along side of the development. Since our technology operates at chip-scale and room temperature, we are optimistic that there will be future Phase III opportunities.
91	2024-03-13 05:39:24	Contracting officer's familiarity with Phase III contracts.
92	2024-03-13 05:28:41	See answer 3 plus. When our recent AFWERX Phase 2 SBIR was awarded, the original Technical Point of Contact (TPOC) was changed before the project even started. The new TPOC, was completely uninterested in the project and did not want the job. So, I respectfully ask, do you think this project will go to Phase 3?
93	2024-03-13 04:17:26	Everyone is clueless plus there is no money. lack of communication in terms of demand signals and lingering animosity of how Roper established AFWERX and the impact on the AFRL civilian staff. All the uniformed personnel involved have been rotated out multiple times.



94	2024-03-13 04:12:12	I don't understand the question
95	2024-03-13 03:21:08	Funding
96	2024-03-12 22:48:48	Noted above, poor road map, underfunded/untrained TPOC's, not enough money, the people who will fund PIII are never really involved in any of the SBIR projects briefs, color of money issues and constant changing of pools of money.
97	2024-03-12 18:45:02	We have had times where our Phase 2 solution wasn't particularly interesting as a Phase 3, and I think that's a very reasonable outcome.
98	2024-03-12 18:20:02	Though there was support to help with transition, there was not really a Phase III transition process to transition the technology. Though our TPOC was a strong champion for the technology it was challenging to get buy in on the demonstrated benefits from some who had budget authority.
99	2024-03-12 18:15:24	Still ongoing
100	2024-03-12 18:13:00	Our counterparts on phase II had no intention, interest, or even knowledge about how we could transition, what would be required, etc. They were very engaged in the Phase II and once it ended, it ended. It was very strange.
101	2024-03-12 18:10:33	We were awarded a phase 3 in 2020, but took 9 months to get on contract, having been passed between 4 contracting officers. The P3 was written such that it was limited to a one time support without ability to increase scope or funding.
102	2024-03-12 18:08:29	Most SBIR customers & end users are more tactical organizations and have little/no money to fund follow-on work. Additionally, they're many layers removed from program offices with funding. Bottom-line: The 'customer' must fund Phase IIIs, along with creating the contract vehicle. That's difficult for even a well-resourced (people/time/budget) PEO.
103	2024-03-12 18:06:50	77 percent of our SBIR Phase I/II have transitioned. However, none transitioned to the agency that awarded the Phase I/II. For example, we developed a quantum-resistant encryption system under an AFWERX SBIR. It's been challenging to get Air Force stakeholders to award a Phase III. However, the Navy and Marine Corps have initiated Phase IIIs for the same product. As a small business looking to commercialize our products, deliver capabilities to the military, and also make payroll, the challenge of getting a SBIR Phase III initiated in DAF is acute. An interesting observation is that we transitioned a Phase I/II SBIR from the National Science Foundation over to DAF, but have not been able to transition our AFWERX SBIRs to DAF.



104	2024-03-12 17:54:58	Not applicable
105	2024-03-12 17:49:40	Contracting support is the first thing. The second is that some DOD customers use the SBIR funding to see new ideas, but they only fund traditional contractors.
106	2024-03-12 17:38:59	We are doing our best to meet the needs of our DOD customers and develop business we can develop as a Phase III contract, so we hope that our transition to both P2 and P3 will be successful.
107	2024-03-12 17:33:38	We have not attempted a Phase 3 award. We have received a selected but not funded Phase 2, which we understand is because of the continuing resolution and deadlock in congress.
108	2024-03-12 17:32:52	N/A but to date have not encountered any government challenges.
109	2024-03-12 17:29:48	Many contracting offices are not familiar with Phase III SBIRs, which presents a barrier to entry for small businesses that have identified a government end-user. Additionally, lack of government funding represents the most significant barrier to getting a Phase III.
110	2024-03-12 17:17:51	Without an award there is no way to engage with the government
111	2024-03-12 17:10:06	Contracting officers and Program Managers don't appear to understand that they can award Phase III efforts without any further competition and they don't have funding to transition to Phase III efforts anyway and then blame congress that they don't have funding to transition the projects.
112	2024-03-12 17:07:06	We were surprised to not be funded for a TACFI as our base partners were highly pleased with the particular Phase II contract that we based the submission on. They want to continue working with us on a Phase III, but now they are not sure of how to do that.



- (3) Describe what the government could do differently to address challenges and difficulties concerning achieving a successful Phase III award.

1	2024-04-08 13:54:27	Inform the Government personnel better about the opportunity. As well as inform folks on the hill as to the programs existence.
2	2024-04-06 09:39:36	Could there be a pot of funding available for customer organizations to pull from to at least get a Ph 3 started, as UFR money is identified and then ideally the capability is programmed for beyond that.
3	2024-04-04 14:05:27	Unknown at this time.
4	2024-03-26 08:46:20	Phase II contract awardees need help identifying acquisition communities that support the solution they have developed. Understanding that innovative solutions might not have a clear answer to this, it should still be a requirement to have one or more supporting acquisition groups take a partnering role to guide the small business through the process, find sponsorship, find funding, etc.
5	2024-03-26 02:38:26	Pipeline between End User and Customer for requirements definition should be put in place, there could be “kitchen table” style roundtables (emphasizing communication of requirements from the bottom-up and top-down)
6	2024-03-22 07:38:33	Sponsor town hall events, seminars, webinars, etc to let government agencies know what solutions are coming out of SBIR programs. Provide educational material to government agencies to understand how Phase III proposals work.
7	2024-03-22 06:23:59	Spark Cells have been extremely helpful. So widening that network and interconnecting them even more would be great.
8	2024-03-20 13:59:55	The government could make information about the SBIR program more widespread within the USAF, allowing stakeholders to understand the program and perhaps give them support in creating line items in their budget and contracting information.
9	2024-03-20 10:44:06	Defray the cost of legal reviews required to do business with a Research Institute. Allow the SBC to submit our legal bills to the government (within reason) for the documents required for STTR partnerships: NDA, Allocation of Rights, Subawards, Fundamental Research Determinations, Teaming Agreements, No-Cost Extensions, etc. We have experience all of these things as a result of partnering with a university, and each of them requires legal review and coordination...
10	2024-03-20 09:31:31	There likely needs to be an incentive to shepherd a Ph III. I also think Innovation Cells are a good idea and be more helpful. When I’ve tried to get their help it usually doesn’t work out. We have to plow and plow via our network.



11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	Help SBIR companies identify both contract mechanisms and funding for Phase III work. For instance, We are exploring a Phase III contract via GSA, but that was an idea from a consultant – the information that this was a possibility did not come from the Air Force.
13	2024-03-19 15:41:49	I don't know
14	2024-03-19 12:54:53	Organize authorized PEOs and provide early access to a staffer from their office.
15	2024-03-19 08:59:10	The government can provide a clear path or directions to get a phase III award.
16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week.
17	2024-03-19 08:24:24	As the SBIR contractor, we sense that AFSCs (Air Force Sustainment Centers) lack the knowledge to secure Phase III funding and are unable to fund Phase III programs directly, which limits their ability to infuse game-changing technology into their facilities. To the extent possible, AFSCs should be given access to program funding to award Phase III programs to small businesses.
18	2024-03-19 07:25:57	Our company's business develop group has very good connections within the Military's Satcom community. That helps us with closing the gap between our technical offering and a Gov organization with a corresponding need.
19	2024-03-18 12:42:46	Hard for a small business to move as slow as the government seems to move. No income has a large impact on small businesses.
20	2024-03-18 10:48:39	NA
21	2024-03-18 08:21:27	If the purpose is to bring advanced technologies provided by small business into the USAF, the program should likely be more oriented towards deep tech startups (presumably with a TRL of 3 to 6 if you want cutting edge technology). The program contents currently seem more oriented towards companies which are at a TRL of 7 or 8 and could potentially adapt existing technology into USAF needs. Greater integration into the deep tech community such as with The Engine or other deep tech organizations could help significantly.
22	2024-03-18 07:43:43	Tie in and educate the government end user with/on how to procure the SBIR innovation. The lack of procurement education and support on the



		gov't side is the "valley of death." Why fund an SBIR if the gov't end user loves the innovation, but does not know how to purchase?
23	2024-03-17 09:03:25	Setting aside specific pools of money would be helpful in ensuring some number of Phase IIIs are awarded
24	2024-03-15 13:15:38	Usually govt buys from a prime contractor. The contract with the prime contractor must enable use of new tech and encourage it. If the prime has a cost plus contract to do a job "X," they are not interested if I can reduce the cost of job "X" because now the prime is losing money.
25	2024-03-15 11:54:06	Additional facilitation for companies to specific programs that are interested in new technologies.
26	2024-03-15 08:00:49	Better educate and work with Gov entities to transition. Streamline and simplify award process. Flexibility with hard deadlines for Gov to Gov interactions.
27	2024-03-15 05:01:49	Please eliminate the requirement for matching funds for a second Phase II. The AFWERX requirement to have matching funds from the customer only works for customers that are SPOs or organizations that have the ability to POM for funds. Many of our customers do not have matching funds available for a sequential (TACFI/STRATFI) Phase II that is often required to develop the technology for Phase III.
28	2024-03-14 12:52:00	Take on more of the common contracting elements, especially enabling AFWERX to hold clearances and facilitating IATTs and ATOs. Further educate TPOCs on their roles and provide more day-to-day support for their efforts, even if they're owning things.
29	2024-03-14 11:40:41	Provide a simple, detailed step-by-step guide or template to give to a KO.
30	2024-03-14 10:23:31	We need a fair playing field. Perhaps the government should consider procurement of the innovative technology separate from the scale required for deployment.
31	2024-03-14 07:57:32	Not far enough along to have feedback.
32	2024-03-14 07:41:31	Provide a contracting office that is specifically dedicated to accepting monies and contracting Phase III awards on behalf of customer and end user stakeholders. No SBIR money need be applied, but just having the CO would be a win.
33	2024-03-14 07:05:31	Create better materials, training and pathways for TPOCs and their contracting officers, leadership and finance personnel to understand the time and effort necessary to transition their Phase II to a Phase III.
34	2024-03-14 06:33:38	Several areas: 1) having a strategy for standardized Phase III IDIQs that KOs are trained on. AFWERX has done a superb job streamlining Phase I/Phase II awards and educating KOs. Doing the same for Phase III is critical. 2) having program and transition offices get incentivized/encouraged for transition. Everyone is busy and has competing interests,



		but if transition isn't encouraged / rated, Phase II's won't transition. We have seen end user chain of commands who do not value the AFWERX mission, which is a huge disconnect.
35	2024-03-14 06:17:52	1. Preposition a funding path (if not specific funding) earlier in the SBIR cycle 2. Preposition a transition sponsor earlier in the SBIR cycle
36	2024-03-14 04:02:21	We are still in phase 1
37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	The main thing would be to have a well-defined and clear funding path to Phase III awards if a Phase II is awarded. Not all Phase IIs will be successful, but those that are should have a pool of funds to immediately draw from rather than the current situation of having to hunt around for funding. This would be similar to venture funding, if you raise seed or Series A funding, typically venture funds will have a pool of money reserved for a follow-on round of funding.
39	2024-03-13 16:09:15	Appropriate engagement of procurement/contracting specialists during the Ph II effort may provide more successful transitions to Ph III. Understand that this is difficult as many Ph II efforts may not warrant an eventual Ph III transition and therefore could result in wasted time/efforts on the part of the contracting resources. That said, starting the contracting effort and bringing logistics personnel up to speed after the Ph II effort is closed, has been problematic in our experience(s).
40	2024-03-13 15:00:20	perhaps more meetings/annual conference for phase II awardees to get exposure to top brass directly, and align success with command wants and needs. Better alignment of command priorities with potential phase III's, Contracting assistance/streamlining of vehicles for Phase III awards.
41	2024-03-13 14:53:36	The government is doing a good job at making efforts to bridge this gap, but they have challenges with the labyrinthine bureaucracy as well. The effort and will to make this process better is there – but the challenges and process barriers are real.
42	2024-03-13 14:45:58	Please eliminate the requirement for matching funds for a second Phase II. The AFWERX requirement to have matching funds from the customer only works for customers that are SPOs or organizations that have the ability to POM for funds. Many of our customers do not have matching funds available for a sequential (TACFI/STRATFI) Phase II that is often required to develop the technology for Phase III.
43	2024-03-13 14:18:22	TACFI and STRATFI are defensible transition programs. If there is not a dedicated pot of money to pull capabilities inside a Program of Record it won't survive the POM build. Most SBIR are too small to be a POR of their own. They need to be injected into a steady funding stream and to do that takes extra funding because every penny inside the POR is spoken



		for unless you get a PM to give up something they already have and that will be tough. Way too many stake holders within existing POR to include those on the Hill.
44	2024-03-13 14:14:28	The AFWerx open topic PI and D2P2s is a great idea. If by the government in this question means all of DOD SBIR, my answer is expand the “real” propose anything open topic concept to all agencies, not just AF. The Navy now has something they call open topic, but it really is not. I asked the Navy SBIR leader (maybe it was the NAVAIR SBIR leader) why their open topics really are focused and his answer was they had no good way to evaluate a bunch of random SBIR proposals in any fair way (maybe the expansiveness of AFWerx open topic is the source of the selected not funded issue mentioned above). I should say my former and current companies have been very successful at PIII transition, with several large PIIIs in the \$30 to \$75 million range). We also have a lot of very good SBIR PIIIs that ended in the valley of death without transition. A key early indicator for us seems to be a very interested and motivated DOD TPOC with vested interest in seeing the technology into the field. This helps a small business maneuver the DOD process. Another factor leading to PII success is teaming with large companies with the resources to push the SBIR technology. Something that might be done during PII is helping the SB find the interested DOD guy if it is not the TPOC. In many cases we have found that the DOD TPOC has had the program handed to him and is not all that interested. That is the kiss of death. Perhaps DOD could help the SB find the truly interested DOD person to champion the technology thru the PI to PIII process if it is not the person assigned as TPOC. Another help would be an advocate in DOD to help acquisition contracting officers understand and be happy about things like SBIR data rights and sole source justification and the desire to use the SBIR technology if possible. Our experience has sometimes been that a mention of any of these above items to an acquisition person can be viewed quite negatively. It should not be the job of the small business to educate the non-SBIR CO on the rules of SBIR.
45	2024-03-13 14:11:06	1. Force the MOU signers to devote time and training for Customer Contracting Officers and TPOCs so they know what Phase III means and how to conduct the transitions. 2. Provide gap funding for the time it takes to get from Phase II to Phase III
46	2024-03-13 14:04:51	Funding is always going to be the issue. For a SBIR/STTR Phase I / II, government agencies often depend on AFRL/AFWERX to fund the initial efforts. Because of the typical PPBE/JCIDS processes, the only way to execute a Phase III is via execution year dollars. Further, many Phase III contracts do not rise to the level to support “above the cut” POM submissions
47	2024-03-13 13:54:12	There needs to be more investment into contracting officials to administer awards.



48	2024-03-13 13:36:39	Assign product-level managers within acquisition a responsibility to get reports from the TPOC and to make a definitive determination on whether the product should transition to a Phase III and if not provide a written statement as to why not. I feel that many of the Phase II efforts are done in isolation with a TPOC that effectively manages the effort but is unable to advocate for it outside of their narrow scope of operations.
49	2024-03-13 13:23:00	Possibly help to promote the success of Phase II efforts to other government offices
50	2024-03-13 13:14:58	Having some way to get help to approach end users other than cold-calling the small business office at the base. The USAF/DAF needs to supply more funding to assist small companies market to the USAF/DAF. We did win a \$50K Phase I that did some of this, but it needs to be more like \$100K-\$150K. Phase II companies need even more. This is perhaps the most substantive assistance that would help. Clearer instructions on proposals. Lower some bars on signatures. More support from TPOCs.
51	2024-03-13 13:08:11	Lead Commands should be more involved in the SBIR process from the beginning and better educated on how to use this system to meet their strategic priorities.
52	2024-03-13 12:48:54	Provide a clear path and understanding of who has money and what type of money it needs to be.
53	2024-03-13 12:26:13	If Phase IIIs will only be awarded for things that directly contribute to the highest priority needs, then possibly better alignment and guidance in Phase IIs so that the technology grows in that direction. It didn't seem like our Phase II sponsors were very savvy about what it would take to win a Phase III and thus we didn't really get much guidance or support towards being able to pitch our Phase III story in a compelling way to those holding the purse-strings on Phase III funding.
54	2024-03-13 12:11:00	Work with End-Users and companies to understand how to navigate ATOs and GSA schedules
55	2024-03-13 12:00:49	Some organizations within the DAF do not always seem interested in pursuing a product. It is not a concern during phase II as it is not their money, so they are happy to go along with it and provide feedback but at phase III when they have to put money on the line I think they get nervous or they simply do not have funds available.
56	2024-03-13 11:19:17	Identify clear pathways to end users
57	2024-03-13 10:57:21	Maybe a "Phase III incubator" for products that are very close to a phase III contract, but not there yet. Would be similar to TACFI, but more focused on addressing gaps.



58	2024-03-13 10:32:23	I am assuming there is material that addresses a path to Phase III but we have not been exposed to this.
59	2024-03-13 10:17:25	Dedicated contracting office for Phase III contracts.
60	2024-03-13 10:14:40	Do a better job training TPOCs on SBIR and how they should finding funding to transition technologies
61	2024-03-13 10:08:32	The new structure of the Air Force announced by SecAF for great power competition hopefully solves the conflicts in acquisitions between research labs, MAJCOMS, HQ and Contracting.
62	2024-03-13 10:04:46	Defund all the federal research at FFRSC (Battelle) and universities until the threat from China is over. These entities DO NOT BUILD PRODUCTS, businesses do!
63	2024-03-13 10:04:08	AFWERX webinars are helpful. A Phase III transition webinar would be great. An ATO webinar would be great. An ATO guidebook would be great. Many of us cannot transition to Phase III without an ATO, In fact, we've had bases around the world ask if they can buy one of our units with "fall out money" but without an ATO they are taking a personal risk putting it into operation.
64	2024-03-13 09:48:02	We are paying a third party to aggregate contracting opportunities; it's difficult to find all of the relevant opportunities in SAM.gov. See "TZero Space Tracker" for an example of an easy-to-use interface.
65	2024-03-13 09:39:56	A big issue is the inherited structure of the DOD in that the end-user isn't the customer 99% of the time. So you could find a need and help fulfill requirements etc but if they don't control their own budget or procurement and instead someone 100-1000s of miles away in a different organization does, it adds an infinite amount of barriers.
66	2024-03-13 09:33:17	If government could contribute a certain amount of funding in the Phase III process, as done in Phase I and Phase II, it would encourage small businesses to pursue a Phase III.
67	2024-03-13 09:21:59	The Phase III has been delayed because money could not be found on short order; it would be nice if there was a "Phase 2.5" transition where – as one example – 50% of the money came from the SBA/DOD and 50% had to come from the Phase III customer
68	2024-03-13 09:19:51	Have TPOCs and their leadership better understand the impacts on small business of delay, but also recognize that by initiating SBIR III, they will not be lumbered with the entire bill/ obligation. The key phrase we keep hearing "we see the benefit across the AF, even DOD, but do not see why we should have to foot the bill." This is a blocker to an enterprise technology as many entry points to the AF are through orgs lower down the chain
69	2024-03-13 09:17:38	Assign a PEO and SPO when the Phase 1 is awarded. Assign and PM.



70	2024-03-13 09:05:28	The Phase I to Phase II path is fairly clear. The Phase III path is not. What do you need to get a Phase III? What Phase II outcome is needed. What is the funding available? What is the timing? All of these things are nebulous and unclear. There are no ground rules.
71	2024-03-13 09:02:34	There are several thoughts. A) internal branding: Phase III contracts need to be better understood by the people who have the money. Fundamentally there needs to be a phase shift in the zeitgeist within the AF, to one which believes that Phase III's are straight-forward. If Phase IIIs are not actually that straightforward, then the process needs to be streamlined by creating contract templates or some other idea to simplify B) Better connections: My impression is that the people with the money aren't necessarily out there looking for solutions within the SBIR community. Generic emails to them with relevant SBIR efforts probably don't even get paid attention to. Somehow, there needs to be more support within the community at connecting companies with the relevant persons would be tremendous. In fact, as we've been more successful, we've hired people to try to do this for us, but it seems like the type of thing that if AFWERX did and did well, would be a huge unlock. That is, if AFWERX hired some ex-generals (or people otherwise well-connected within the AF) part time to support the SBIR projects relevant to their arenas, those generals could help making the right connections to the right people.
72	2024-03-13 09:00:18	I am happy that our technology was selected for a Phase II, but it was a bad bet by the Air Force if they were hoping to gain a procurable product at the end of the project. To achieve a Phase II, we would need the following: – More time and money. We needed closer to \$1.5M and 24–30 months, not the \$750k and 18 mos allotted. We were hoping for an opportunity to pursue TACFI/STRATFI funding and an extended Phase II, but our TPOC was not responsive to our requests to be considered. – More stringent requirements vetting. The Air Force seemed to consider our Phase II as an extended Phase I/Proof of Concept. Our sponsor had no defined system into which our product would integrate. We were hoping that the Air Force would assist us in identifying a specific host system and making inroads with the manufacturer(s) of greatest interest/impact. – Education for small businesses on detailed DOD procurement requisites, such as MILSPEC, penetration testing, etc. Our firm has little understanding of these requirements for hardware/software, or how to accomplish. We would likely have to outsource the efforts, so this would have to be solidified *before* the Phase II and baking into the proposed budget (or included in the TACFI/STRAFI-backed project extension.)
73	2024-03-13 08:56:55	Nothing I can think of
74	2024-03-13 08:52:42	Customer discovery. Bringing customer who actually have money to spend on an open call project to the table. Maybe sharing open



		requirements from AF customers who need a solution? I was told dozens of times that “we don’t have a requirement to spend against.”
75	2024-03-13 08:36:51	Give us a very clear, crisp one-pager on Pentagon letterhead, written directly to contracting/acquisition professionals, saying “here’s the law, here’s the preference, don’t make us tell you again.” If the White House, Congress and Pentagon are serious about helping small businesses via the SBIR program, there need to be consequences for not supporting it or following the prioritization of SBIR companies. All the carrots (better performance evals, the warm fuzzy feeling of supporting small businesses, etc) won’t help change the behavior of risk-averse people. The stick may be needed; otherwise we’ll continue to see innovation theater that discourages small business from working with the federal government. Another idea would be to create a SBIR ombudsman somewhere; we’ve seen incumbents and primes repeatedly set traps and spread misinformation about the SBIR program to prevent competition.
76	2024-03-13 08:18:22	More education on it.
77	2024-03-13 08:10:22	Raise awareness amongst its KOs. It seems that I have to handhold each PM and KO through the SBIR process every time I bring it up. This should be higher priority training to the procurement folks.
78	2024-03-13 07:52:19	NA
79	2024-03-13 07:52:03	The government should ensure that awards can be completed with the original TPoC wherever possible by not reassigning them before the project is complete. Should personnel transitions become necessary, the government should ensure new TPoC’s are a good fit for the project rather than reassigning it to whoever is available, and potentially uninterested in the scope and goals of the project.
80	2024-03-13 07:49:44	Government officials with the proper authority need to provide better technical leadership to control and guide the formation of the technical requirements for the project. The Government should be more open to the application of new technology to improve productivity rather than continue with the status quo.
81	2024-03-13 07:32:57	The process is very complex and non-transparent with funds coming many different areas. We are not sure where Phase III or future funding would come from, nor do our military partners. Fostering well performing teams with early military stakeholder buy-in and clear funding paths would reduce the uncertainty for small business.
82	2024-03-13 07:20:23	Better aligning funded SBIR technologies/projects with program offices and funding opportunities to support transition. Assigning ‘transition sherpas’ to small groups of companies (e.g., open-topic segments or multiple specific-topic awardees) could help.



83	2024-03-13 06:55:29	Create a list of agencies that are relevant to the awarded opportunity, so that companies know where to narrow their focus in garnering support.
84	2024-03-13 06:54:12	It is unclear whether end user level staff know procurement strategies well enough to know how to transition to a Phase III. AFWERX tutorials for government end users on this may be helpful if not already offered.
85	2024-03-13 06:41:32	Program managers need to be motivated to work with successful SBIR companies. There is zero help or motivation to help small businesses. This also goes for discovering technology and program champions.
86	2024-03-13 06:39:02	Streamlining the purchasing process.
87	2024-03-13 06:33:27	A target customer may be identified but their commitment to participate in trials and provide product feedback is not assured. Commitment would require some time allocation during the project and this must also be secured.
88	2024-03-13 06:14:23	Promising SBIR work should always have a phase 2.5 or phase 2 sequential award available to do system level testing of basic technology. Better advertisement of the STRATFI and TACFI programs would also be helpful, but the matching funding levels can be problematic for small businesses who do not wish to dilute ownership or take on large debt to support these programs. We recently were informed that we won a TACFI, and were only able to participate due to cooperation with another DOD entity who supplied financial support. This was originally intended to be a STRATFI, but the necessary matching funding amount was a hurdle to submission.
89	2024-03-13 05:55:51	Phase III is such a unique contract vehicle it needs its own administration, such as the GSA developing the Federal wide IDIQ. Too many contracting officers, especially at the lower Wing or below levels, do not want to deal with Phase III.
90	2024-03-13 05:42:15	Looking at this from a historical perspective, I have seen a few instances when there has been a timing mismatch between Phase III and the needs of a program. From the time a topic is written until a Phase II is completed is about 4 years and the total funding is less than \$2M. If a program has a technology development challenges, they sometimes use SBIR as a hedge – they give a prime \$10+M and put out a topic. The SBIR is intended to provide an alternative in case the prime doesn't come up with a solution at all. So a better SBIR solution often arrives too late to be incorporated into the system, because they have a much more expensive, good enough solution, that was ready several months before Phase II ends.
91	2024-03-13 05:39:24	AFWERX should post example Phase III contracts in .docx format so that the contracting officers can feel comfortable having a place to start from.



92	2024-03-13 05:28:41	The phase 3 path should be an obvious way forward based upon the success of the phase 2, the need for the project, and not depend on a changing of the government project personnel.
93	2024-03-13 04:17:26	Planning, communicating and funding. All difficult during sequestration but not existent prior to sequestration.
94	2024-03-13 04:12:12	Award more TACFIs
95	2024-03-13 03:21:08	Help to identify or create budget for following year for funding.
96	2024-03-12 22:48:48	The people who will fund PIII need to be involved sooner. There needs to be funding and training for TPOCs to apply time and to better navigate the SBIR infrastructure.
97	2024-03-12 18:45:02	I think two things: 1 – Help early companies understand how the Space Force works better 2 – Move faster, and more predictably
98	2024-03-12 18:20:02	The challenges to transition are under-stated by the SBIR program. It's often extremely challenging to identify decision makers with transition authority. If the program required Government personnel to facilitate meetings and contacts with those Government personnel, there would be a lot more transition. Some TPOCS are very hesitant to share meaningful information about who in their organization can genuinely impact transition. Some TPOCs are almost secretive and hesitant to provide meaningful information. That was not the case with our TPOC on this effort, but it is very often the case. For the SBIRs that our entity has had transition it has always taken a lot more effort to transition than expected. In most cases the Phase III transition was with a different service or agency than the SBIR was funded and managed through.
99	2024-03-12 18:15:24	2 TacFi cycles per year
100	2024-03-12 18:13:00	1. Set expectations for the company and what it will take 2. Make sure the DOD side of the Phase II understands what the Phase II is for and that the goal, assuming successful, is to move to a Phase III and what that means and entails. 3. Spend less time hiring external companies to “help” the awarded, and instead have the DOD decision makers and operators participate in networking with the company, help organize solution road shows, and more. If the DOD teams don't know what is available, and what is activity going through a Phase II, it is hard for them to help support the transition.
101	2024-03-12 18:10:33	More streamlined contracting process



102	2024-03-12 18:08:29	Provide for a two-stage Phase II, all leveraging SBIR (3600) funding....First stage being \$1.5M for 12–18 months with a follow-on second stage based on Customer/TPoC/End User endorsement. Then, Phase III transition planning can start in earnest early in teh second stage.
103	2024-03-12 18:06:50	A few things. 1. Establish a Phase III IDIQ for critical technologies as defined by the DAF Secretary. Award the IDIQ to the AFWERX SBIR holders. There should not need to be a competition since these are already competed and many companies cannot bear the expense of writing proposals. 2. Award BOAs in Phase II, where Phase II is the first task in the BOA and Phase IIIs are just additional tasks. 3. The Volpe Center is experimenting with a new approach. Phase I awardees receive a combination Phase I,II, III award. They are in the process of awarding a \$10M Phase I/II/III contract.
104	2024-03-12 17:54:58	I think TPOC education is important. I know that some TPOCs participate in the monthly AFWERX calls, but most do not. More active outreach to TPOCs with specific messaging / guidance would be useful.
105	2024-03-12 17:49:40	Allocate a certain portion of the SBIR program contracting support and for the first year of a Phase III contract. Track Phase IIIs as a measure of success and future funding.
106	2024-03-12 17:38:59	MORE RESOURCES, give us a playbook. We have a great team, so I expect our crew has the knowledge at or above most of our AFWERX cohort. I had to hire former DOD people who are intimately familiar with this area to position our company for success. You might suggest that SBIR companies hire Vets who know the acquisition game.
107	2024-03-12 17:33:38	Having AFWERX or another government office identify possible stakeholders for a Phase 3.
108	2024-03-12 17:32:52	N/A
109	2024-03-12 17:29:48	The government needs to award more Phase III contracts directly after Phase I. Our company is mature enough to execute Phase III contracts, yet many government customers prefer to go through all three phases which significantly delays the process fo transitioning the technology.
110	2024-03-12 17:17:51	Start the process during Phase 1/Phase 2 to streamline adoption and advocacy – make sure that requirements are aligned and end users are aware of and have bought in on the timelines for delivery and performance
111	2024-03-12 17:10:06	Have Industry Days within the SBIR/STTR community where SBIR and STTR performers can meet with Program and Acquisition Offices as well as the Contracting Officers.
112	2024-03-12 17:07:06	A clear application process would be ideal. We are able to get formal letters of support from multiple bases and a plethora of supporting data, but do not know who to share them with in order to transition to a Phase III.





(4) What challenges or difficulties within your firm hindered the transition to a successful Phase III SBIR/STTR award?

1	2024-04-08 13:54:27	We were unable to dedicate certain key personnel away from existing projects to support what could have been a more compelling proposal.
2	2024-04-06 09:39:36	Focused manpower with the experience and expertise to consistently engage with and help the customer move the Ph 3 forward.
3	2024-04-04 14:05:27	Not applicable
4	2024-03-26 08:46:20	The length of time required.
5	2024-03-26 02:38:26	Opportunity cost
6	2024-03-22 07:38:33	Navigating the complexities of Contracting Offices
7	2024-03-22 06:23:59	N/A
8	2024-03-20 13:59:55	n/a
9	2024-03-20 10:44:06	N/A
10	2024-03-20 09:31:31	Even when you find a champion their needs to be a funding stream they can tap. Also many COs steer clear and are likely just too busy. We had an example where a program office directed a potential end-user to stand down and not support our Ph II proposal and memo because the OEM had something similar which was not exactly correct. Talk about killing Small Business innovation.
11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	Again, in our experience, both the contract mechanism and funding are challenges in getting a Phase III award.
13	2024-03-19 15:41:49	I am not sure that there were any issues other than possibly we did not have the complete functionality the sponsors were needing to make the next step.
14	2024-03-19 12:54:53	Certainty of which awarded projects will be best received by Endusers.
15	2024-03-19 08:59:10	No one in the company know what a transition to phase III looks like.
16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week – if I had to guess the biggest difficulty for Phase III would be customers finding funding within the budget since the POM cycle happens so far in advance and also an acquisition shop willing to support the Phase III contract vehicle whether that be an IDIQ or something else.



17	2024-03-19 08:24:24	None, we are an experienced participant in the SBIR program and have commercialized and transitioned numerous SBIR technologies to DOD, NASA, and the commercial markets.
18	2024-03-19 07:25:57	Too early to tell
19	2024-03-18 12:42:46	N/A
20	2024-03-18 10:48:39	NA
21	2024-03-18 08:21:27	NA. Still in Phase I
22	2024-03-18 07:43:43	Not having access/knowing the right gov't contacts that had the ability to make a procurement decision.
23	2024-03-17 09:03:25	We were able and willing to put in the effort to meet customers and end users who might support a Phase III. This was distinctly not something our TPOCs could help with, and that we realized we would need to do entirely ourselves. This requires a significant time and resources investment, and often likely frustrates the gov stakeholders who are fielding inbound requests from tons of companies. But it's the reality of the situation and we have been fairly successful at developing our own relationships. Typically however these orgs (in SSC for example) do not have budget availability and certainty to support a Phase III
24	2024-03-15 13:15:38	The people who are technical innovators are not same people as sales/marketing/manufacturing etc. These resources are also necessary.
25	2024-03-15 11:54:06	As a small business, it is difficult to find the right person with the right requirements and know that the government stakeholder is the right transition partner. That exercise alone takes a significant amount of bandwidth that is difficult for small businesses to have cycles for.
26	2024-03-15 08:00:49	None. We had everything ready to go months in advance.
27	2024-03-15 05:01:49	None. However, see answer to 5 above.
28	2024-03-14 12:52:00	The inability to send VRs for classified visits is a major hinderance
29	2024-03-14 11:40:41	
30	2024-03-14 10:23:31	Transitioning to Phase III has been the highest priority for our small business. We even raised \$1M of equity to fund the development required to have a technically superior product that will bring immediate value to the USAF.
31	2024-03-14 07:57:32	Our issue is simply our TRL. We are still in more research than development. That is changing in 2024.



32	2024-03-14 07:41:31	None that immediately come to mind
33	2024-03-14 07:05:31	Our firm did everything 'by the book'. If it is up to our firm to help our DOD stakeholders understand DAF acquisition, funding appropriation, increasing DAF budgets etc., then we need to be provided the materials necessary for us to do our own research.
34	2024-03-14 06:33:38	We are somewhat unique as we are B2G focused and therefore understand government better than many companies who are just exploring DOD for the first time. However, like all venture backed companies, we need to ensure our investors understand this is a viable path and the key to that is consistency of transition.
35	2024-03-14 06:17:52	Government funding, no transition sponsor. SBIRs are notoriously just science experiments. We have been informed that fewer than 3% of Phase II transition to Phase III.
36	2024-03-14 04:02:21	We are still in phase 1
37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	The process is quite new to us, so we are still learning about how to successfully transition a Phase II to a Phase III. Given some of the funding issues mentioned previously, a big challenge is identifying where the pockets of funding are that could possibly be available for our technology/company.
39	2024-03-13 16:09:15	We have been hindered and/or have hindered ourselves by (generally) maintaining a sole focus on Ph II technical efforts at the expense of appropriately supporting a transition effort toward Ph III. Additionally, we have limited knowledge of the appropriate points of contact on both the government side as well as with relevant or impacted equipment manufacturers whose systems will be influenced/impacted by the completed Ph II items.
40	2024-03-13 15:00:20	See above, We are currently in phase II and about 80% of the challenge is being an efficient networker and aligning wants with your research there can be entire wings and divisions working on your problem statement you're not even aware of until you network for months/have inside help.
41	2024-03-13 14:53:36	Finding the right customers who are also funded with a contract vehicle to spend money. This is a challenge because budgets are protected and funds are closely guarded – as they should be.
42	2024-03-13 14:45:58	None. However, see answer to 5 above.
43	2024-03-13 14:18:22	We are 10 people and only one with DOD experience. A small company can't survive on a contract here and a contract there....there as to be some dependable recurring revenue/cashflow in order to support hiring people to scale and the infrastructure to support. Not a surprise...uncertainty equals high risk and that is hard for a start up or small company to absorb and hang on. The sheer time it takes to



		get on contract and funds flowing is tough to manage. Last item is the required accounting system that is very different from standard commercial accounting. We will have to pay our accounting firm a significant amount of money to build the required infrastructure to qualify which is why we are in discussions with a PRIME so that we can be a sub.
44	2024-03-13 14:14:28	Lack of staff, experience and time to work an SBIR technology through the DOD system. Also, lack of time to wait for the transition. We have had some transitions take 10 years from the initial Phase I. What can be done about interim funding to keep the technology at least on a life support level of activity. Otherwise the development team gets dispersed and everyone moves on to the next thing that is currently paying the bills. Lack of clear path to advance TRL level is an issue. I will use the example of a Phase I SBIR we just completed – waiting now to hear about PII. This topic was a very specific modification to the Jet Blast Defector system that exists on just one location on one aircraft carrier. What are we supposed to do to move development and testing past what we can do in the lab? This is something beyond the ability of the small business to resolve.
45	2024-03-13 14:11:06	None, we need to have a better transition roadmap on the DOD side of things. We are more than ready and willing to transition.
46	2024-03-13 14:04:51	No challenges within our SBC at this time as we are leaning forward with trying to anticipate what the RFP will ask for once received from the contracting squadron
47	2024-03-13 13:54:12	on a PHIII with another command, we were not able to transition due to a technical issue that a vendor has been unable to solve. I think this could have been resolved were the caps on SBIR awards higher, we could have gave them more runway or got a second source, and/or the limitation on the amount of funding going to the prime. Possibly having more of the budget for them may have made sense.
48	2024-03-13 13:36:39	Insufficient understanding and access/connections to decision-makers within programs of record to fund Phase III
49	2024-03-13 13:23:00	No internal issues
50	2024-03-13 13:14:58	This was our first Phase II. We grossly underestimated the effort in time and money. That’s entirely on me. Our proposal team needs improvement so we’re not blindsided by things like the signature levels and other byzantine proposal requirements. They are experienced pros and they missed it. I had no clue. But mainly we are a tiny company, investing our own money, and cash flow is a huge issue that causes a spiral of not having the resources to do the work causing delays t complete the Milestones, waiting 4–6 weeks for payment, further causing us to not be able to have the resources (people) we need to do the work on time. I’ve had to let two people



		go and take on the work myself. It is too much for me alone and so we have fallen 8 months behind. I now have to do almost all of the technical work, and run the business. There appears to be no mechanism for the USAF/DAF to assist our small business other than the NCE. I feel if I default that it will be the end of our opportunities, so I am in a rock and a hard place.
51	2024-03-13 13:08:11	AF budget priorities and brand loyalty with existing contracts
52	2024-03-13 12:48:54	Lack of prior experience in achieving a Phase III makes it difficult since we are not knowledgeable and there is no one available to help.
53	2024-03-13 12:26:13	Our dual-use technology is extremely well-suited to U.S. Government needs, particularly in the Intelligence Community side, but the Phase III SBIR side, as sponsored by Space Force, did not have mission or funding priorities for earth observing technologies. “Your technology is incredibly useful, and once on-orbit we will use it a lot, but it doesn’t technically align with our current mission priorities, so we cannot fund it”.
54	2024-03-13 12:11:00	We lack a dedicate team with understanding of how to work on GSA and IDIQ
55	2024-03-13 12:00:49	Finding a willing customer.
56	2024-03-13 11:19:17	Nothing has hindered it so far.
57	2024-03-13 10:57:21	The proliferation of FAR clauses sucks up a lot of time in review that could be better spent.
58	2024-03-13 10:32:23	I would imagine the typical operational challenges like hiring to scale, receiving clearances, and working through the steps for an ATO.
59	2024-03-13 10:17:25	Contracting and budget availability.
60	2024-03-13 10:14:40	Long lead time to find funding
61	2024-03-13 10:08:32	The need to remain viable in economically challenging times for startups. The timelines to move beyond small SBIRs to develop a deployable product and a program of record mean we have to juggle many balls to keep investors happy and interested. A steadier stream of money could allow greater focus on the DOD’s interests and solving problems for the warfighters.
62	2024-03-13 10:04:46	Hiring and keeping talent is a nightmare because people know government creates delays or gaps between contracts which impacts their ability to get a steady paycheck.
63	2024-03-13 10:04:08	No challenges.
64	2024-03-13 09:48:02	We have not yet transitioned, but the need to have a DD254/facility clearance is definitely slowing down the conversations we can have. We were able to pursue a CRADA with AFRL to obtain a clearance



		(it's in work), but if there were a way to begin the FCL process under a Phase II, that would have bought us a lot of time.
65	2024-03-13 09:39:56	N/A
66	2024-03-13 09:33:17	We need to take some time and resource to do the Phase II process application, but without getting more funding return.
67	2024-03-13 09:21:59	It's difficult for DOD customers to go from 100% SBA/DOD dollars to 0%. There tends not to be fluency among all contracting officers how SBIR acquisitions work, what level of effort is involved, and what special status they carry (i.e., sole-source status) Additionally, since the rate of turnover inside of DOD entities tends to be high compared to industry (with PCSs or moves to private industry) it can be difficult for a SBIR program to maintain its champion and "go the distance" all the way to Phase III.
68	2024-03-13 09:19:51	Disbelief at Board level that the AF will ever move forward, or that the AF is a; able, orb; willing to move forward on innovation. The Board (coming from Google, LinkedIn, Amazon) see a crippling of innovation and a snail pace that has put us working the Federal arm under huge pressure to justify
69	2024-03-13 09:17:38	No PEO support
70	2024-03-13 09:05:28	We don't even know what is need to get to a Phase III. As I said I have never seen a Phase III award. I only know one company that has ever won one. I must know about 100 small businesses....
71	2024-03-13 09:02:34	Our firm is dedicating significant resources to try to make this happen, including hiring some ex-Generals for support to connect with the right people. This is helping, but the process is slow to get buy-in from busy people.
72	2024-03-13 09:00:18	Same as above. Our goals and scope were centered around proving that our technology worked in a representative environment. We needed more time and money--probably double what was allotted--to deploy the proven tech to a system of interest and then package everything to MILSPEC so it would be ready for procurement.
73	2024-03-13 08:56:55	N/A
74	2024-03-13 08:52:42	Finding someone at AFWERX who could explain the process to my own Govt customer (how a phase III works).
75	2024-03-13 08:36:51	We don't have the time and energy to educate KOs/COs about SBIR Phase III. We don't want to risk not being awarded the contract, so it's often easier to just take what the KO/CO is offering us than to try and present an alternative. The CRs and short timelines mean contracting folks themselves often don't have time to do things differently or to learn a new way of operating.
76	2024-03-13 08:18:22	awareness of the opportunity



77	2024-03-13 08:10:22	Limited BD budget/time. Lacking relationships due to geographical isolation (HQ in Knoxville, TN – no nearby customers). KOs unfamiliar with SBIR process.
78	2024-03-13 07:52:19	NA
79	2024-03-13 07:52:03	Our firm had technical challenges with one of our vendors, who ultimately could not provide the hardware they agreed to. Our project is also a hardware heavy project, and supply chain issues delayed the receipt of some items for months. Finally, our own personnel limitations in terms of capacity and available bandwidth contributed to delays
80	2024-03-13 07:49:44	It is challenging to keep the small business “afloat” while waiting on a contract award as the Government debates requirements.
81	2024-03-13 07:32:57	Time required to submit multiple applications for post Phase II funding. This is not just to AFWERX Phase III which never opened for us. The pathway to Phase III (or post Phase II) was not and is still not clear for us.
82	2024-03-13 07:20:23	Lack of knowledge about how to navigate the government funding and technology transition process. It’s also very challenging self-funding technology to get from SBIR Phase II to full commercialization.
83	2024-03-13 06:55:29	Being able to identify the appropriate POCs and decision-makers to support our award.
84	2024-03-13 06:54:12	None
85	2024-03-13 06:41:32	see 3 and 5. There is no roadmap, there is no assistance. There is no motivation to change.
86	2024-03-13 06:39:02	Lack of DOD resources to work with us, we are a technical software product and their often aren’t employees on the other side to assist us.
87	2024-03-13 06:33:27	Staffing can be difficult because some of our employees are not American citizens. Furthermore, our own commercialization priorities may shift in the span of a year.
88	2024-03-13 06:14:23	Reluctance to assume debt associated with system level testing, either due to external lab costs or internal design, fabrication and support of custom designed system test devices/facilities.
89	2024-03-13 05:55:51	We were one of the last groups of lower funded SBIR Phase II (\$750K). That funding and time frame did not allow for the execution of the cyber security requirements for a cloud-based application. We cannot immediately transition to a Phase III Production application because our product still requires certification (3rd party audit, development in a government only Cloud, etc...)
90	2024-03-13 05:42:15	We are a small company with actively engaged decision makers. There were minimal challenges in accepting the SOCOM Phase III award.



91	2024-03-13 05:39:24	Really the only thing that pushed the program office across the line was the matching funds – need more of that, even potentially on Phase IIs (instead of just on STRATFI and TACFI).
92	2024-03-13 05:28:41	There are no significant hurdles for our firm in transitioning.
93	2024-03-13 04:17:26	No opportunity. Moot point
94	2024-03-13 04:12:12	Hard to get to a higher level of acceptance (in terms of the Phase III)
95	2024-03-13 03:21:08	Finding more end users with funding
96	2024-03-12 22:48:48	It is very tough to scope the end market and to have confidence to invest your own money if the path to PIII sales is so mysterious.
97	2024-03-12 18:45:02	Small companies always have limited resources and need to focus. When we pick a couple products to focus on with commercial and government customers, it means other products will not be developed and sold.
98	2024-03-12 18:20:02	We need to have more face-to-face meetings on base with the Government. As stated, the amount of marketing of the technology required is well in excess of the budget of an SBIR Phase II.
99	2024-03-12 18:15:24	Timeline
100	2024-03-12 18:13:00	None
101	2024-03-12 18:10:33	Lack of clear transition partner / end user
102	2024-03-12 18:08:29	Where's the PEO advocacy? Is there money? Who's writing/owning the contract?
103	2024-03-12 18:06:50	Our challenges related to how we were organized. We had to streamline our information so that it was easier for the Phase III customers to conduct market research and determine lineage (Determination and Finding). As a result, we created a repository open to the public, that the contracting officers can use to conduct market research. We also developed a tool to automatically generate the DNF, ROM and other information to accelerate the SBIR Phase III award. As a result, last year, we received and closed 5 Phase III awards (by FEMA) within 8 hours of receiving the government's solicitation.
104	2024-03-12 17:54:58	We are likely to get a Phase III award, but the lack of awareness of how the contracting and budgeting processes work is an issue.
105	2024-03-12 17:49:40	Contracting support has thus far been a problem and some agencies are not funding Phase IIIs.
106	2024-03-12 17:38:59	Not applicable to us.
107	2024-03-12 17:33:38	Size of our firm and ability to find potential Phase 3 stakeholders



108	2024-03-12 17:32:52	Too early to comment.
109	2024-03-12 17:29:48	When we were awarded a Phase III we did not have a clear path of additional customers after our initial scope of work was completed. We needed a more thought-out contract and customer pipeline that could extend the Phase III.
110	2024-03-12 17:17:51	Level of funding – its challenging to receive outside funding on single SBIR that is enough to scale the company and production capabilities
111	2024-03-12 17:10:06	Difficulty in finding PMOs and Acquisition Offices. The SAGES and other SBIR/STTR program personnel are minimally helpful. They are mostly constrained by their contracts as to what help they can provide.
112	2024-03-12 17:07:06	Per previous comments, not knowing the exact Phase III application and evaluation process is the largest hurdle.



- (5) Describe what factors influenced the government organization’s evaluation of the readiness and capabilities of the small business to meet the needs of a Phase III award.

1	2024-04-08 13:54:27	unknown.
2	2024-04-06 09:39:36	Not sure
3	2024-04-04 14:05:27	Not applicable
4	2024-03-26 08:46:20	Solution certifications. The longest and most expensive was the FedRAMP cloud certification process. This was ultimately not funded by the government, only sponsored, and required both a long time and a large, at risk investment, to meet the government customers requirement for our SBIR Phase III
5	2024-03-26 02:38:26	Little. Not seeing the point of Open Topics and TACFI is to operationalize warfighter needs that are End User driven. End-users/ Customers/Supporting personnel (Contracting, Financial Management, etc.) have little concept of AFWERX guidance and “legality”
6	2024-03-22 07:38:33	An established relationship with several stakeholders who realize the value of our solution to their mission needs.
7	2024-03-22 06:23:59	N/A
8	2024-03-20 13:59:55	Work and experience during the Phase 2
9	2024-03-20 10:44:06	N/A
10	2024-03-20 09:31:31	They usually just email around the abstract or Ph II proposal and sometime take a meeting.
11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	This is N/A for us at this point with the Air Force. We have successfully transitioned a technology to a Phase III via USSOCOM. We were selected for a Phase III by SOCOM because our prototype was tailored to specific SOF needs and was ready for deployment on SOCOM operational systems.
13	2024-03-19 15:41:49	I do not have knowledge of an evaluation of readiness
14	2024-03-19 12:54:53	TBD.
15	2024-03-19 08:59:10	I don’t even know. As far as I know were never received this evaluation. Our phase II awards have been successful and we are close to commercialization, but i have never seen a phase III evaluation.



16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week.
17	2024-03-19 08:24:24	In our case, no such evaluation was completed because the programs were designed to complete the technology transition during the AFWERX Phase II.
18	2024-03-19 07:25:57	Too early to tell. Our company is still in the process of executing Phase II SBIRs
19	2024-03-18 12:42:46	Opportunities never came up
20	2024-03-18 10:48:39	NA
21	2024-03-18 08:21:27	NA. Still in Phase I
22	2024-03-18 07:43:43	Have not got there yet. Most end-users/customers on the gov't end have a very basic understanding of SBIRs or the Phases.
23	2024-03-17 09:03:25	It seems like gov organizations look at the results of our Phase II but also other data points like our own internally-funded demonstration mission which is currently on orbit; launching and flying our own satellite went a long way toward establishing our credibility with gov stakeholders.
24	2024-03-15 13:15:38	Our small business has a long history and has spin offs and licensing deal that have been used to transition.
25	2024-03-15 11:54:06	The factors that influence government organization of readiness are mostly 1) does it fill a capability gap, 2) can our end users downstream utilize it?
26	2024-03-15 08:00:49	Governments evaluation was that we were ready and had capability to perform. Failure was in the gov to get the correct signatures.
27	2024-03-15 05:01:49	N/A for this specific topic. However, maturity of the technology always determines whether the customer will move forward with Phase III.
28	2024-03-14 12:52:00	N/A – haven't obtained a Phase III award yet
29	2024-03-14 11:40:41	
30	2024-03-14 10:23:31	Good question. Seems to me that the government preferred a solution that was previously known to them.
31	2024-03-14 07:57:32	n/a
32	2024-03-14 07:41:31	Access to end users to evaluate and speak on behalf of the capability
33	2024-03-14 07:05:31	All factors were met. The money simply wasn't there to transition to phase III. Contracting and finance told us we were 12+ months too late.
34	2024-03-14 06:33:38	TRL9 product, mission fit, company fit.



35	2024-03-14 06:17:52	We have no visibility into Government evaluator's thought processes.
36	2024-03-14 04:02:21	We are still in phase 1
37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	The presence of a champion within the organization that can shepherd the company through all of the internal processes, a good understanding of the Phase III mechanics, and also all of the requirements around ATO, etc.
39	2024-03-13 16:09:15	Engagement with government personnel or organizations (i.e. SPO, JPO, etc.) beyond the relevant TPOCs has positively impacted the government organization's evaluation of readiness and capabilities. TPOCs, in our experience, are tasked with guiding, understanding, and supporting the "thing" being developed within the Ph I and Ph II activities, whereas the SPO and similar type organizations are more broadly interested in the "and then what" aspects of the program. These aspects often include an evaluation or assessment of the small businesses capabilities around qualification support, manufacturing readiness, capacity, and other such items that would support a successful transition toward a Ph III award.
40	2024-03-13 15:00:20	NA
41	2024-03-13 14:53:36	Having a product that fills a current mission need was the most important factor. Connecting with a funding source was the next most important factor.
42	2024-03-13 14:45:58	N/A for this specific topic. However, maturity of the technology always determines whether the customer will move forward with Phase III.
43	2024-03-13 14:18:22	One of the biggest elephants in the room is cyber security and the various interpretations about what level of compliance a small company needs to achieve. My opinion, there is significant confusion even within Bluecyber, the DOD entity charged with helping small companies understand CMMC etc. Accounting standards was another. Probably the most interesting was their ability to get their brain around how a small company actually operates with the speed that they do. Most of their experience is with large companies that have an army of BD and proposal writers.
44	2024-03-13 14:14:28	I can use a current example of a large AF SBIR transition we have on path for the technology to become a \$200 million acquisition in maybe FY25??? Our understanding is the AF has already budgeted this funding. This is very clearly 100% SBIR technology where we developed the hardware and software. But the AF COs are seeming very reluctant (in fact refused when we talked with them) to just go with a sole source SBIR PIII that the legislation seems to direct as the next step. Currently there is an RFI process underway to seek



		competitive bidders. Why is this even happening?? There is no doubt my small business could be prime and deliver all the needed aspects of this larger system, including some details we have already arranged subcontract to a large aerospace firm to provide. It seems to me that inside of DOD there needs to be an activity that would separate the SB from this fear of using the small business for the prime of a large PIII that exists inside some conventional DOD acquisition contracting and planning groups. We faced and survived this same situation about 15 years ago, when the Navy was thinking of not using my firm as a an SBIR supplier of a product we developed for a 14 ship contract. We eventually won that battle to be the hardware prime for what became a \$70 million PIII transition for us, but the Navy acquisition group was clearly maneuvering to award directly to a large shipyard. I think some sort of DOD internal group should made available to rep for the small business and intervene with the acquisition group in this sort of situation.
45	2024-03-13 14:11:06	Little to none. We produced the requested capability but there was no plan ever for how a transition would work.
46	2024-03-13 14:04:51	Primary decision was based upon the return on investment our SBC has provided to the MAJCOM as well as the number of MAJCOM directorates the SBC supports. The demonstrated capabilities during the PoP of the Phase II were instrumental in deciding to pursue the Phase III
47	2024-03-13 13:54:12	Prior award outcomes, submission of proposal package in response to RFP and Contracting Officer inquiries.
48	2024-03-13 13:36:39	TPOC loved the capability. But could only seek funding from an limited unit operational budget for a limited deployment of the capability.
49	2024-03-13 13:23:00	Scalability of the system to meet varying demands
50	2024-03-13 13:14:58	Lack of TPOC commitment to assist us in the completion of out effort. On our end, we missed our Milestone dates, but we are still doing everything we can to complete the effort. I am sure that this has made us look bad to our end-customer. I am far from perfect, but I am doing the very best I can, and while we do have the support from AFRL and OUSD, I feel that it is a Sisyphean task to engage with USAF. We simply have to find a way to bring this fantastic technology to the USAF.
51	2024-03-13 13:08:11	This type of information was not shared with us
52	2024-03-13 12:48:54	We believe the government is satisfied with the readiness of our Phase II based on our 10 aircraft flight test success (soon to be 15 as we are preparing to test fly the last 5 aircraft and then close out the Phase II contract).
53	2024-03-13 12:26:13	I think our general level of expertise and our execution record were important factors in influencing the Government in being interested



		in our capabilities. That we had very substantial Venture Capital funding also reduced the perceived risk of our ability to execute on a potential Phase III.
54	2024-03-13 12:11:00	What they hear from other people. Most of our customers/end-users don't know how to find funding for a Phase III award
55	2024-03-13 12:00:49	I think the technology may still not be at a high enough TRL to assure the customers we are ready for phase III.
56	2024-03-13 11:19:17	We have no idea what factors influence the government.
57	2024-03-13 10:57:21	I don't know what factors influenced the government. I would speculate that deployments and CR had an impact on their bandwidth.
58	2024-03-13 10:32:23	not applicable
59	2024-03-13 10:17:25	Price of service, radar cross section, and performance capabilities.
60	2024-03-13 10:14:40	Meeting Phase II requirements and milestones successfully
61	2024-03-13 10:08:32	The Phase III itself hasn't been a problem. Funding the Phase III has been. Our product needs us to have access to classified information, that is the first major non-starter. Second, because we're a small business (thus eligible to receive Phase IIIs), we by definition can't be a company that is large enough to be ready to mass produce our product, which is also proving to be a barrier to greater interest.
62	2024-03-13 10:04:46	Lack of participation from SME at AFRL. They do not want new capabilities developed, then they would have to shift focus on research.
63	2024-03-13 10:04:08	Question is: Do you have an ATO. Answer: No. Response: We cannot deploy without an ATO so hard to justify a Phase III transition.
64	2024-03-13 09:48:02	Not yet awarded a phase III, so unknown.
65	2024-03-13 09:39:56	N/A
66	2024-03-13 09:33:17	Not sure.
67	2024-03-13 09:21:59	In our case, our customer is judging how many users our application is able to attract and is collecting quantitative and qualitative feedback to see if our program should be funded for Phase III.
68	2024-03-13 09:19:51	Physna capability has been evaluated against cost, schedule, performance at the tactical level (429 SCMS) and against industry use cases (Ford/ Whirlpool / Magna). It has also been evaluated against benefits to the Enterprise for life cycle management, and interoperability (HAF A4L, Operational Imperatives 5 and 7, as well as HAF A4 Fusion Cell), and up to HAF A4 Innovation WG. We have been evaluated against the capability to support Set The Theaters, Theater "push," DMSMS, obsolescence, reverse



		engineering, advanced manufacturing. Each time, our use cases pass the tests. Each time, we receive acknowledgment that a sponsor for SBIR III will be found, but our champions are not the ones with money/ program time
69	2024-03-13 09:17:38	We have a TACFI, but only because we used our own funds to keep the program going!
70	2024-03-13 09:05:28	I don't know. It was never made clear to me.
71	2024-03-13 09:02:34	You get 30 minutes to get buy in. If you fail there, you're done. If you don't, you then go through the multi-month process of getting buyin. Once you've gone through that, then you have to get through the not short Phase III process which does take a fair amount of attention of the AF contact. If at any point along this way, the AF contact changes their mind, gets distracted, moves positions, etc., all of the effort is lost. It is a very high risk endeavor, and the time it takes to get through it all is the biggest challenge. I'd add that there is no rubric, so someone who has never done it before doesn't really know what the bar is or what the risk is.
72	2024-03-13 09:00:18	I cannot comment on the Government's evaluation process and influences thereon. I can only comment on our experience as a small business. AFWERX obviously took an interest in our tech but did a poor job assessing the likelihood of us achieving a fieldable product in 18 months (as we did).
73	2024-03-13 08:56:55	N/A
74	2024-03-13 08:52:42	It was important to DHS that we had already commercialized products (unrelated to our Phase III). This helped build credibility and helped them trust of SBIR effort would work.
75	2024-03-13 08:36:51	N/A for us; we have met all requirements tied to Phase III awards
76	2024-03-13 08:18:22	not sure
77	2024-03-13 08:10:22	We did a flight demo of our capability at NORTHERN EDGE 2023, along with numerous ground-based demos. We hosted and recording training sessions. We created an abundance of training and promotional material. We helped identify transition partners, wrote example SOWs, and provided our clients with as much info as possible to show 1) this is a real, capable, and value add product, and 2) (most importantly in some cases) we can get on contract very easily.
78	2024-03-13 07:52:19	NA
79	2024-03-13 07:52:03	N/A we have not yet applied for Phase III
80	2024-03-13 07:49:44	Successful past performance on projects and the quality of the staff.



81	2024-03-13 07:32:57	The only factors we know we are being evaluated on are what is in the post phase II proposal applications. Typically this has to do with commercialization including markets, sales, and future plans for the prototype.
82	2024-03-13 07:20:23	Not sure I can fully answer this, but our background in commercializing similar technology presumably helped.
83	2024-03-13 06:55:29	N/A
84	2024-03-13 06:54:12	We have not had Phase III discussions yet
85	2024-03-13 06:41:32	not there yet
86	2024-03-13 06:39:02	Technology fit.
87	2024-03-13 06:33:27	It can be difficult to determine. I conclude that the technical complexity of phase 2 solutions must be better matched to the technical competency of the customer for it to progress to a phase 3 deployment.
88	2024-03-13 06:14:23	In most cases, our contacts were not in a position to commit funds due to the lack of system level testing data to support a deployable solution.
89	2024-03-13 05:55:51	In NOAA's case, they were interested in our commercial version prior to the SBIR. We discussed the SBIR modification for eth Air Force and then the ability to use Phase III contracting they immediately wanted it. NOAA's contracting Officer said this is the easy button to get us on contract, but we are being stymied by the cyber security requirements.
90	2024-03-13 05:42:15	This is a little bit opaque to us, but I think the following things were relevant: – We have had several Air Force STTR projects supporting our development work. This is clearly an area that the Air Force is interested in investing in because of the potential long term benefit. – We were in talks with VCs for a funding round (subsequently closed). The group includes Khosla Ventures and Draper Associates that have a long track record of supplying sufficient capital to technology companies for long term success. – We had transitioned Phase III projects in the past.
91	2024-03-13 05:39:24	Phase III does NOT necessarily mean that the technology is complete and finalize, in many cases the phase III is just a continuation of the prior SBIR work (without using SBIR funds) --> one thing that should be communicated better is the fact that nearly all Phase IIs still need more R&D or integration work before a complete transition to a program office. The messaging that a Phase II-Phase III should be easy is unhelpful for small businesses or program offices.
92	2024-03-13 05:28:41	I have no knowledge on this.



93	2024-03-13 04:17:26	N/a
94	2024-03-13 04:12:12	They want the service we are offering
95	2024-03-13 03:21:08	They had to Evaluate themselves our qualifications and make sure we met all needs with lots of paperwork through different internal organizations
96	2024-03-12 22:48:48	Not sure.
97	2024-03-12 18:45:02	The government will know better, but I think there are a couple things: 1 – Our business internally funded a major technical demonstration 2 – Over the course of multiple Phase 1 and Phase 2 awards over a few year we showcased our technical capability repeatedly
98	2024-03-12 18:20:02	There was not a formal evaluation. The TPOC and other Government personnel evaluated the technology very favorable. The stated requirements were met, but there was not a direct path to transition the technology.
99	2024-03-12 18:15:24	N/A
100	2024-03-12 18:13:00	There was no evaluation. We ended the phase II with astounding results, exceeding what the government expected, and yet nothing moved forward. And no evaluation was given.
101	2024-03-12 18:10:33	
102	2024-03-12 18:08:29	We've had 5 SBIR Phase IIs. All 5 Customer/TPoC/End User sets wanted more, to continue the development effort. No funding and no contract vehicles were the blockers.
103	2024-03-12 18:06:50	Even though we invented the technology, and have deep knowledge of the domain, many government organizations still want to see us backed by a large company.
104	2024-03-12 17:54:58	The favorable evaluation of the technology solution we delivered has been a huge positive. The lack of significant budget (and the uncertain budgeting process) is a problem.
105	2024-03-12 17:49:40	We were told by the TPOC that they cannot meet their operational goals without us, but that they have no contracting resources. We would need to apply for a STAR.
106	2024-03-12 17:38:59	We are scouring the environment to find opportunities to formally document the readiness of our product to meet government needs. In fact, we just pinged Mike Richardson from NPS to see if the report documenting our participation at JIFX 23–3 has content consistent with a “Field Operational Assessment” that we can distribute.
107	2024-03-12 17:33:38	Not assessed for that award yet.
108	2024-03-12 17:32:52	N/A



109	2024-03-12 17:29:48	Our company was evaluated independently by an AF innovation unit, separate from our prior Phase I work. The innovation unit determined that our technology presented significant value for the DAF and our company was mature enough to warrant a Phase III contract.
110	2024-03-12 17:17:51	This also is a challenge – there is no clear criteria as far as I know as to what a healthy company is that can actually perform – hence funding is allocated to organizations that are incapable of executing
111	2024-03-12 17:10:06	Unknown because that information is not provided by the government organizations because we are not able to engage them because they are not providing the ability to contact them.
112	2024-03-12 17:07:06	I am ufrankly nsure how the government would evaluate a small business' capacity as this is a complex entity. For example, my company only made 9 robots and generated \$8m in revenue last year, but we have enough manufacturing equipment and capacity to make well over a 100 robots this year if that many purchases came in. We have not needed to make that many robots because the vast majority of our business comes from rentals, not from sales



- (6) If you did not receive a Phase III award by the Government, what Phase III commercialization opportunities did your firm successfully execute outside of the Government?

1	2024-04-08 13:54:27	we continue to execute a commercial line of business which is adjacent to the proposed concept proposed in the Phase II.
2	2024-04-06 09:39:36	None
3	2024-04-04 14:05:27	Not applicable
4	2024-03-26 08:46:20	We did received a Phase III
5	2024-03-26 02:38:26	None
6	2024-03-22 07:38:33	Phase III award is pending.
7	2024-03-22 06:23:59	Raised \$105 million to commercialize our 100% recycled asphalt plants. Currently preparing a PII and shopping a PIII for this solution within the Air Force for the mobile recovery of dilapidated airfields in the pacific theater.
8	2024-03-20 13:59:55	n/a
9	2024-03-20 10:44:06	N/A
10	2024-03-20 09:31:31	We try to sell tech direct to larger Industry companies.
11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	We have not commercialized our Air Force SBIR technology to date.
13	2024-03-19 15:41:49	The changes we developed under SBIR II were very valuable. Commercialized opportunities have not developed yet but plans are to integrate many of the changes into our standard products
14	2024-03-19 12:54:53	\$25M in commercial LOIs
15	2024-03-19 08:59:10	None, I don't know what a Phase III is.
16	2024-03-19 08:47:07	Too early to say, we just completed our Phase I last week.
17	2024-03-19 08:24:24	As mentioned above, the technology will be successfully transitioned to the customer (Robins AFB) during the Phase II program. These systems are highly specialized for C130 propeller inspections, so their direct commercial applicability is limited.
18	2024-03-19 07:25:57	N/A



19	2024-03-18 12:42:46	We are a commercial product first and so the SBIR has not impacted our commercial opportunities or progression
20	2024-03-18 10:48:39	NA
21	2024-03-18 08:21:27	We're getting traction from the manufacturing space by providing automation tools.
22	2024-03-18 07:43:43	We are still working on the commercialization of our product as it is tailored for first responders and unfortunately their budgets have been drastically reduced.
23	2024-03-17 09:03:25	We have won and executed a Phase III with NASA; we were hand-selected based on the results of our Phase II and other independent priorities the agency was already working on.
24	2024-03-15 13:15:38	Sales directly to commercial entities.
25	2024-03-15 11:54:06	N/A
26	2024-03-15 08:00:49	None at this time
27	2024-03-15 05:01:49	N/A for this specific topic. However, we have had many Phase III commercial customers on other developmental efforts.
28	2024-03-14 12:52:00	We have pursued bias audit work with private companies as a means of doing additional research into the industry
29	2024-03-14 11:40:41	
30	2024-03-14 10:23:31	We continue to be very successful in selling and supporting our commercial solution both here in the States with fortune 500 companies and with our allied partners.
31	2024-03-14 07:57:32	TACFI
32	2024-03-14 07:41:31	We have leveraged SBIR funded technology to enhance our own commercial products and services. This has allowed us to pursue new customers and bolster the value to our existing customers. We also have been able to pursue licensing of the technology to third-party firms. Currently we have two firms that are using our technology for evaluation purposes (i.e., no transfer of funds yet), but both opportunities hold potential for future paid licensing.
33	2024-03-14 07:05:31	Our solution has scaled to thousands of users outside of our Phase II SBIR partner and we are working with various IL 4 environment partners to enable our solution. We are on a strong pathway towards commercialization in the Army and Navy now.
34	2024-03-14 06:33:38	We have received multiple Phase III and other procurement awards which we were directly as a result of our Phase I/Phase II work.
35	2024-03-14 06:17:52	We have made our SBIR outputs into a commercial product and have achieved small scale sales to other entities.
36	2024-03-14 04:02:21	We are still in phase 1



37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	We are currently also actively focused on the commercial market and working directly and with partners to develop pilots with commercial organizations.
39	2024-03-13 16:09:15	We have not developed Ph III commercialization opportunities outside of the Government. The unique characteristics of the platforms being protected and which are leveraged with our technology, are not utilized in the commercial space. Therefore, in its present form, our item does not reasonably fit within the non-Government commercial environment.
40	2024-03-13 15:00:20	We are currently in commercialization with NAVSEA and commercial customers, we also have gone through some OTA dollars that were awarded to a prime to quickly onboard startups for NAVSEA work, that model worked well.
41	2024-03-13 14:53:36	N/A
42	2024-03-13 14:45:58	N/A for this specific topic. However, we have had many Phase III commercial customers on other developmental efforts.
43	2024-03-13 14:18:22	That is the growth we are starting to see. It is nascent but growing. We have our first low cost simulator display and are in discussions about a second (same company). We have deployed our software in two local museums and will be doing more work for them later this Spring. We are in initial discussions with several large companies in the entertainment space and another with an international hardware supplier. We are working with two defense related companies and are happy to follow their lead.
44	2024-03-13 14:14:28	In cases when a technology did not go to Phase III, we were in some cases, given long enough time, able to find a way to incorporate that technology into some other SBIR proposal and slowly ratchet up the TRL to the point that a transition did happen. But in many cases great tech just ended up in the scrap heap for reasons outside our ability to push forward to PIII. The issue with truly small businesses is the ability to survive long enough for these big lags in funding to resolve (i.e., falling over the valley of death's cliff).
45	2024-03-13 14:11:06	We are entering the commercial sector. If things go well, this will result in a massive increase in cashflow. BUT, this also means that if DOD comes back with a Phase III it will not be a priority for our firm since we will need to focus on what maximizes returns.
46	2024-03-13 14:04:51	N/A
47	2024-03-13 13:54:12	N/A
48	2024-03-13 13:36:39	Many. Our product has received strong demand in the commercial space sector and they have used it to reduce cost, improve responsiveness and resiliency. The Space Forces systems remain stuck in legacy capabilities.



49	2024-03-13 13:23:00	We are still in process with DOD, DoE, and international customers
50	2024-03-13 13:14:58	We made a sale of one of our pieces of technology to a multi-billion \$ corporations. It will take a long time to see this come to fruition in volume sales, but it was a very positive first step. We also found two smaller strategic investors who may still be available for us to try the TACFI again. I have an investor pitch deck and I am actively seeking investors outside of DOD. But DOD are really the first who could benefit.
51	2024-03-13 13:08:11	Not applicable at this point.
52	2024-03-13 12:48:54	We are closing out our Phase II in April so we'll see.
53	2024-03-13 12:26:13	We are actively executing full go-to-market commercialization activities on Venture Capital funding. Due to not receiving a Phase III award, we are unable to accelerate our deployment, and thus the dual-use Government benefits of our technology will be deferred in when they will be fully available.
54	2024-03-13 12:11:00	Sales to other customers
55	2024-03-13 12:00:49	None
56	2024-03-13 11:19:17	We have not progressed that far with our product yet. We will be applying for a Phase II and then a Phase III.
57	2024-03-13 10:57:21	We are continuing to commercialize the underlying technology in medical and consumer products.
58	2024-03-13 10:32:23	We have proven that the underlying technology is feasible and there is a commercial product developed off of this technology in the market place to help small businesses with cybersecurity challenges.
59	2024-03-13 10:17:25	Still working on Phase III, both government and commercial.
60	2024-03-13 10:14:40	Commercial projects/contracts
61	2024-03-13 10:08:32	we did get a phase III
62	2024-03-13 10:04:46	We are talking to a prime who wants to claim any future IP as theirs for simply giving us a contract.
63	2024-03-13 10:04:08	We have airport and airline customers deploying in the next month or so in EU and U.S. So USAF monies have helped perfect a system that will first be deployed outside of USAF.
64	2024-03-13 09:48:02	We have an MOU, and are in contract negotiations, for an 18-satellite constellation with a prime payload provider for one of the top telecommunications companies in the world.
65	2024-03-13 09:39:56	N/A



66	2024-03-13 09:33:17	Often time, by our own financial support, we continue to commercialize the technology that was developed under the support of a SBIR Phase II program, if we believe there is a commercial need for the technology on the market.
67	2024-03-13 09:21:59	We were awarded our first P1 in 2019, then our first Phase II in 2020. We're on our 2nd Phase II with the same entity (awarded 2023, wrapping up 2024), and now awarded a TACFI in 2024 that will wrap up in 2025. We anticipate our first Phase III transition will occur in 2025.
68	2024-03-13 09:19:51	So Far Ford, Magna, and with Unity Technologies
69	2024-03-13 09:17:38	We are currently going to market with a solution designed for DOD. Sadly, DOD will now have to pay 10x for our offerings on the commercial market.
70	2024-03-13 09:05:28	We always try to take technology gained from our Phase II work and incorporate it into commercial products. Or we use developments to help us win another PHase II which pushes the development further along as Phase IIIs are nebulous.
71	2024-03-13 09:02:34	We have been successfully selling our 3D printers in the commercial setting. The functionality the SBIR projects are providing is key to the pitch to and opportunity for our customers.
72	2024-03-13 09:00:18	These efforts are still ongoing--none to report yet.
73	2024-03-13 08:56:55	Nothing as of yet. We've only been in the phase 2 period for 6 months or so.
74	2024-03-13 08:52:42	Outside of the Phase III we secured with DHS, we did sell several of our commercialized products to various elements of DOD, through individual sales.
75	2024-03-13 08:36:51	We have done both, with Phase IIIs in the government and in the commercial sector.
76	2024-03-13 08:18:22	na
77	2024-03-13 08:10:22	n/a
78	2024-03-13 07:52:19	Still too early to respond.
79	2024-03-13 07:52:03	N/A
80	2024-03-13 07:49:44	Most contracts are with the Government.
81	2024-03-13 07:32:57	We are focusing our resources on products and projects with a more certain ROI. The Gen2 system is military centric being hyper portable with a specific use case for forward surgical applications. We are still trying to raise money from investors to match using STRATFI or TACFI.



82	2024-03-13 07:20:23	We are still working on opportunities with Prime contractors for Phase III transition and funding. We are also heavily investing IRAD dollars to further the commercialization process.
83	2024-03-13 06:55:29	N/A
84	2024-03-13 06:54:12	We have garnered some work with satellite imagery providers who use hyperspectral data
85	2024-03-13 06:41:32	n/a – still working the process
86	2024-03-13 06:39:02	We sold the software to enterprise customers.
87	2024-03-13 06:33:27	In the last year, we have refocused our attention on a new AI use case that could turn into a phase 3 commercial deployment. However, it has not happened yet. We should have more certainty by end of Q2 2024.
88	2024-03-13 06:14:23	We are currently working to commercialize the technology tested on SBIR contact FA864922P0847, “Super Lubricous Interface Coatings for Gears,” as described in response # 4.
89	2024-03-13 05:55:51	n/a
90	2024-03-13 05:42:15	As noted, a \$4.7M seed round.
91	2024-03-13 05:39:24	We sell to other commercial businesses and have raised a round of private investment funding.
92	2024-03-13 05:28:41	We have not ever received a Phase 3 after three AFWERX awards, so, none so far.
93	2024-03-13 04:17:26	N/a
94	2024-03-13 04:12:12	We already had achieved commercial success in B2C & B2B
95	2024-03-13 03:21:08	We have received many commercial contracts outside government.
96	2024-03-12 22:48:48	DOT modular roundabout product. Multi-millions in sales and we have done 1 DOT SBIR, we have done over 20 DOD SBIRs and gotten 0 to PIII, however, we are currently close on one.
97	2024-03-12 18:45:02	Our Phase 3 to the government and our commercialization opportunities are very similar, which we are very fortunate for.
98	2024-03-12 18:20:02	We’ve attended conferences and briefed the successes to the Army, Navy and DMEA. We are continuing to meet with personnel at Robins AFB and other AF facilities. We have a Phase III with DMEA and we will be using some of the results of the AFWERX SBIR in that contract (maybe that counts as transition), but the contract was not the result of the AFWERX SBIR.
99	2024-03-12 18:15:24	N/A



100	2024-03-12 18:13:00	We serve multiple commercial customers in various industries, including large corporations. It is just the government we seem to not advance with.
101	2024-03-12 18:10:33	Build new commercial products from lessons learned
102	2024-03-12 18:08:29	Nothing specific in the product space; however, we have strong technology services offering because of our SBIR efforts.
103	2024-03-12 18:06:50	We did receive Phase III awards by the Government, and also received a commercial Phase III (Cubic Corporation) in 2023.
104	2024-03-12 17:54:58	We probably will get a Phase III award. At the same time, we have had success in selling our technology into a number of commercial customers (as well as other branches of the DOD).
105	2024-03-12 17:49:40	We are optimizing complex systems for multiple entities like Amazon and York Space Systems.
106	2024-03-12 17:38:59	Not yet applicable.
107	2024-03-12 17:33:38	Still too early for us, not yet in Phase 2
108	2024-03-12 17:32:52	Please see response #3.
109	2024-03-12 17:29:48	We received a Phase III contract in 2022.
110	2024-03-12 17:17:51	that is the challenge, USG is the largest venture firm. Not receiving a Phase 3 is a death sentence for the technology – attempting to commercialize the product post-Phase 2 and without a Phase 3 leads to why wasn't it picked
111	2024-03-12 17:10:06	We are looking for private investment and investors
112	2024-03-12 17:07:06	We have greatly expanded our commercial footprint over the last year, locking in more than 40% growth year on year already.



(7) Regarding Phase I/II to Phase III transitions, is there anything you would like to address that was not asked?

1	2024-04-08 13:54:27	no
2	2024-04-06 09:39:36	Nope
3	2024-04-04 14:05:27	Please provide guidance on the Phase III application process.
4	2024-03-26 08:46:20	Reemphasizing – an acquisition organization should be in a sponsorship role to help lead an small business through the process. For innovative solutions, I understand there may be a hesitation because a “requirement” is not clearly indicated. This is objection that must be overcome because the innovation burden is already challenging and to expect a small business to innovate, deliver, acquire investment, is already challenge enough. They should received help navigating the complexity of government as a part of the process,
5	2024-03-26 02:38:26	No.
6	2024-03-22 07:38:33	
7	2024-03-22 06:23:59	N/A
8	2024-03-20 13:59:55	n/a
9	2024-03-20 10:44:06	No.
10	2024-03-20 09:31:31	If the Ph I is selected it must connect with a need or requirement so it would be great if AFRL/AFWERX lined up the Customer, End-user and TPOC.
11	2024-03-20 07:16:51	
12	2024-03-20 05:19:59	Just to repeat that the time lag in contract awards creates execution challenges for small businesses. We simply do not have funding to carry a SBIR team on overhead for that duration.
13	2024-03-19 15:41:49	No
14	2024-03-19 12:54:53	
15	2024-03-19 08:59:10	The process is not clear. I still don’t know if a phase III is a sales or contract or further development.
16	2024-03-19 08:47:07	Better opportunities during Phase I for customer discovery and customer matching.
17	2024-03-19 08:24:24	No, thank you for the opportunity to comment.



18	2024-03-19 07:25:57	As stated, Satcom Direct is currently executing against two separate Phase II awards.
19	2024-03-18 12:42:46	
20	2024-03-18 10:48:39	One of the toughest challenges in the SBIR process is accessing potential customers. Obviously, the best way to gain access is through a warm relationship. The issue is that even for well-connected organizations, there is such a high degree of turnover that relationships do not remain fresh. There is no operationalized way for the cyber phase 1 cohorts to get in front of potential end users and customers, despite what could be a perfect fit between defense need and the commercial provider. The dynamic is too “push oriented” from the company side and with a lack of “pull” from the customer side. It feels almost haphazard when there is a connection made unfortunately.
21	2024-03-18 08:21:27	Still figuring out that step.
22	2024-03-18 07:43:43	I would like to see the end-users have contracting/procurement support if they want to purchase the innovation.
23	2024-03-17 09:03:25	
24	2024-03-15 13:15:38	No
25	2024-03-15 11:54:06	N/A
26	2024-03-15 08:00:49	Emphasis on gov to gov interactions and process improvement.
27	2024-03-15 05:01:49	See answer to 5 above.
28	2024-03-14 12:52:00	N/A
29	2024-03-14 11:40:41	
30	2024-03-14 10:23:31	Seems to me that Phase III funding from MAJCOMs / Program Offices should be more closely aligned with successful Phase II projects. This may help the MAJCOMs / Program Offices overcome the perceived risk.
31	2024-03-14 07:57:32	We look forward to making the transition!
32	2024-03-14 07:41:31	A single website that clearly defines QAs related to both Phase II enhancements (STRATFI/TACTI) and Phase III awards as a single source of truth – where questions can be posted and the USG will post responses to appropriate questions. Along with this, provide greater flexibility in how SBIR/STTR programs move forward – specifically with respect to cross-service transitions. We have found that while early expectations of one service (e.g., USAF) as the stakeholders allowed us to secure Phase I/II SBIR funding, the eventual transition



		pathway that made the most sense was through another service (e.g., Army, SOCOM). In these cases, having a clearly documented process on steps that are required would be helpful, again just on a website or some accessible resource.
33	2024-03-14 07:05:31	Phase III transitions have the lowest success rate for a reason. Thank you for allowing this survey to better understand one perspective of why these numbers are so low.
34	2024-03-14 06:33:38	Excited to see great capstones like this!
35	2024-03-14 06:17:52	No
36	2024-03-14 04:02:21	We would like help in introductions to the various government teams to help us present our solutions
37	2024-03-13 18:28:05	n/a
38	2024-03-13 18:15:40	Nothing else to add.
39	2024-03-13 16:09:15	No.
40	2024-03-13 15:00:20	Asking good questions. The hardest thing to address is culture and attitude change. Primes have armies of administrators to push paperwork, startups and SBA's rely on 3rd party contract award winners. I wish the system could be streamlined/taught easier so you didn't need a contracts expert (\$\$) to get past phase I
41	2024-03-13 14:53:36	It would be great if contracting could move more quickly.
42	2024-03-13 14:45:58	See answer to 5 above.
43	2024-03-13 14:18:22	There really is no "active" match making or networking mechanism. If you don't have a veteran on your team you don't even know what you don't know. Pin the tail on the donkey is the closest metaphor I can think of. I am a retired GO and still, looking from the outside in I get frustrated at not only how hard it is but how arbitrary it is.
44	2024-03-13 14:14:28	We always try to address and understand the path to PIII in our initial SBIR kick off meeting. In many cases the DOD side does not really know. TABA seems to be an attempt to address this, but some agencies don't allow it, others pull the funds from the already too low base funding level rather than add more. This really is not a help. Unless a TABA guy is really well connected in the agency, it seems a waste of time to me. A better use of DOD TABA funds would be to use them to pay a DOD SBIR guy inside the funding organization issuing the topic who becomes a DOD-employed TABA guy "working for" the small business. They know the ins and outs of acquisition at their agency better than any outsider ever could. I would also say that although transition has become the primary metric for SBIR success, a topic that does not transition is not necessarily a waste of DOD's money. We



		hand many, in fact most SBIRs not transition, but they did help move technologies in the company on a path to future SBIR transitions. Also another huge benefit to SBIR that I don't see mentioned often is it provides a "non-sales" reason for a SB to contact a LB. I have developed many long and mutually beneficial relationships with LB groups that our SB teamed with on an SBIR PI proposal (even on losing SBIR Phase I proposals). Working this way with the large business team mate on a proposal lets the LB see the SB's capabilities and decide they want to work with the SB. I am trying to say here that maybe the focus on the PIII transition is a useful, easily quantifiable metric, but it misses some important SBIR benefits like SB/LB relationship building that may not show up as PIII money for many years, if at all. At the same time I do like the intention of weeding out those companies that only do SBIR as a profit line. I have had companies at conferences tell me (in the distant past) that they write only SBIR PI proposals with the intention of doing the minimum possible to make max profit on PI, and no insertion of even bidding PII. The transition metric would seem to eventually to useful eliminate those sorts of companies, something I fully agree with.
45	2024-03-13 14:11:06	No. Overall we need a better roadmap, training, and bridge funding into Phase III on the DOD side of things.
46	2024-03-13 14:04:51	I think the important thing to emphasis is the guidance provided that states the government will take all possible steps to award a Phase III after successful Phase II. SBIR/STTR program does not match up well with the traditional PPBE process and without available funding, awarding Phase III contracts is difficult. identifying when government agencies should start planning for a Phase III award along with the required funding to support is going to be key for any company
47	2024-03-13 13:54:12	There should be more clarity around the PIIII transition process, and what a contractor should do to present this information to the sponsor.
48	2024-03-13 13:36:39	Only that transition to a Phase III appears to be limited by the TPOC's networking ability and connections.
49	2024-03-13 13:23:00	
50	2024-03-13 13:14:58	Reiterating that small businesses need more and larger funding opportunities to market to USAF/DAF.
51	2024-03-13 13:08:11	I'm unable to provide an educated response at this point as we have not been able to compete for a Phase III having just closed out our first Phase 1
52	2024-03-13 12:48:54	
53	2024-03-13 12:26:13	
54	2024-03-13 12:11:00	NA



55	2024-03-13 12:00:49	no
56	2024-03-13 11:19:17	We are just finishing a Phase I.
57	2024-03-13 10:57:21	Seems like there is a big gap between phases II and III. Anything that you can do to bridge that gap is appreciated
58	2024-03-13 10:32:23	Yes, how can I participate in the opportunity to go after a Phase III.
59	2024-03-13 10:17:25	No
60	2024-03-13 10:14:40	
61	2024-03-13 10:08:32	
62	2024-03-13 10:04:46	SBIR do not provide any funding to do actual research or product development. Simply create TRL 3 to TRL 5 and TRL 5 to TRL 7 funded projects.
63	2024-03-13 10:04:08	We have won two D2P2s, but our Phase I to Phase II transition was denied. Its hard to reconcile given the commonality of the team and additional expertise we had proposed for the Phase II. Everything considered, we are appreciative for the energy and expertise brought into our team by the USAF contributors. We would not have the quality of product we do today without their input. This feedback is meant to be constructive and helpful so hope that it is received as such.
64	2024-03-13 09:48:02	We worked around this by hiring a consultant who had access to the email global address list, but the biggest hindrance I've seen from working with SBIRs across three companies, and advising the Hacking For Defense course at Stanford for three years now, is the inability to reach out to known stakeholders. I understand there is no easy solution to this problem, as swamping the PEOs with cold emails is a bad solution as well. SSC's Front Door is a good example of a way around that; ensuring other organizations have a similar nexus and that they are well staffed would be a good start.
65	2024-03-13 09:39:56	No
66	2024-03-13 09:33:17	None
67	2024-03-13 09:21:59	Since starting our work with the DOD there have been *many* other folks who've wanted to adapt our solution for their needs. Our Phase II proposals were strong (weaker proposals of ours were accepted previously) but they were rejected. It makes the selection process feel arbitrary, not merit based
68	2024-03-13 09:19:51	
69	2024-03-13 09:17:38	SBIRs MUST come withe PEO oversight and PM support to transition.



70	2024-03-13 09:05:28	The Phase I to Phase II transitions are fairly clear and straightforward. Sometimes they don't happen because of funding or a more successful path was chosen but these are clear and we are provided information.
71	2024-03-13 09:02:34	
72	2024-03-13 09:00:18	<p>It seems that AFWERX judges its success by annual award amounts, not by the number of successful transitions to Phase III and impact on warfighter effectiveness. While this has been fantastic for our company, allowing us to begin development of several new products without seeking outside investment, it seems wasteful of taxpayer money, Program Officer time, and gives the SBIR/STTR program a bad name. There is fundamental a disconnect between the stated purpose of the program and the realities of how funds are granted. If the true goal of <i>every</i> Phase II is to develop a novel, impactful, fieldable product that's served up on a platter and ready for an Air Force procurement contract, then AFWERX has to make some changes. I suggest:</p> <ul style="list-style-type: none"> - Only select companies with proven viable products that require a small amount of time and money to modify for Air Force purposes. This is more of the DIU model--don't even bother applying unless you have a commercial track record with demonstrated market fit and actual customers spending actual money on your products. - If AFWERX wants to select small unproven companies, (like ours) with potentially game-changing tech, they need to spend more money on the Phase II and/or offer more opportunities for Phase II extensions. Baked into the Phase II/II-E needs to be deliberate requirements refinement and help ensuring MILSPEC compliance. - If they want to select companies with <i>partial</i> (software) solutions (like ours), there will NEVER be a Program of Record procurement opportunity at the end of the Phase II. The best I can hope for is for a larger, established integrator to take an interest and buy my software for integration into their PoR offerings. This is a great win-win-win situation for everyone, but the outcome will never be a Phase II-to-Phase III transition for my company! If AFWERX wants to encourage this type of innovation, then the metrics--and effort to achieve those metrics--need to change. AFWERX, AFRL, and AFLCMC need to be more deliberate via OEM introductions and facilitated collaborations so that innovative Phase IIs that result in partial solutions can be integrated into new offerings from larger established defense firms. Maybe this means there should be two types of Phase II with two different measures of success? One can be for established tech that will result in a PoR system, with success defined as a traditional Phase III. The other can be for partial (e.g., software) solutions that will result in a marketable product, with success defined as a paid commercial engagement with an OEM that's developing a PoR system for the USAF.



73	2024-03-13 08:56:55	No
74	2024-03-13 08:52:42	Bring back a handful of companies who successfully made the transition to phase III and let them speak to open call SBIR awardees. From my limited experience, it's the other companies who have successfully done this who can provide the most benefit to folks seeking to replicate the process.
75	2024-03-13 08:36:51	Yes, it would be great to know what the best path to a contract vehicle is and where the supportive contracting people are. Our company has commercialized our Phase I/II technology across multiple service branches, federal agencies and private companies – true “dual use” with significantly more commercialization than SBIR dollars invested (ie, a high ROI). Yet, each time we approach contracting commands for their support in writing a contract vehicle for us, we get told they're too busy. When we think about the number of man-hours spent by contracting professionals across the DOD writing contracts for our company over the last few years, it's appalling (as a taxpayer and a business owner). This is the whole point of contract vehicles, especially since we only have a couple CLINs.
76	2024-03-13 08:18:22	Maybe a formal process of reviewing opportunities for phases 3
77	2024-03-13 08:10:22	My contract KO and Contract Specialist were completely unresponsive for weeks when I reached out to them. I had to email/call multiple people in AFWERX to help get my client support for working through the Phase III process. My client's KO felt like he had minimal support from AFWERX and was navigating an unfamiliar territory alone. I figured AFWERX would prioritize Phase III transition support, and I was very disappointed in the support.
78	2024-03-13 07:52:19	NA
79	2024-03-13 07:52:03	
80	2024-03-13 07:49:44	No.
81	2024-03-13 07:32:57	The process at the end of the phase II SBIR should and a clear path to future funding (Phase III or other) or a response to small business that future funding at this time will not be awarded. We never technically applied for a Phase III nor do we know if one will open. It would be beneficial if the military would assign an expert on the process of getting funding and possible avenues to achieve it based on the system complexity. We spend a lot of time simply trying to find the >Phase II funding mechanism.
82	2024-03-13 07:20:23	STRATFI/TACFI would likely be a better bridge and open opportunities for more companies if the submission window was longer and the administrative lift on the government side wasn't so heavy. The



		large amount of paperwork definitely discourages government personnel involvement.
83	2024-03-13 06:55:29	N/A
84	2024-03-13 06:54:12	No
85	2024-03-13 06:41:32	Small business innovators and their DAF partners are constantly told the importance of innovation and the rebuilding of the American industrial base, the actions of the gatekeepers do not support this message. We have amazing operational partners in the ANG and AFR who have dug deep in helping us to build what is needed and useful to Airmen (our product is actually designed by Airmen for Airmen – the brainchild of a TSgt), but the next step is very difficult.
86	2024-03-13 06:39:02	Thank you.
87	2024-03-13 06:33:27	Obtaining basic information is significantly slower when working with government stakeholders than private industry stakeholders. This seems logical but it also impedes development effectiveness and efficiency.
88	2024-03-13 06:14:23	Not at this time.
89	2024-03-13 05:55:51	Phase II should be a longer, we only had 15 months. When software development and testing are involved, it takes a lot of time, also as I stated we had a lower amount of funding to get cyber security certification.
90	2024-03-13 05:42:15	No.
91	2024-03-13 05:39:24	Is it possible to incentivize matching funds from program offices for Phase IIs? This would help get the transition partners engaged earlier than they currently do (which is just aligning for the STRATFI).
92	2024-03-13 05:28:41	Yes, the contract paperwork we received from AFWERX on this last direct to phase 2 was incorrect. It had wrong instructions on submitting milestone accomplishments and invoices. This caused months of delays in payment for work.
93	2024-03-13 04:17:26	No opportunity for follow on and \$750K for 12 months is not a lot of time.
94	2024-03-13 04:12:12	No
95	2024-03-13 03:21:08	N/a
96	2024-03-12 22:48:48	No
97	2024-03-12 18:45:02	Open topic is great, speed is great. Those allow dual-use startups to succeed. Many great things to say about AFWERX as a program.
98	2024-03-12 18:20:02	Phase III transition is really hard. The biggest improvement the Government could make is to facilitate and maybe even require the



		open communications with real decision makers who can impact transition.
99	2024-03-12 18:15:24	N/A
100	2024-03-12 18:13:00	I would be happy to share ideas on how Phase IIs can better be allocated and addressed in the government as well how to get better support from the operating units.
101	2024-03-12 18:10:33	
102	2024-03-12 18:08:29	No; thanks for the opportunity to respond
103	2024-03-12 18:06:50	Prime Contractors with contracts over \$100M are required to subcontract with a SBIR company. Most contracts are non compliant. The contracting officers should start sending out cure notices. FFRDCs are also required to subcontract with SBIR companies. They too are non compliant. SBIR Data Rights is another area that needs training and awareness The SBA's appeal rights should also be enforced
104	2024-03-12 17:54:58	No.
105	2024-03-12 17:49:40	We need more contracting resources, esp. with knowledge of Phase III, and a way to incentivize the customers to choose Phase III over other paths.
106	2024-03-12 17:38:59	If you have materials, a playbook, or any informal guidance on the Phase III transition ... we will follow any suggestions you can provide. Expect to hear from our team. THANKS!!
107	2024-03-12 17:33:38	The government takes a lot of time in the administrative processing of these awards. For a small company who has identified a willing customer and a government office with a capability need having a 3 month gap between Phase 1 and Phase 2 for no reason other than administrative processing is not ideal. As a former Defense Civilian Program Manager I can tell you there is a lot of room on the contracts processing, administrative award taken. There is a certain amount of risk aversion within acquisition that has lead us to that an AFWERX (among others) is trying to address is but the small business reality of waiting 3 months for a 75k award and then another 3 months (after a PoP of 3 months) for a Phase 2 is a heck of a lot more time then it needs to be.
108	2024-03-12 17:32:52	No
109	2024-03-12 17:29:48	AFWERX could do a better job of identifying the maturity levels of the various Phase I cohort companies. Based on that assessment, AFWERX could help facilitate a Phase III for those companies.
110	2024-03-12 17:17:51	The fundamental problem is the COTR is disconnected from the funding source. The COTR administers the funding from a different line, separate from their organization leading. In other USG efforts



		funding comes from the same organization so the care and oversight is significant because everyone needs to be on board vs. managing a process
111	2024-03-12 17:10:06	The government does not seem to be truly committed to follow through on the concept of the transition from Phase II to Phase III.
112	2024-03-12 17:07:06	I will repeat a previous comment that clear instructions on the transition process would be useful. Presently, no point of contact has been able to tell us clearly what to do in order to transition to a Phase III. We have only gotten vague advice such as “reach out to people at AFCEC and see what they can do.” Presently, it does not appear that transitioning technology is a priority of the program.



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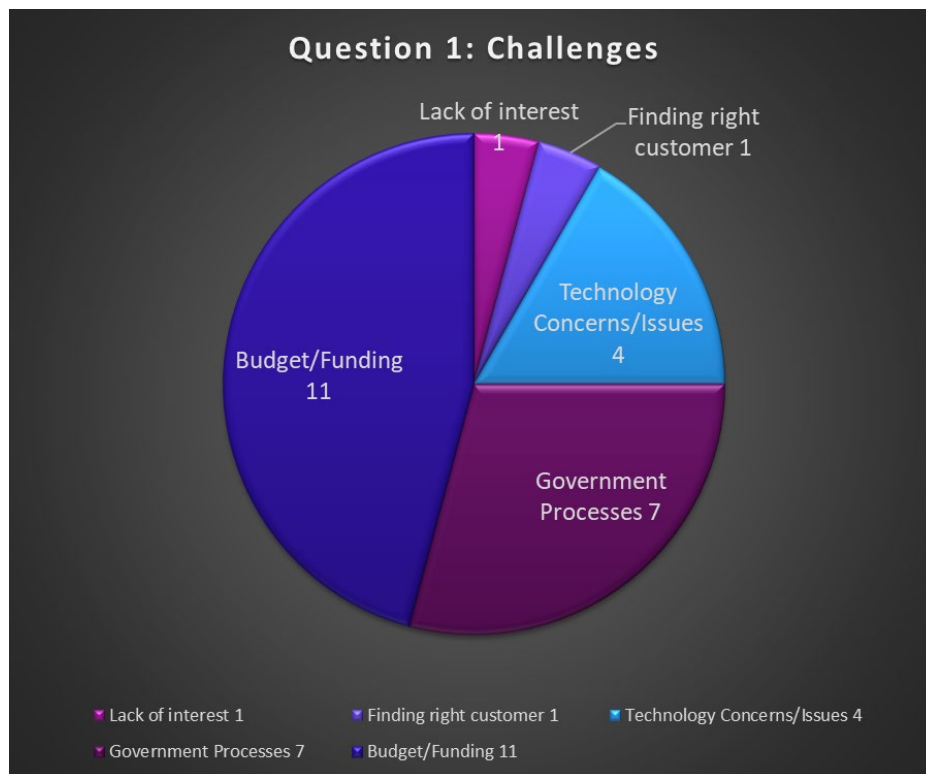


APPENDIX C: PIE CHARTS SUMMARIZING ACQUISITION PROFESSIONAL QUESTIONNAIRE RESPONSES BY QUESTION

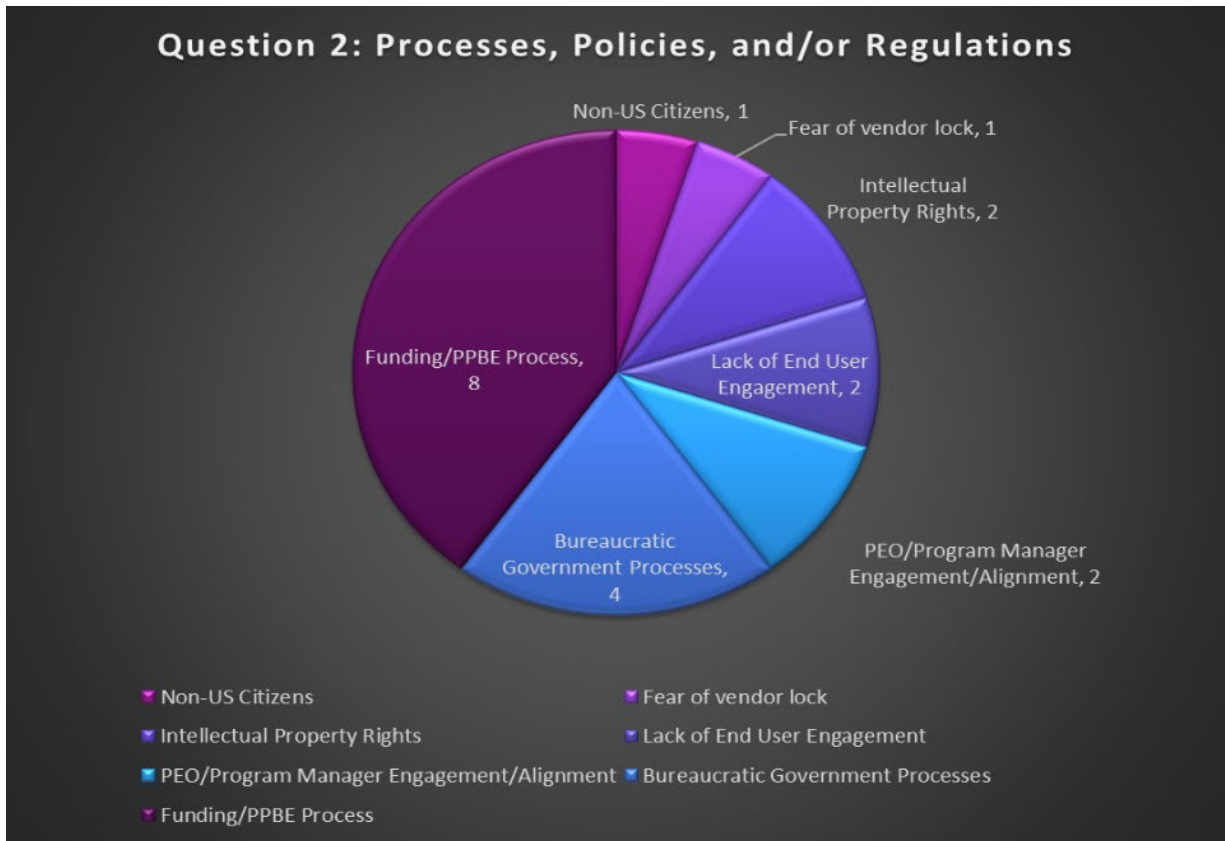
In this appendix, we summarized the acquisition professional questionnaire responses into general categories for ease of viewing. Any responses that were blank, stated “N/A,” or failed to answer the question being asked were omitted from the pie charts.

QUESTIONNAIRE RESPONSES BY QUESTION

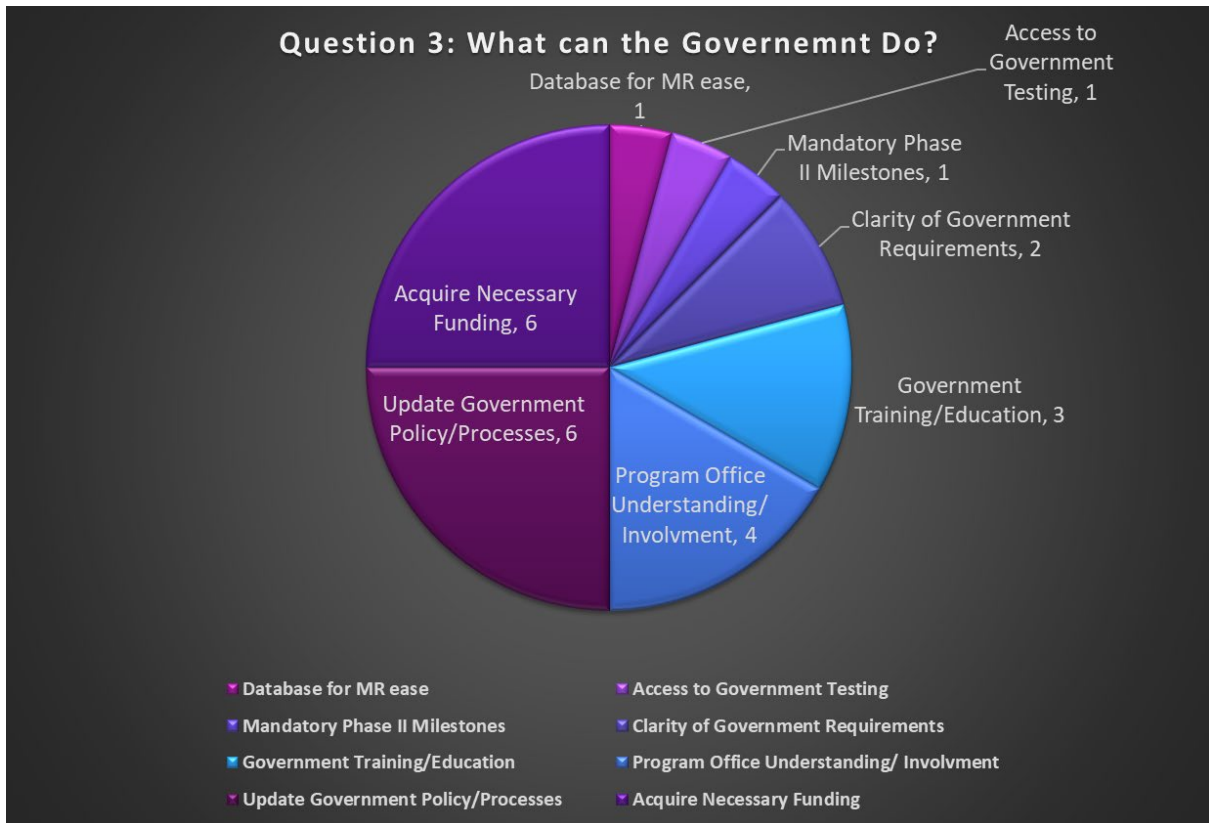
- (1) Describe the government organization’s experience of transitioning to a successful Phase III commercialization award; specifically, what went well and what was challenging?



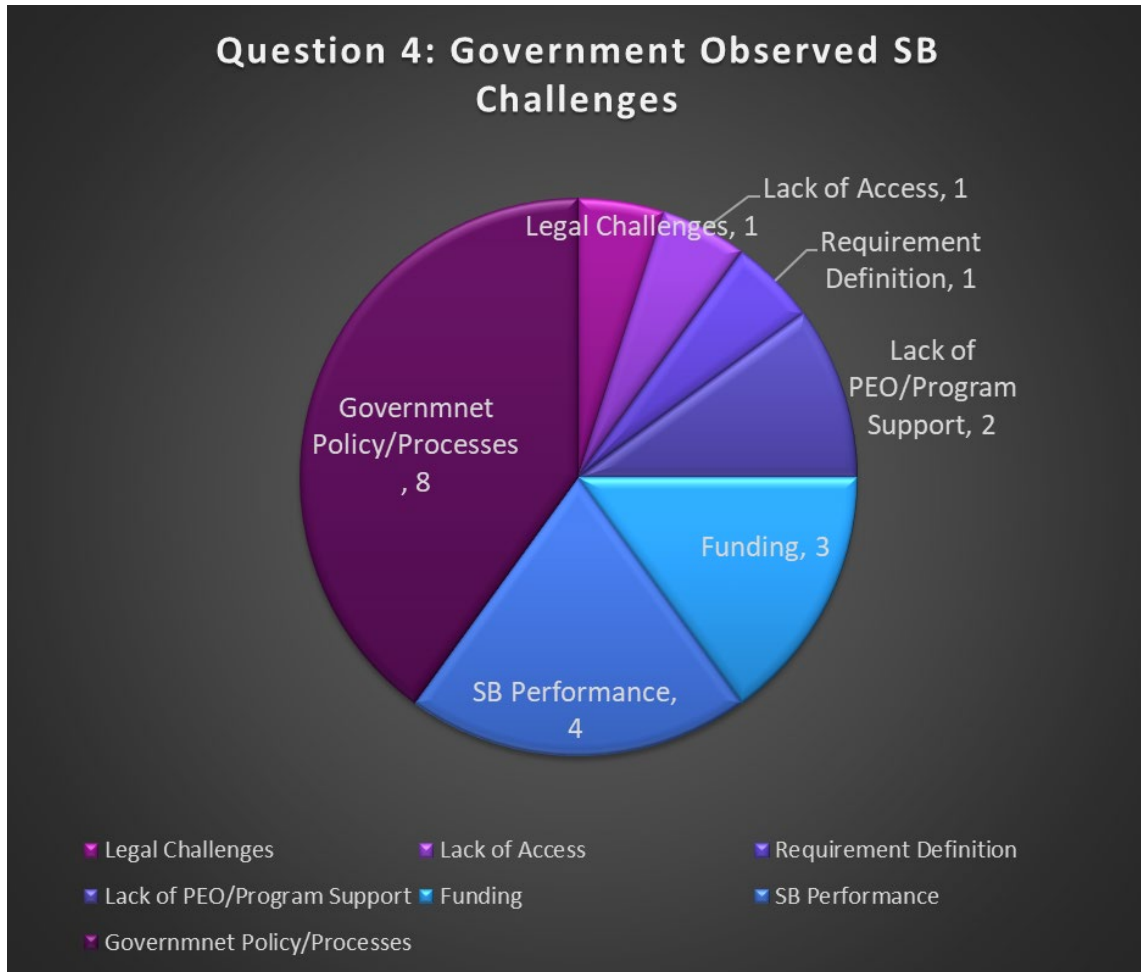
- (2) What government processes, policies and/or regulations influenced the organization to award or fail to award a Phase III contract?



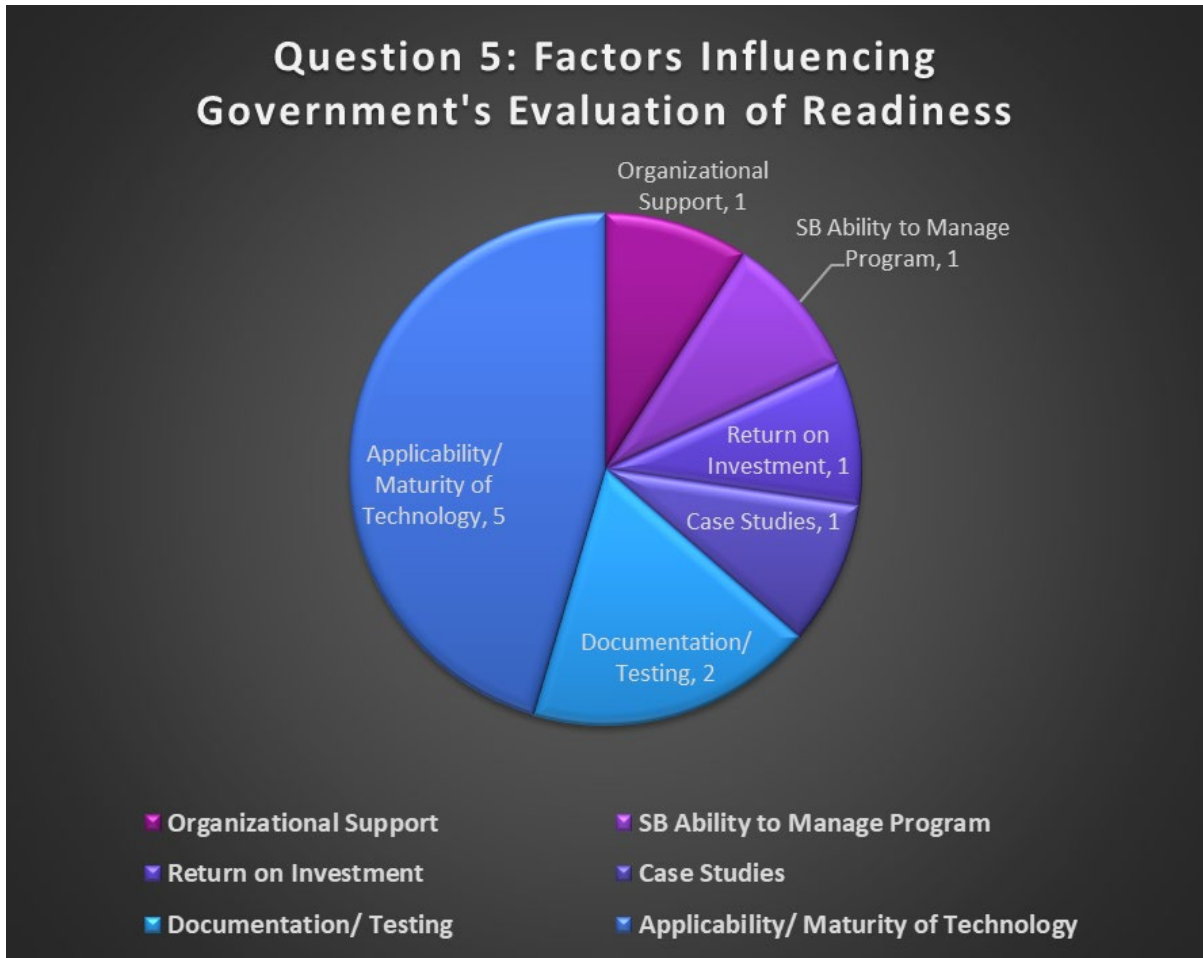
- (3) Describe what the government could do differently to address challenges and difficulties with respect to achieving a successful Phase III award.



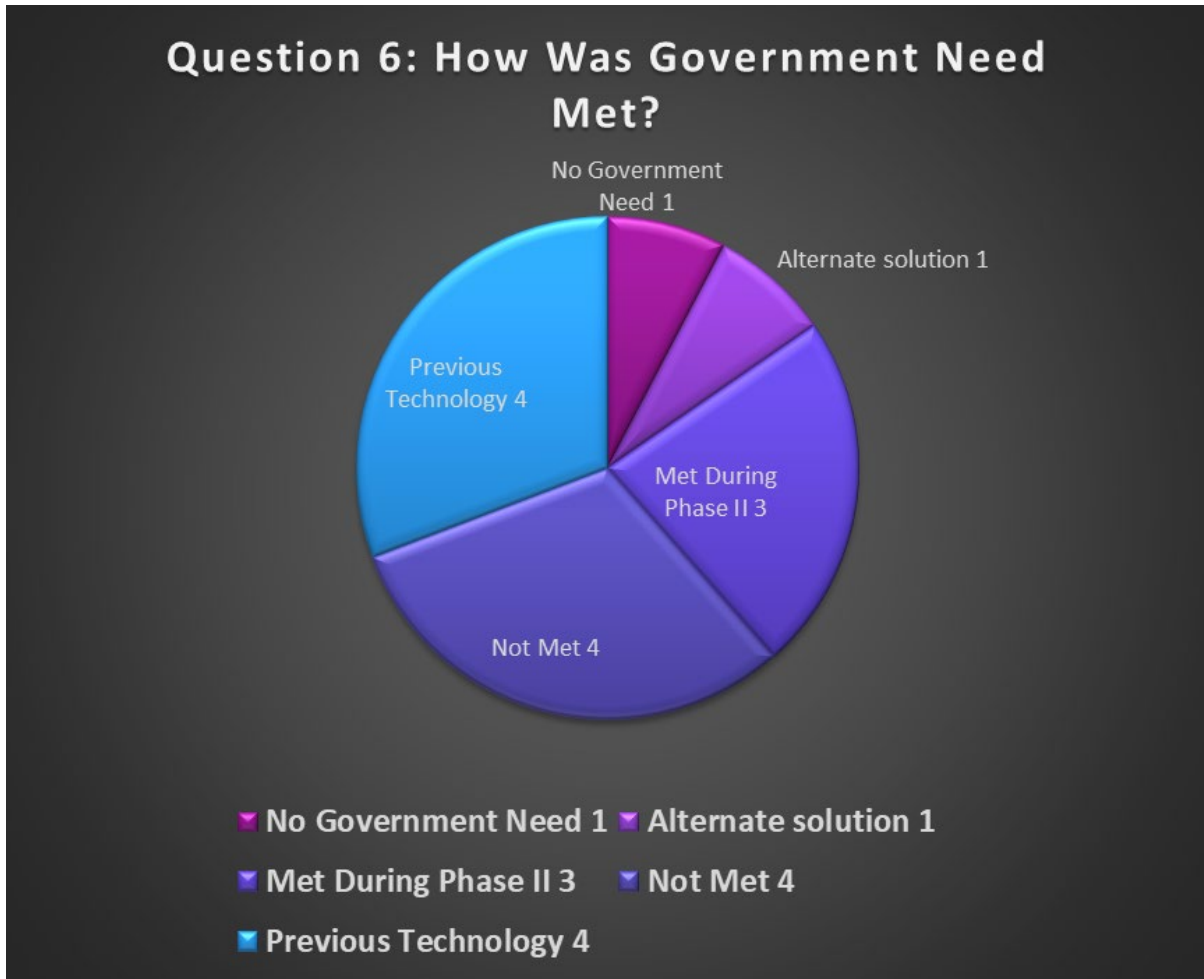
- (4) What challenges or difficulties did the government organization observe with respect to the small business that hindered the transition to a successful Phase III SBIR/STTR award?



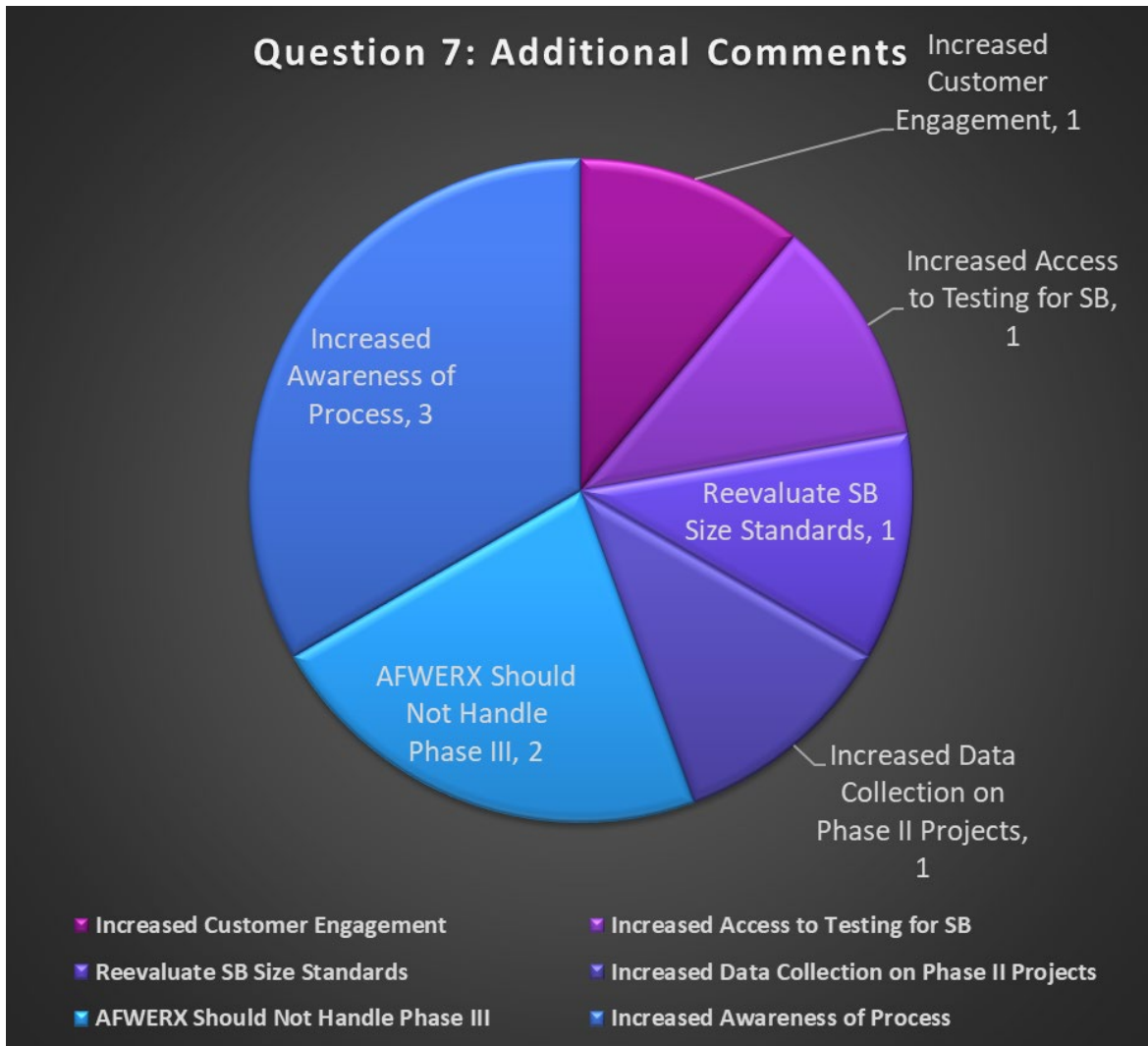
- (5) Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the commercialization needs of the Phase III award.



(6) How were the needs of the government met if a Phase III was not awarded?



(7) Regarding Phase II to Phase III transitions, is there anything that I did not ask that you would like to address?



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APPENDIX D: PIE CHARTS SUMMARIZING SMALL BUSINESS

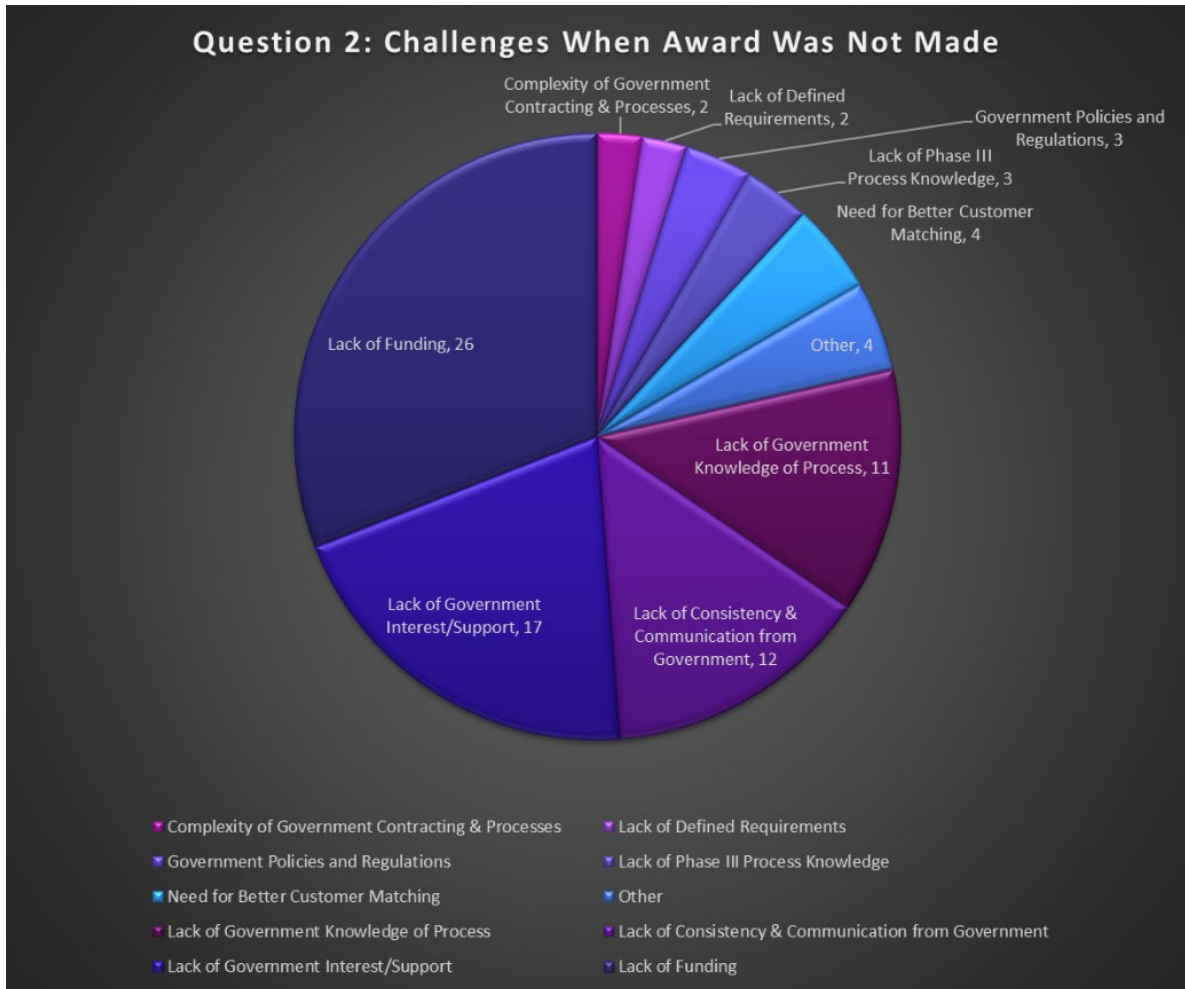
In this appendix, we summarized the small business questionnaire responses into general categories for ease of viewing. Any responses that were blank, stated “N/A,” or failed to answer the question being asked were omitted from the pie charts.

QUESTIONNAIRE RESPONSES BY QUESTION

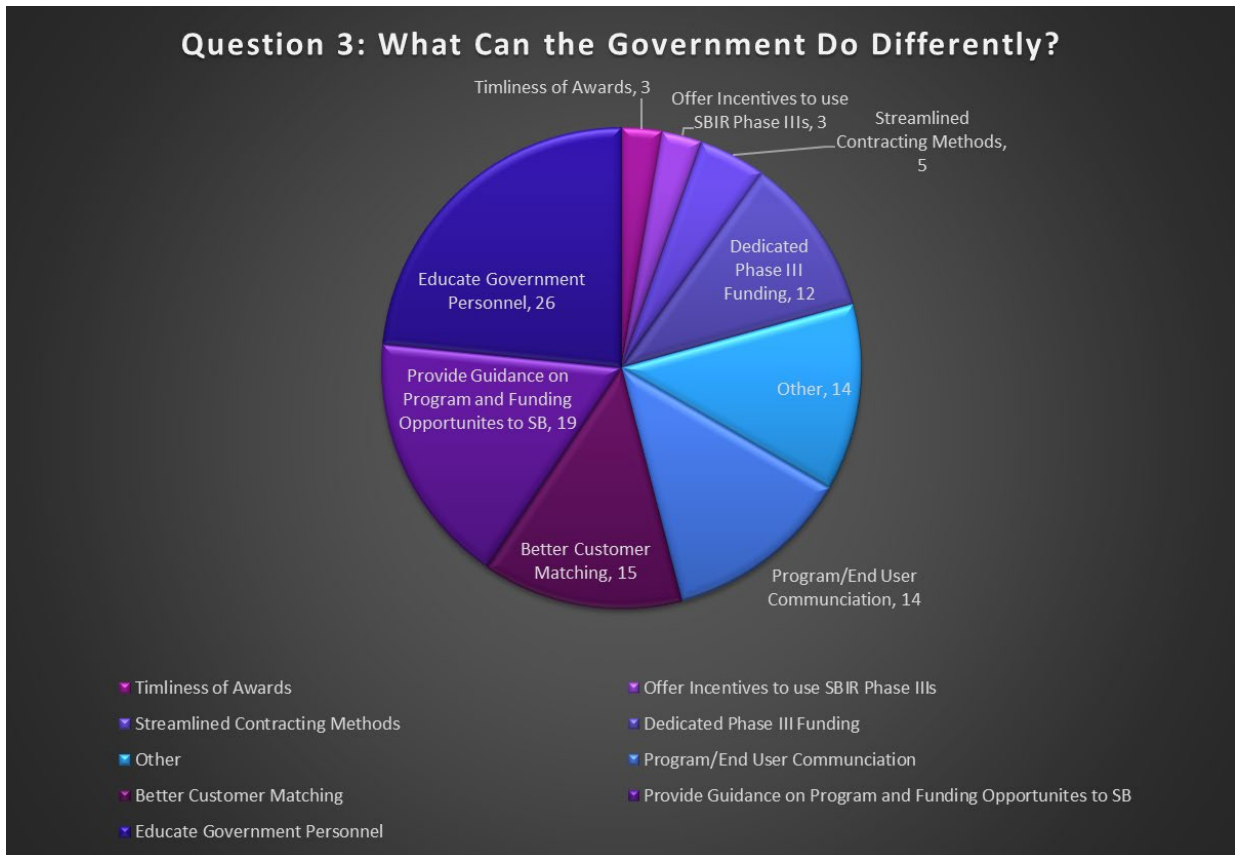
- (1) Describe your firm’s experience of transitioning to a successful Phase III commercialization award; specifically, what went well and what was challenging?



- (2) What government challenges or difficulties in the transition to a Phase III SBIR/STTR process did your firm encounter when an award was not made?



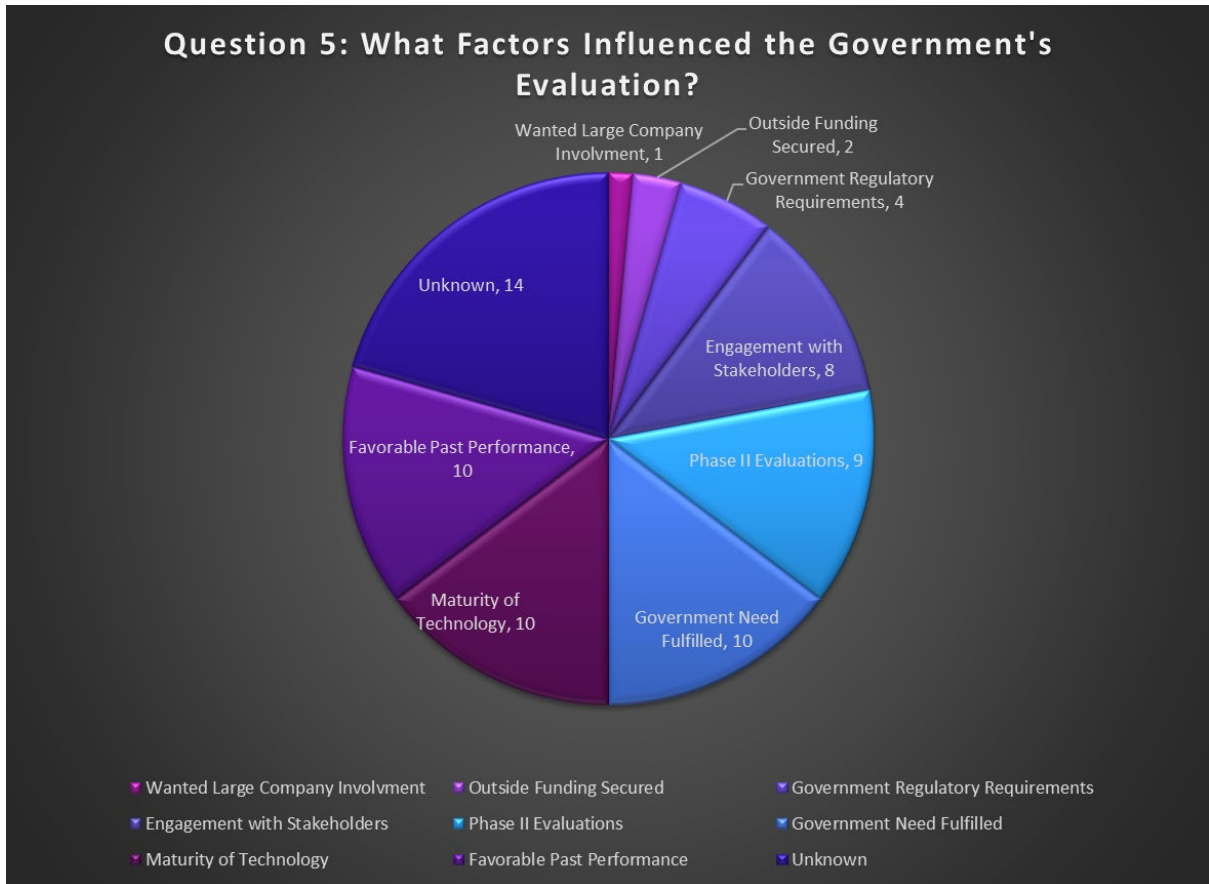
- (3) Describe what the government could do differently to address these challenges and difficulties with respect to achieving a successful Phase III award.



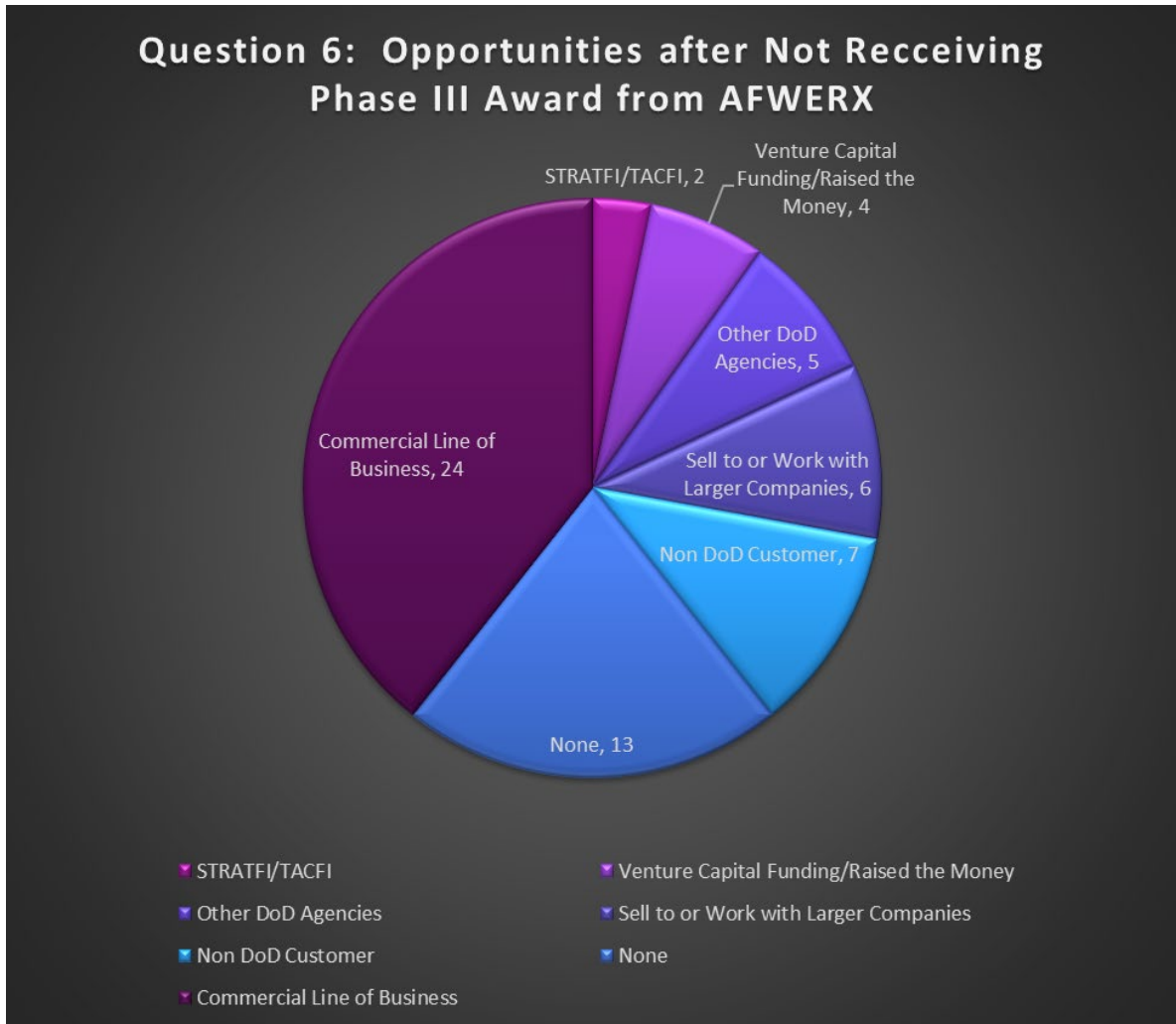
- (4) What challenges or difficulties within your firm hindered the transition to a successful Phase III SBIR/STTR award?



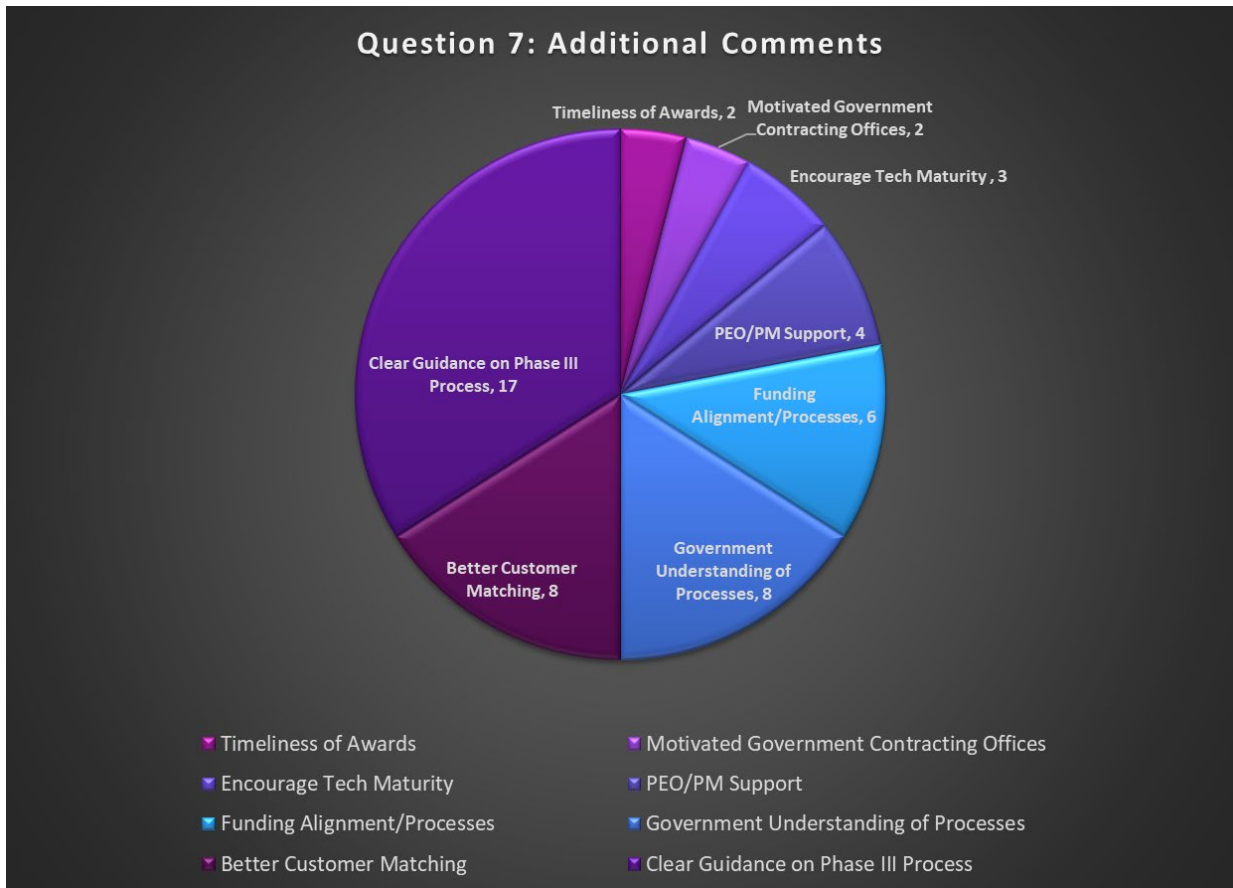
- (5) Describe what factors influenced the government organization's evaluation of the readiness and capabilities of the small business to meet the needs of a Phase III award.



- (6) What commercialization opportunities did your firm successfully execute with all or some of the research outside of the SBIR/STTR program, if you did not receive a Phase III?



(7) Regarding Phase II to Phase III transitions, is there anything that I did not ask that you would like to address?



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LIST OF REFERENCES

- AFWERX. (n.d.-a). *About AFWERX*. Air Force Research Laboratory. Retrieved December 7, 2023, from <https://afwerx.com/about-us/>
- AFWERX. (n.d.-b). *AFVentures*. Air Force Research Laboratory. Retrieved December 1, 2023, from <https://afwerx.com/divisions/afventures/overview/>
- AFWERX. (n.d.-c). *STRATFI/TACFI*. Air Force Research Laboratory. Retrieved May 7, 2024, from <https://afwerx.com/divisions/afventures/stratfi-tacfi/>
- AFWERX. (n.d.-d). *Phase III overview*. Air Force Research Laboratory. Retrieved May 21, 2024, from <https://afwerx.com/divisions/afventures/phase-iii/>
- AFWERX Contracting Division. (2023, October). *Program Management Review (PMR)*, Air Force Research Laboratory.
- Commission on Planning, Programming, Budgeting, and Execution Reform. (2024). *Defense resourcing for the future final report*. <https://ppbereform.senate.gov/finalreport/>
- Department of the Air Force Office of Small Business. (n.d.). *Innovation research & technology transfer programs*. Retrieved December 6, 2023, from <https://www.airforcesmallbiz.af.mil/SBIR-STTR/>
- Gallo, M. E. (2022). *Small business research programs: SBIR and STTR* (CRS Report No. R43695). Congressional Research Service. <https://crsreports.congress.gov/product/pdf/R/R43695>
- Government Accountability Office. (n.d.). *About*. Retrieved December 3, 2023, from <https://www.gao.gov/about>
- Government Accountability Office. (2021). *Small business research programs: Agencies should further improve award timeliness* (GAO-22-104677). <https://www.gao.gov/products/gao-22-104677>
- Government Accountability Office. (2022). *Small business research programs: Air Force had success in some areas with new awards process* (GAO-22-105223). <https://www.gao.gov/products/gao-22-105223>
- Government Accountability Office. (2023). *Small business research programs: Most agencies allow applicants to define needs and propose solutions* (GAO-23-106338). <https://www.gao.gov/products/gao-23-106338>
- Harroch, R. (2019). 15 key questions venture capitalists will ask before investing in your startup. *Forbes*. <https://www.forbes.com/sites/allbusiness/2019/04/13/questions-venture-capitalists-will-ask-before-investing-startups/?sh=6535be3d4c44>



- Hayter, C. S., & Link, A. N. (2022). From discovery to commercialization: Accretive intellectual property strategies among small, knowledge-based firms. *Small Business Economics*, 58(3), 1367–1377. <https://doi.org/10.1007/s11187-021-00446-z>
- Miller, J. (2023, July 6). *New data shines brighter light on merits, impacts of SBIR, STTR programs*. Federal News Network. <https://federalnewsnetwork.com/contractsawards/2023/07/new-data-shines-brighter-light-on-merits-impacts-of-sbir-sttr-programs/>
- Office of Assisted Acquisition Services. (2023). *How GSA is helping to bridge the “valley of death” using small business innovation research (SBIR) to support commercialization*. General Services Administration. https://aas.gsa.gov/assets/pdf_docs/How_GSA_is_Helping_Bridge_the_Valley_of_Death.pdf
- Parts Life, Inc. (2023, April 3). *SBIR success: Conquering the valley of death and fueling mission readiness for the DOD*. <https://www.partslifeinc.com/post/sbir-success-conquering-the-valley-of-death-and-fueling-mission-readiness-for-the-dod>
- Porter, O. S. (2023). *A systemic view to acquiring innovation: How the U.S. Air Force selects and integrates private sector innovation*. ProQuest Dissertations Publishing.
- Rask, T. (2019). *Commercialization analysis of SBIR funded technologies* [Master’s thesis, Air Force Institute of Technology]. AFIT Scholar Theses and Dissertations. <https://scholar.afit.edu/etd/2351>
- Renick, J., & Espinoza, J. (2022, December 1). *A benchmark study of RAPIDX, an Air Force contracting innovation organization* [Master’s thesis, Naval Postgraduate School]. NPS Archive: Calhoun. <https://hdl.handle.net/10945/71587>
- SBIR and STTR Extension Act of 2022, Pub. L. No. 117–183, 136 Stat. 2180 § 7 (2022). <https://www.congress.gov/117/plaws/publ183/PLAW-117publ183.pdf>
- Secretary of the Air Force Public Affairs. (2017, July 21). *Air Force opens doors to universities, small businesses and entrepreneurs to boost innovation*. Air Force. <https://www.af.mil/News/Article-Display/Article/1254932/air-force-opens-doors-to-universities-small-businesses-and-entrepreneurs-to-boo/>
- Sheerin S., Gregory, W., Wells, L., & DeMello, D. (2011, July). *Commercialization of NovaScan- A case-study*. WiSys Foundation Conference, Whitewater, Wisconsin, United States.
- Small Business Administration. (n.d.). *About*. SIBR.gov. Retrieved December 3, 2023, from <https://www.sbir.gov/about>



- Small Business Innovation Research. (2020, March). *Leveraging America's seed fund*. Small Business Administration. https://www.sbir.gov/sites/default/files/SBA_SBIR_Overview_March2020.pdf
- Small Business Technology Council. (2017). *SBIR: Entrepreneur-driven R&D to support American economic revitalization*. [White Paper] <https://sbtc.org/wp-content/uploads/2017/01/SBTC-SBIR-White-Paper-2017.pdf>
- Trevino, A.W. (2024, April 11). *Interim Department of Air Force Federal Acquisition Regulation Supplement (DAFFARS) change – part 5307 – acquisition planning* [Memorandum]. Department of the Air Force https://usaf.dps.mil/sites/AFCC/AQCP/KnowledgeCenter/SitePages/What%27s_New/FY24-057-What%27s-New--Interim-DAFFARS-Change-Part-5307-Acquisition%20Planning.aspx?from=SendByEmail
- U.S. Department of Defense. (2024). *F-35 program achieves milestone C and full rate production*. <https://www.defense.gov/News/Releases/Release/Article/3704808/f-35-program-achieves-milestone-c-and-full-rate-production/>
- Van Norman, G. A., & Eisenkot, R. (2017). Technology transfer: From the research bench to commercialization. *JACC: Basic to Translational Science*, 2(2), 197–208. <https://doi.org/10.1016/j.jacbts.2017.03.004>





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