



# PHASE III DESK REFERENCE



VERSION 2.0

U.S. AIR FORCE  
**SBIR STTR**

*Equipping the Warfighter with Small Business Ingenuity*

# PHASE III DESK REFERENCE QUICK START GUIDE

This Phase III Desk Reference Quick Start Guide will point you to specific areas of interest that make it easy to navigate the Small Business Innovation Research|Small Business Technology Transfer (SBIR|STTR) Phase III process.

## Where do I begin?

- **Refer** to the Using Phase III section to better understand how Program Executive Officers (PEOs), Acquisition Program Managers (PMs), Deputy Program Managers (DPMs) and stakeholders can adopt, mature and transition SBIR|STTR technologies into programs of record and field systems.
- **Seek** to understand the many facets of how to market your Small Business Concern (SBC) to potential investors (refer to the Phase III Commercialization section) through the development of marketing surveys, revenue sources and a business plan.
- **Learn** the value of networking (Phase III Commercialization section.)
- **Turn** to the SBIR|STTR Commercialization Readiness Program (CRP) to seek advice and counsel on the next steps. Detailed information and additional resources can be accessed at <https://www.afsbirsttr.af.mil/Program/CRP-Phase-II/>

## What's in it for me to obtain a Phase III?

Transitioning is essentially taking your product to market, which can open up worlds of financial opportunities. Bringing a viable, mature and unique product to a highly-targeted audience can be a significant growth engine for your business.

## Where can I obtain additional information?

For general questions, please contact [afsbircrp@brtrc.com](mailto:afsbircrp@brtrc.com) or visit <https://www.afsbirsttr.af.mil>.



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## AN UPDATE...

Phase III awards are a powerful tool, giving small businesses a boost in the race toward commercialization and sustained sales while helping acquisition professionals use SBIR|STTR technology to address everything from minor field issues to major program needs. The Air Force SBIR|STTR Program Phase III Desk Reference, first published in 2016, is intended to make it easier for contracting officers and program managers to navigate the Phase III process.

Based on feedback, as well as changes in terminology, several minor updates have been included in this revised version (V2.0).

Once a small business has completed a SBIR Phase I or Phase II, the necessity for competition has been satisfied so procurement requirements for the Air Force and other federal agencies are streamlined.

Phase III involves non-SBIR funding from any source – the Air Force and other Department of Defense/federal agencies, major defense contractors and non-DoD investors – which translates to a small business selling its products in a commercial manner.

Officials from the Commercialization Readiness Program and the Air Force SBIR|STTR Program Management Office hope this guide continues to be a valuable reference in your quest as a business leader or acquisition professional.



U.S. AIR FORCE

# GENERAL INFORMATION

The Department of the Air Force SBIR|STTR Phase III Desk Reference is an overarching guidebook providing guidance on using SBIR|STTR technologies to:

- Implement SBIR|STTR inclusion requirements discussed in Department of Defense Instruction (DoDI) 5000.02
- Realize Better Buying Power 3.0 goals and objectives
- Expand SBIR|STTR transitions as required by the National Defense Authorization Act of 2012

Phase III contracting is an essential Better Buying Power tool. Furthermore, a SBIR Phase III is awarded using non-SBIR|STTR Program funding and allows small businesses to transition their technology developed under SBIR Phase I or Phase II awards to either private sector or government sources.

As an Air Force SBIR|STTR Phase III desk reference, this guidebook focuses on use of SBIR|STTR technology to realize mission cost savings and technology objectives and describes SBIR|STTR inclusion in program planning and management through program life cycles.

For Air Force acquisition and procurement purposes, SBIR|STTR's Phase III recapitalizes Air Force Science and Technology (S&T) investment, provides innovative technology that satisfies competition requirements during Phase I and II and gives the government a royalty-free license to use SBIR|STTR data world-wide.

This Air Force Phase III Desk Reference will support acquisition management compliance with DoDI 5000.02 (DoDI Milestone and Phase Information Requirements illustrated on page 3) regarding SBIR|STTR by describing how and why SBIR|STTR technology products may be contracted or subcontracted, and by citing current and recommended future policies, procedures and references. This guidebook also serves as a reference for all stakeholders who have a vested interest in the transition and/or commercialization of SBIR|STTR developed technologies.



Since enactment in 1982, SBIR|STTR has comprised these **basic principles** that support Air Force acquisition and procurement:

**SBIR | STTR is a key research and development (R&D) program, providing increased competition, technological innovation, affordability and strengthening of the industrial base.**

**Acquisition personnel must give priority consideration to making Phase III awards in accordance with statute and regulations governing SBIR | STTR procedures, which ensure that competition requirements are met.**

**In accordance with Defense Federal Acquisition Regulation Supplement (DFARS) 252.227-7018(b), SBIR | STTR gives the government a royalty-free license to use the SBIR | STTR data world-wide, but cannot disclose the technical data or non-commercial software for five years after completion of the project from which such data were generated without the innovator's permission.**

**Phase III contracting supports maturation of SBIR | STTR technology for integration into acquisition programs throughout their life cycles or into other innovative DoD processes needing innovative technologies.**



# GENERAL INFORMATION

## DoDI MILESTONE AND PHASE INFORMATION REQUIREMENTS

| INFORMATION REQUIREMENT | PROGRAM TYPE ACAT  |      | LIFE-CYCLE EVENT |       |     |      |         |             |       |      | SOURCE | APPROVAL AUTHORITY |             |       |
|-------------------------|--|------|------------------|-------|-----|------|---------|-------------|-------|------|--------|--------------------|-------------|-------|
|                         | MDAP   | MAUS | ACAT             |       | MDO | MS A | CCD Val | Dev RFP Rel | MS B4 | MS C |        |                    | FRP/F D Dev | Other |
|                         |  |      | I                | S III |     |      |         |             |       |      |        |                    |             |       |
|                         |  |      | Notes:           |       |     |      |         |             |       |      |        |                    |             |       |
|                         | <p><b>ACQUISITION STRATEGY, continued</b></p> <ul style="list-style-type: none"> <li><b>GENERAL EQUIPMENT VALUATION</b> STATUTORY: a program description that identifies contract-deliverable military equipment, non-military equipment, and other deliverable items, includes plan(s) to ensure that all deliverable equipment requiring capitalization is timely identified and valued. Only required at Milestone C, updated as necessary for the FRP/FD Decision. The capitalization thresholds are unit costs of or above \$1 million for Air Force and Navy general land assets, and unit costs of or above \$200 thousand for all internal use software and for other equipment assets for all other general and working capital funds. SOURCE(S): 41, 101-576 (Ref. (j)), Statement of Federal Financial Accounting Standards 23 (Ref. (k))</li> <li><b>INDUSTRIAL BASE CAPABILITY CONSIDERATIONS</b> STATUTORY for MDAPs, Regulatory for others. Summarizes the results of the industrial base capabilities analysis. SOURCE(S): 10 U.S.C. 2440 (Ref. (g))</li> <li><b>INTELLECTUAL PROPERTY (IP) STRATEGY</b> STATUTORY for major weapon systems and subsystems; Regulatory for other program types. The IP Strategy must be defined as appropriate to support and account for evolving IP considerations associated with the award and administration of all contracts throughout the system life cycle. Customized part of the Life-Cycle Sustainment Plan (LSCP) during Operations and Support (OS&amp;S). For programs responding to urgent needs, but at the Development Milestone. SOURCE(S): 10 U.S.C. 2320 (Ref. (g)), Para. 6A(x) of Enclosure 2 of this Instruction</li> <li><b>MARKET RESEARCH</b> STATUTORY: A standalone. Regulatory requirement at MDO. STATUTORY updates (as part of the ACQUISITION STRATEGY) required at Milestone A and the Development RFP release point, not required thereafter. Conducted to reduce the application of existing technologies and products, and to understand potential market solutions, technology maturity, and potential sources, to assure maximum performance of small business concerns, and possible strategies to acquire them. For programs responding to urgent needs, included in the Course of Action Approach at the Development Milestone. SOURCE(S): 10 U.S.C. 2377 (Ref. (g)), 15 U.S.C. 644A(x) (Ref. (j)), This Instruction</li> <li><b>SMALL BUSINESS INNOVATION RESEARCH (SBIR)/SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM TECHNOLOGIES</b> STATUTORY: Program managers will establish goals for applying SBIR and STTR technologies in programs of record and incentivize primes to meet those goals. For contracts with a value at or above \$100 million, program managers will establish goals for the transition of Phase III technologies in subcontracting plans and require primes to report the number and dollar amount of Phase III SBIR or STTR contracts. Not required at Milestone B. SOURCE(S): 15 U.S.C. 438 (Ref. (j))</li> <li><b>TERMINATION LIABILITY ESTIMATE</b> STATUTORY: Only for MDAPs. Must be documented in the ACQUISITION STRATEGY for any contract for the development or production of an MDAP for which potential termination liability could reasonably be expected to exceed \$100 million. Updates may therefore be required at other than the marked events. The estimate must include how such termination liability is likely to increase or decrease over the period of performance. The Program Manager must consider the estimate before making recommendations to decisions to enter into or terminate such contracts. SOURCE(S): SEC. 813 (1), 103-278 (Ref. (j))</li> </ul> |      |                  |       |     |      |         |             |       |      |        |                    |             |       |

**SMALL BUSINESS INNOVATION RESEARCH (SBIR)/SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM TECHNOLOGIES:** STATUTORY, Program managers will establish goals for applying SBIR and STTR technologies in programs of record and incentivize primes to meet those goals. For contracts with a value at or above \$100 million, program managers will establish goals for the transition of Phase III technologies in subcontracting plans and require primes to report the number and dollar amount of Phase III SBIR and STTR contracts. Not required at Milestone B. SOURCE(S): 15 U.S.C. 638 (Ref. (j))

This desk reference recommends actions for SBIR|STTR stakeholders to take to be compliant with current legislation, as well as DoD and Air Force specific guidance. These include SBIR|STTR program requirements specific to Phase III awards, such as:

- Requests for Proposals (RFP)
- Broad Agency Announcements (BAAs)
- Other announcements for efforts supporting Air Force acquisition and procurement

It also recommends standard procedures to increase accurate and comprehensive tracking and reporting of Phase III actions, as new legislation and related studies have identified. Throughout this document the use of the word “agencies” or “agency” refers to federal agencies, their government-owned, contractor-operated facilities or federally-funded R&D centers, unless otherwise noted.

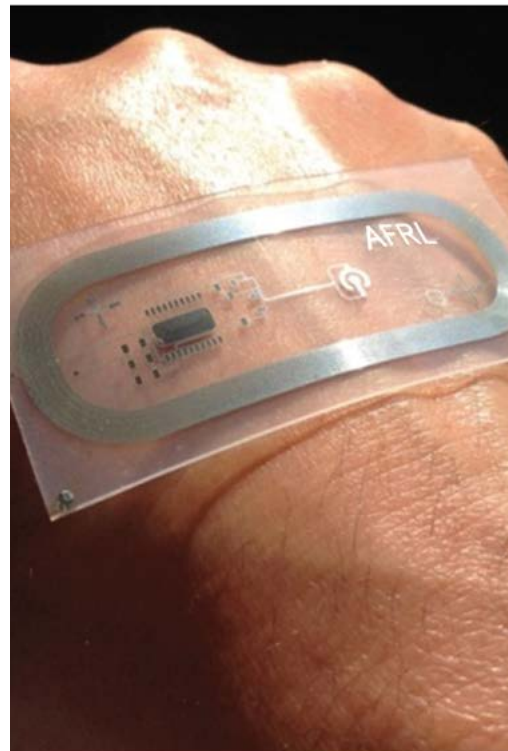
Air Force acquisition stakeholders are highly encouraged to develop an effective SBIR|STTR strategy to achieve mission cost savings and technological innovation objectives, that are consistent with DoD/Air Force directives, Congressional legislation, Small Business Administration (SBA) regulations and required Air Force strategic asset management practices. SBIR|STTR should represent a major component of program planning, development, testing and management processes across the entire life cycle of a program. This SBIR|STTR strategy should describe a business and technical end state for SBIR|STTR products and services.

**The desk reference is organized with the objective of providing information focused on SBIR|STTR Phase III. Although intended primarily for acquisition personnel, this guide will serve as an excellent source for all stakeholders involved with SBIR|STTR Phase III actions.**

# GENERAL INFORMATION

## ACQUISITION PROGRAM MANAGER GUIDELINES

- Adopt, mature and transition SBIR|STTR technologies into their programs of record and fielded systems through direct SBIR|STTR Phase III awards.
- Assure that SBIR|STTR technologies can satisfy topic requirements – either as a prime or sub to a prime – to determine if government furnished equipment (GFE) is a viable strategy.
- Ensure explicit SBIR|STTR requirements are levied upon competitive and sole source contracts to the extent permitted by the SBIR|STTR Reauthorization Act or other legal authority.
- Include SBIR|STTR as part of ongoing program planning processes and acquisition category (ACAT) programs to insert SBIR|STTR technologies at milestone reviews.
- Liaise with both SBIR|STTR awardees and acquisition personnel to support timely transition of SBIR|STTR technologies.
- Perform data rights assessments as part of the overall data management.
- Possess a royalty-free license for use of the SBIR|STTR data world-wide.
- Play an influential role in the Air Force SBIR|STTR program in topic development, technical oversight of Phase I and Phase II projects and planning use of Phase III to anticipate integration of a new technology into a program of record or other programs.
- Provide solutions to form, fit, cost and schedule obstacles confronted in their programs for areas, such as risk reduction, obsolete equipment replacement, technology insertion and to increase competition.
- Subsequently prepare all required procurement documents for delivery to the contracting officer (CO) for acquisition of the technology.
- Conduct historical search strategy by using the context-based search engine at [www.sbir.gov](http://www.sbir.gov) to find prior SBIR|STTR projects adaptable to meet program needs.
- Utilize the Department of Defense (DoD) Open Systems Architecture (OSA) Contract Guidebook, an open systems architecture document that focuses on cost-based incentives for development contracts, which could be adapted to meet SBIR|STTR commercialization goals.



**“The SBIR|STTR journey is full of exciting technological innovations, but the delivery of the product to customers is the ultimate destination and the true measure of success.”**

# OVERVIEW OF THE AIR FORCE SBIR | STTR PROGRAM

The SBIR program was established by Congress in 1982 as a three-phased process, uniform throughout the federal government, of soliciting proposals and awarding funding to small businesses for federal research/ research and development (R/R&D), production, services or any combination of these, to meet agency needs or missions. The STTR program is a sister program to SBIR and was established by Congress in 1992 with a similar statutory purpose. However, a major difference between the two programs is that the STTR program requires the small business to have a research partner consisting of a university, federally funded R&D center or a qualified non-profit research institution.

In 2006, Congress and the DoD piloted the Commercialization Readiness Program (CRP) specifically designed to aid transition between SBIR Phases II and III, as well as insertions of STTR products or processes into major defense acquisition programs. This program was formalized in 2011. In December 2011, the president signed into law the National Defense Authorization Act for Fiscal Year 2012, Public Law 112-81, Section 5001. Division E contains the SBIR|STTR Reauthorization Act, which amends prior legislation as codified in 15 USC §638. The Reauthorization Act directs the Secretary of Defense (SECDEF) and the Secretary of each military department, to identify SBIR and STTR projects for the CRP program that have potential to rapidly transition to Phase III and into the acquisition programs of record and fielded systems. It also contains significant program reforms, including a focus on increased and expanded commercialization of SBIR|STTR technologies and a mandate for the SECDEF to establish SBIR|STTR commercialization goals to include increased numbers of SBIR|STTR contracts and subcontracts (that is, Phase III actions) and increase insertions of SBIR|STTR products and processes into major defense Acquisition programs (MDAPs). The act also requires annual reporting to Congress by participating federal departments and agencies. In September 2018, the John S. McCain National Defense Authorization Act for Fiscal Year 2019, extended the authorization of the SBIR|STTR program through September 30, 2020.

As part of the overall DoD SBIR|STTR program, the Air Force SBIR|STTR program is targeted at addressing the needs and areas of interest to the PEOs. Through this program, the Air Force allots a percentage of its external research, development, test and evaluation research dollars for awards to small businesses, with the goal of stimulating and fostering science and technology (S&T) innovation and increasing commercialization of federal R&D.

The SBIR|STTR program is a highly competitive program that encourages domestic small businesses to engage in federal R/R&D that has the potential for commercialization. Through a competitive award process, the program enables small businesses to explore their technological potential, while providing them incentive to profit from commercialization. By including qualified small businesses in the nation's R&D arena, high-tech innovation is stimulated; thereby increasing competition, productivity and economic growth, helping the Air Force and the United States meet their specific R&D needs.

On a schedule coordinated by the DoD, each year the Air Force releases SBIR and STTR announcements that contain a series of technical topics that describe the areas of interest and needs of the Air Force, with a large percentage of topics coming from PEOs. A "call for topics" is issued approximately six months prior to an announcement's pre-release period, giving program managers (PMs) and their deputy program managers (DPMs) an opportunity to submit candidate topics that address component-level needs for innovative technology solutions.

## Award Phases

### PHASE I

- Feasibility study
- Typically up to \$150K and 9 months

### PHASE II

- Full R&D effort leading to prototype
- Typically up to \$750K initially and 2 years
- Enhancements/extensions possible
- Commercialization/transition assistance if warranted

### PHASE III

- Final development/production
- External (non-SBIR) funding from government or private sources





# OVERVIEW OF THE AIR FORCE SBIR | STTR PROGRAM

Small businesses are invited to submit proposals targeted at one or more of the technical topics listed within the announcement. Following submission of proposals, the Air Force awards SBIR and STTR contracts based on the small business's qualifications, degree of innovation, technical merit and future Phase III market potential for the proposed technology. Time to award from proposal submission is typically six months.

The SBIR|STTR program is structured in three phases:

## PHASE I

A feasibility study is needed to determine the scientific or technical merit of an idea or technology that may provide a solution to Air Force requirements.

- SBIR and STTR Phase I awards are typically nine months, including a three-month reporting period.
- Award amount is typically up to \$150,000.

## PHASE II

Phase II is typically a demonstration phase in which prototypes are built and tested.

- SBIR and STTR Phase IIs are a 27-month effort: 24 months technical performance and 3 months for final reporting. For the Air Force, the initial Phase II award is limited to \$750,000. Depending on success of effort, the firm may receive an extension or enhancement up to an additional \$750,000.
- If awarded, a follow-on Phase II may be funded for up to \$1.5 million. The maximum amount of a Phase I and Phase II effort totals \$3.15 million, as illustrated in the SBIR|STTR Program Award Structure on page 7.

Any changes to award amounts are noted on the Air Force website <https://www.afsbirsttr.af.mil/>

## PHASE III

Phase III efforts include products, services, 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. Although no government SBIR|STTR set-aside funds are involved, Phase III funding can come from the government (e.g., 6.2 or 6.3 mission dollars) and/or private sector. 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, Phase III awards can be made to the company using a non-competitive/sole-source process, since competition requirements were satisfied under Phase I and II.

Air Force SBIR|STTR PMs and DPMs play an influential role in the Air Force SBIR|STTR program in topic development, technical oversight of Phase I and Phase II projects and planning Phase III actions to help integrate a new technology into a Program of Record or other program, as described in Chapter IV. SBIR|STTR project development typically extends over a minimum of three years, as illustrated in the SBIR|STTR Program Award Structure on page 7.

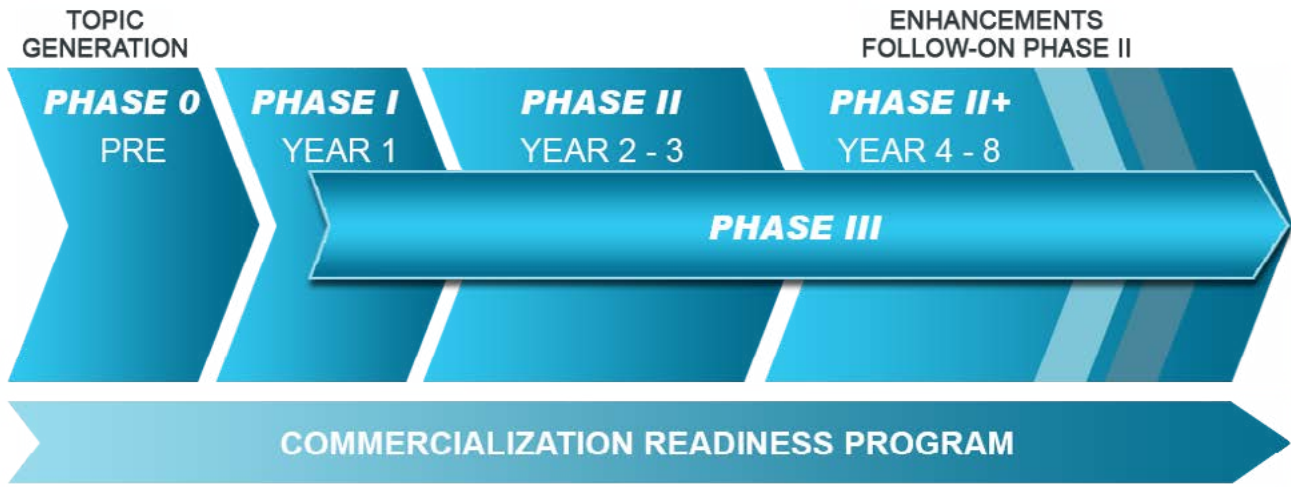


**Phase III purpose:**  
Transition a company's effort into hardware or software products, processes or services that benefit the Air Force community or the private sector.

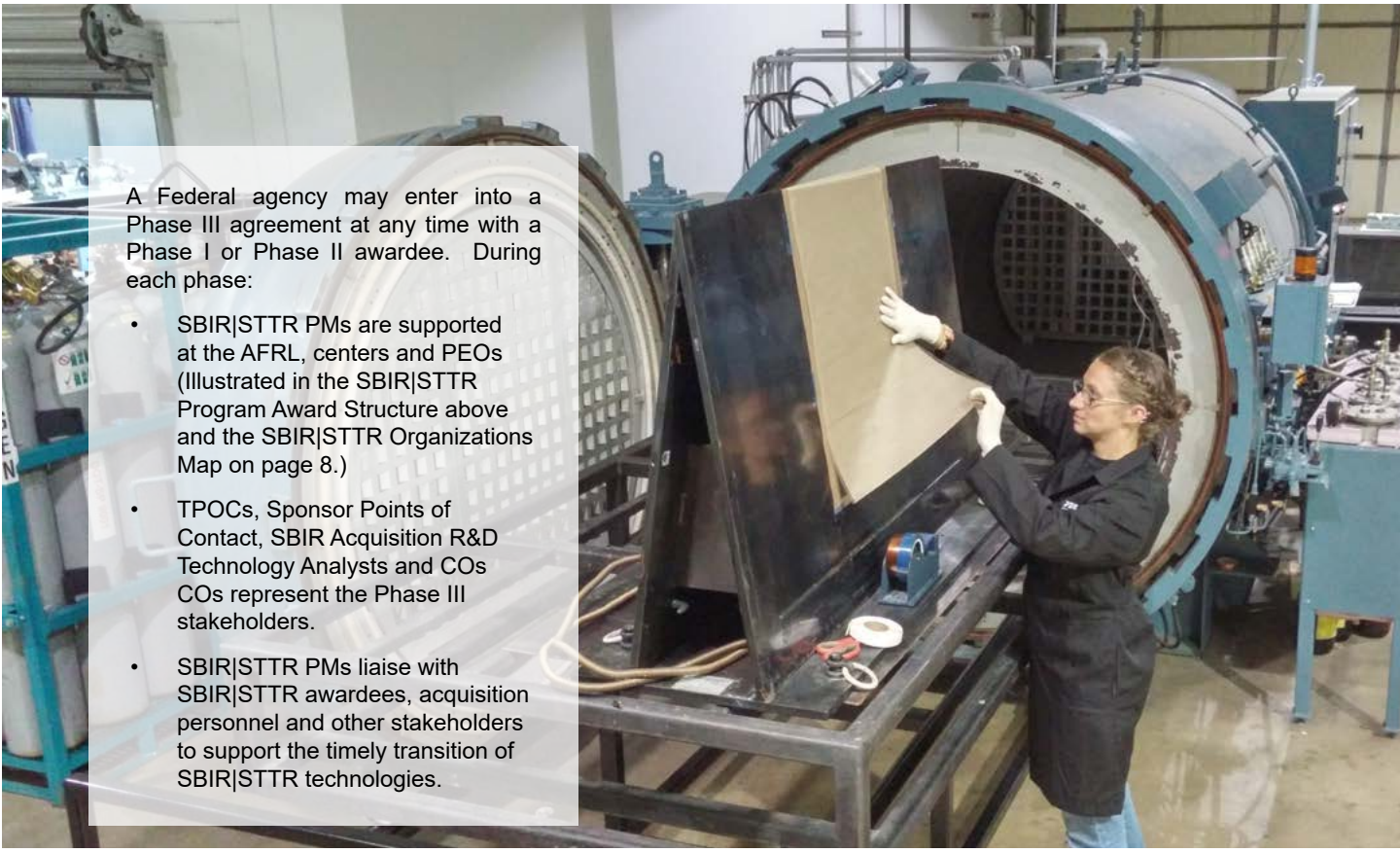


# OVERVIEW OF THE AIR FORCE SBIR|STTR PROGRAM

## SBIR|STTR PROGRAM AWARD STRUCTURE



PROGRAM OVERVIEW

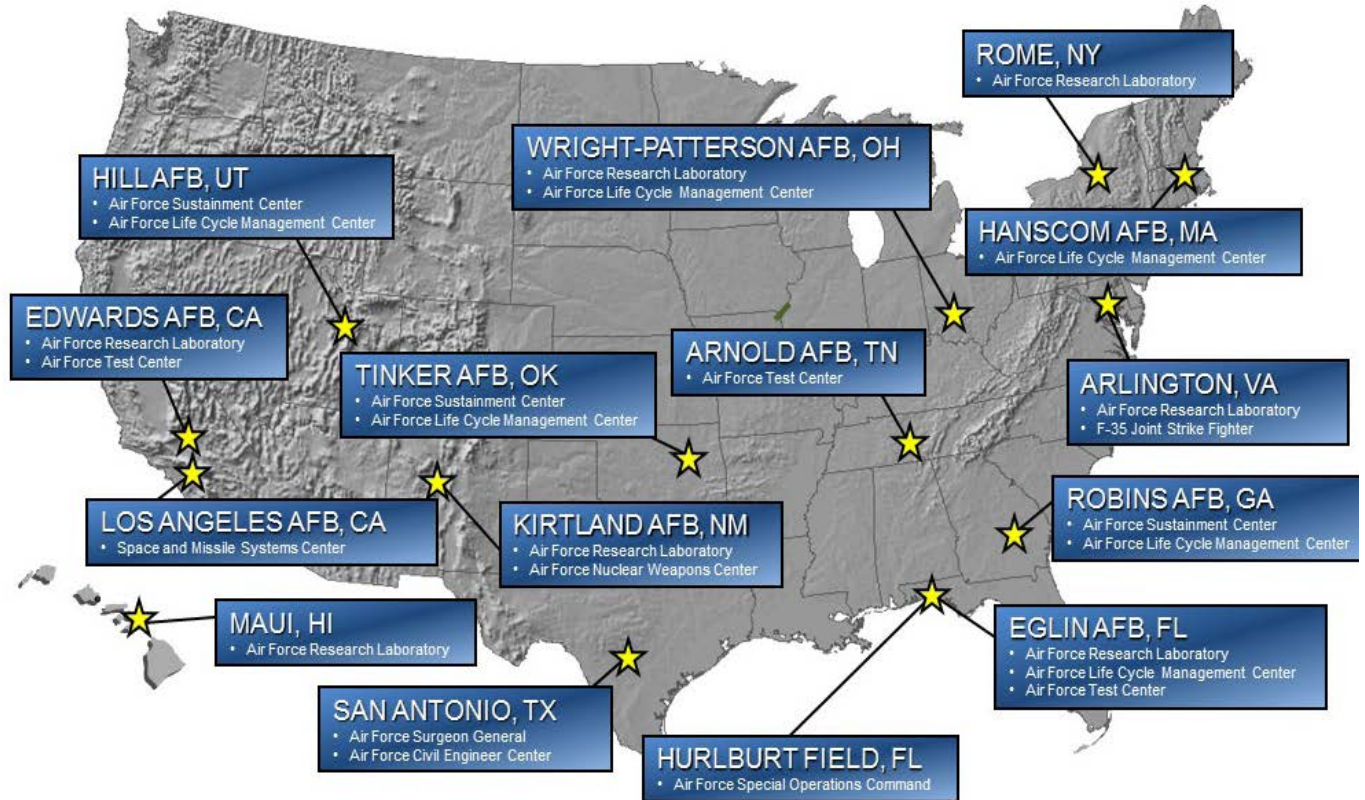


A Federal agency may enter into a Phase III agreement at any time with a Phase I or Phase II awardee. During each phase:

- SBIR|STTR PMs are supported at the AFRL, centers and PEOs (Illustrated in the SBIR|STTR Program Award Structure above and the SBIR|STTR Organizations Map on page 8.)
- TPOCs, Sponsor Points of Contact, SBIR Acquisition R&D Technology Analysts and COs COs represent the Phase III stakeholders.
- SBIR|STTR PMs liaise with SBIR|STTR awardees, acquisition personnel and other stakeholders to support the timely transition of SBIR|STTR technologies.

# OVERVIEW OF THE AIR FORCE SBIR | STTR PROGRAM

## AIR FORCE SBIR | STTR ORGANIZATIONS

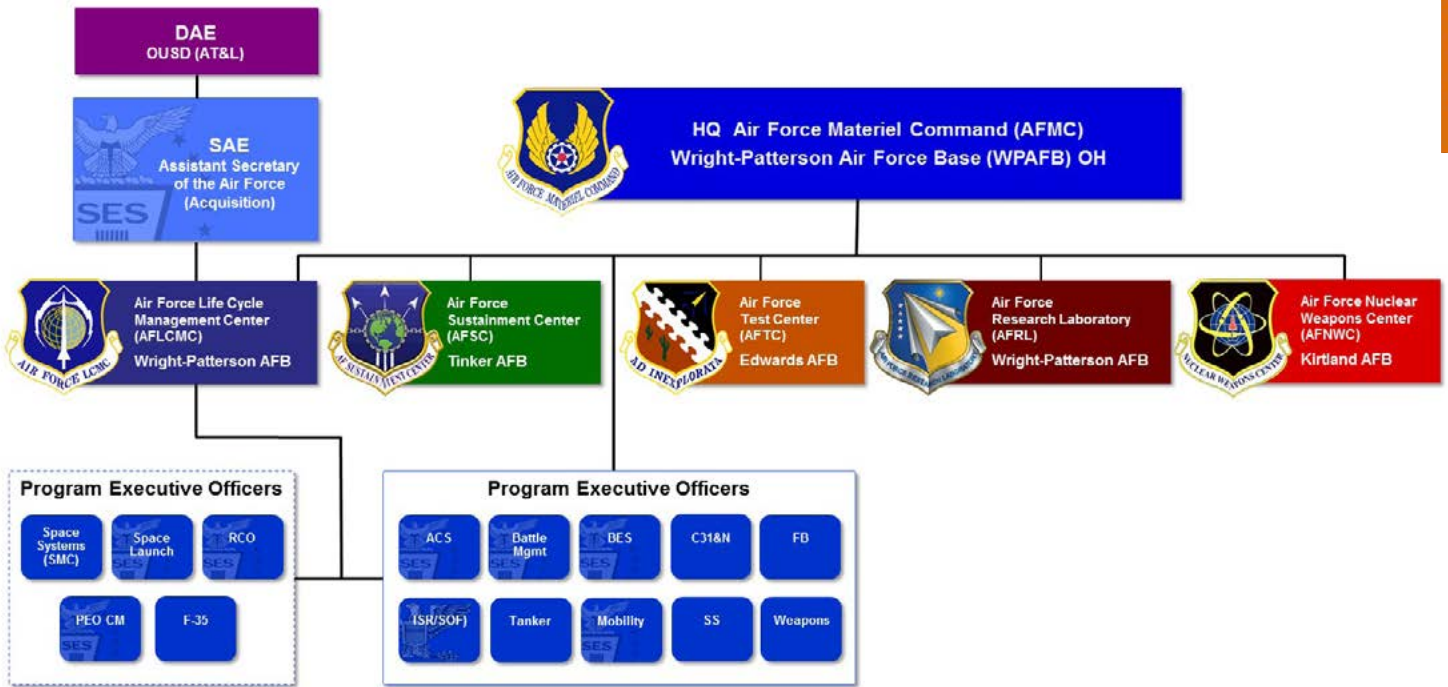




# OVERVIEW OF THE AIR FORCE SBIR | STTR PROGRAM

## AIR FORCE ACQUISITION ORGANIZATIONAL CHART

PROGRAM OVERVIEW



A high-level view for PMs to become familiar with the acquisition organization of the Air Force.





# OVERVIEW OF AIR FORCE SBIR | STTR PHASE III

The Phase III vehicle provides a powerful tool to address key affordability, innovation and other Air Force strategic asset objectives. Phase III, as discussed in the SBIR and STTR Policy Directives, aligns with many Air Force technology transition functions and meets Air Force mission needs, from research and services to production. Importantly, a Phase III contract may be awarded to a firm which has outgrown the small business size standard, to a novated<sup>1</sup> awardee, or to a successor in interest, such as a large company that acquired the small business.

In the Phase III description: "Work that derives from, extends or completes an effort made under prior SBIR|STTR funding agreements..., but is funded by sources other than SBIR|STTR set-aside funding," the following meanings apply:<sup>2</sup>

- "Derives from" is a broad test that refers to work that traces back to SBIR|STTR efforts performed under prior SBIR|STTR funding agreements.
- "Extends" means the work can be for other applications not researched or performed in prior SBIR|STTR efforts.
- "Completes" means commercialization of the prior SBIR|STTR research into a commercial product or application.

## PHASE III BASICS

### A Phase III:

- May look like a regular procurement because it can be funded by procurement, operations and maintenance, construction, research or any other type of agency funds (except SBIR|STTR program funds);
- Can be any type of contract, including a subcontract and may result from competition;
- Must be accorded SBIR data rights, according to the SBA: "A Phase III award is, by its nature, an SBIR award, has SBIR status and must be accorded SBIR data rights";
- Typically oriented toward commercialization of SBIR|STTR technology. The competition for SBIR|STTR Phase I and Phase II awards satisfies any competition requirement of the Competition in Contracting Act.

The SBIR|STTR Reauthorization Act of 2011 states Congress' intent that Phase III awards be made to the SBIR|STTR firms that created the technology so that these small businesses can commercialize it.

*"Federal agencies, to the greatest extent practicable, shall issue Phase III awards to the SBIR|STTR awardee that developed the technology."*

Agencies are required to report to the SBA all instances in which an agency pursues research, development or production of a technology to be developed by an SBIR|STTR awardee, with a business concern or entity other than the one that developed the SBIR|STTR technology.

The Under Secretary of Defense, Acquisition Technology and Logistics (USD)(AT&L) first issued guidance recommending acquisition program use of Phase III in December 2008, with the requirement appearing in DoDI 5000.02 in January 2015.

## Small businesses receive seed funding

A surprising number of small businesses with innovative research and commercially-viable technology have resulted from the SBIR|STTR programs.

Examples of other companies that have received SBIR|STTR initial seed funding:

- *Qualcomm (mobile and microprocessor technologies)*
- *Symantec (anti-virus software)*
- *Intuitive Surgical (DaVinci robot surgical device)*
- *GeoMagic (3-D printing)*
- *Biogen-Idec (life-saving drugs)*
- *Ultra Scan (biometric technology)*



<sup>1</sup> Novation Agreement to Recognize a Successor in Interest to a Government Contract: If a contractor wishes the Government to recognize a successor in interest to a Government contract it may be requested in accordance with Federal Acquisition Regulation (FAR) Subpart 42.12. This Subpart prescribes the policies and procedures for- a. Recognition of a successor in interest to Government contracts when contractor assets are transferred; b. Recognition of a change in a contractor's name; and c. Execution of novation agreements and change-of-name agreements by the responsible contracting officer.

<sup>2</sup> Small Business Administration; SBIR and STTR Policy Directives; February, 2014; Sect 4(c)(4).

# OVERVIEW OF AIR FORCE SBIR | STTR PHASE III

The following types of activities constitute SBIR|STTR Phase III work:

- Commercial application (including testing and evaluation of products, services or technologies for use in technical or weapon systems) of SBIR|STTR-funded R/R&D financed by non-federal sources of capital.
- SBIR|STTR-derived products or services intended for use by the Federal Government, funded by non-SBIR|STTR sources of federal funding.
- Continuation of SBIR|STTR R/R&D that has been competitively selected using peer review or merit-based selection procedures, funded by non-SBIR|STTR federal funding sources.

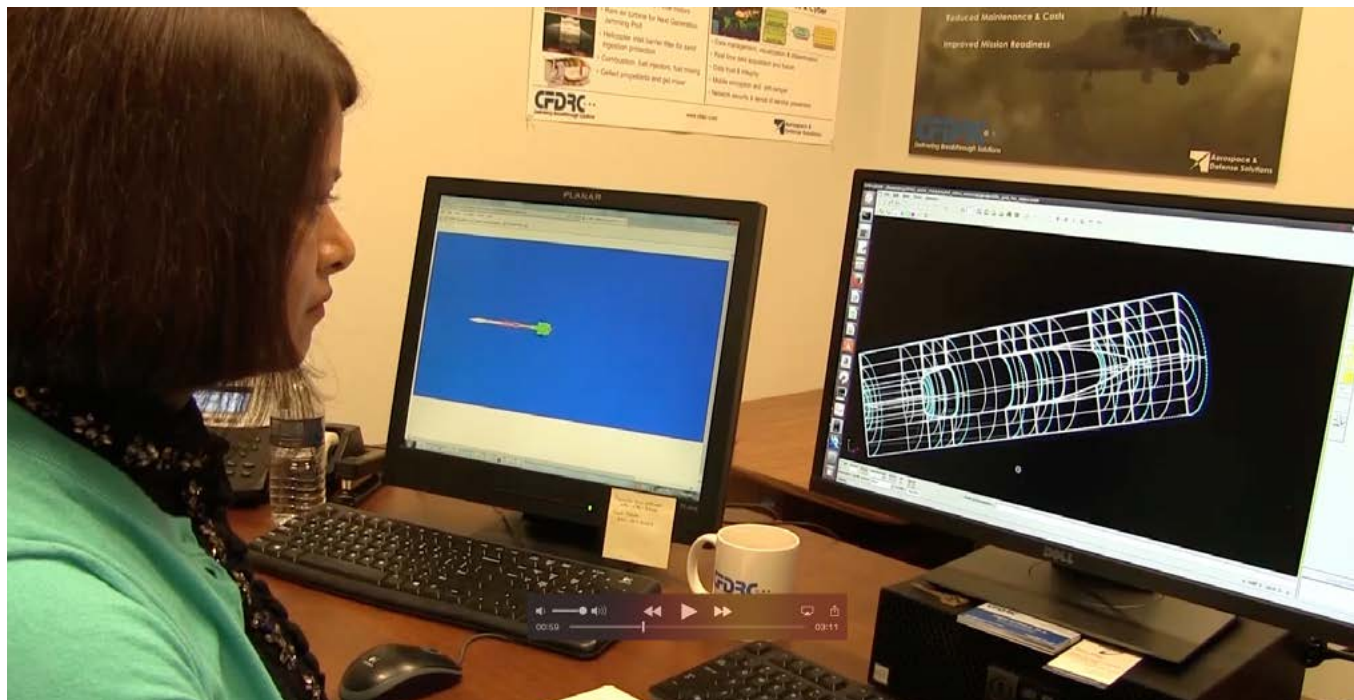
## PHASE III CONTRACTS AND SBIR | STTR DATA RIGHTS

One section of DFARS 252.227-7018 describes the use of an assertions table to specifically identify intellectual property and merits special attention. This clause requires the small business contractor to identify its intellectual property assertions in an attachment to the contract on any technical data or software to be furnished to the government with restrictions on use, release or disclosure. The assertions table identifies the data the contractor or subcontractor will furnish to the government with restrictions, the basis for assertion, the type of rights being asserted and who is making the assertion.

The DoDI 5000.02 (January 7, 2015) requires PMs to establish goals for applying SBIR and STTR technologies in programs of record and incentivize primes to meet those goals. For contracts with a value at or above \$100 million, PMs will establish goals for the transition of Phase III technologies in subcontracting plans and require primes to report the number and dollar amount of Phase III SBIR or STTR contracts. At each milestone, the PM will provide a detailed plan for the use of SBIR|STTR technologies and associated planned funding profile (Phase I, II and III).

To review the relevant phase information requirement in the instruction, see DoDI Milestone and Phase Information Requirements illustrated on page 3. SBIR|STTR data rights convey to Phase III awards, as addressed in detail in the SBIR|STTR Phase III Legislation section.

PHASE III  
OVERVIEW



# USING PHASE III

The DoDI 5000.02 (January 7, 2015) requires PMs to review the relevant phase information requirement in the instruction, (see DoDI Milestone and Phase Information Requirements illustrated on page 3).

## HOW SBIR|STTR AND PHASE III AWARDS BENEFIT PROGRAMS

DoD's policy for acquisition improvement, as stated in the USD AT&L memorandum "Better Buying Power 3.0," is organized into seven focus areas, with four of these focus areas relevant to SBIR|STTR, as summarized below:

- **Achieve Affordable Programs** - SBIR|STTR agility and cost effectiveness enhances the effectiveness of using large businesses established in large ACAT programs, such as the F-35 Joint Strike Fighter, SSN-774 Virginia-class submarine, MQ-8B Fire Scout and in expeditionary energy systems.
- **Incentivize Innovation and Productivity in Industry and Government** - PMs have used new performance baselines achieved by SBIR|STTR technology innovations as examples for prime contractors and their vendors to follow.
- **Promote Effective Competition** - SBIR|STTR firms' ability to serve as reliable second source providers establishes viability of small firms as competitors and improves solution performance.
- **Improve Tradecraft in the Acquisition of Services** - SBIR|STTR firms can create tradecraft-related optimization solutions within all six major areas identified by Dr. Ashton Carter's testimony before the Senate Committee on Armed Services, Sept. 28, 2010:
  - Knowledge
  - Facility
  - Transportation
  - Equipment
  - Medical
  - Electronics and Communications

“Establish goals for applying SBIR and STTR technologies in programs of record.

For contracts with a value at or above \$100 million, PMs will establish a goal for the transition of Phase III technologies in subcontracting plans and report the number and dollar amount of contracts entered into for Phase III SBIR|STTR projects. At each milestone, the PM will provide a detailed plan for the use of SBIR|STTR technologies and an associated planned funding profile (Phase I, II and III).”

— DoDI 5000.02





# USING PHASE III

## Acquisition Program Problems - SBIR|STTR Remedies

From laser-guided smart weapons, to battlefield communication advances and improved aircraft dynamics, Air Force PMs have turned to SBIR|STTR to provide solutions to form, fit, cost and schedule obstacles confronted in their programs, addressing, for example:

- **Risk Reduction** - SBIR|STTR funding can be used to “buy down” risk by using a gated Phase II approach and developing additional sources or approaches to the current funded prime effort.
- **Obsolete Equipment Replacement** - SBIR|STTR can often provide alternate, cheaper innovative solutions to obsolescence than an office of emergency management.
- **Technology Insertion** - SBIR|STTR innovations can improve system or component performance, reduce costs and address smaller-faster-cheaper key performance parameters, known as “KPPs,” and key system attributes, known as “KSAs.”
- **Increase Competition** - SBIR|STTR solutions can motivate mainstream suppliers to match SBIR|STTR performance.

Creativity and breakthrough ideas are the foundation of good research, but solid commercialization at the end of the SBIR|STTR process is still the goal.

USING  
PHASE III



# USING PHASE III

## EXAMPLES OF SUCCESSFUL USE OF SBIR | STTR BENEFITS TO ACQUISITION PROGRAMS

| ISSUE  | SPECIFIC PROBLEM  | SBIR   STTR SOLUTION  | RESULTS  |
|--|---|---|--|
| <b>ADVANCED SATELLITE PROPULSION TECHNOLOGY</b>  | Low power thrusters needed boost  | Xenon Hall thruster developed for electro propulsion systems  | Low power needed to operate and created high specific impulse and high efficiency of satellites  |
| <b>EXTREME TURBULENT AIR FLOW ON PLANE WINGS</b>   | Severe buffeting vibrations of aircrafts  | Control System combats flight aircraft tail vibration   | 50 percent reduction in stress of the aircraft tail structure, while meeting stringent weight and balance requirements   |
| <b>SURFACE TEMPERATURE ISSUES AND COATING OF TURBINE BLADES AND ENGINES</b>                    | Aircraft wings and engine coatings broke down causing frequent repairs and shorter lifecycles   | Innovative Thermal Barrier Coating Imaging System   | Minimized engine and repair costs and helped to avoid catastrophic failures while lengthening lifecycle  |
| <b>BATTLEFIELD COMMUNICATIONS REQUIRED ADVANCED CAPABILITY FOR SMALL TACTICAL COMBAT UNITS</b> | Small tactical combat units using unmanned aerial system communications required battlefield airborne communications node support units | Network of SBIR efforts build airborne network for combat troops  | The compact, secure, trusted, autonomous router software allows small tactical units to support their own operations by significantly increasing their airborne communications coverage area and the number of users supported |
| <b>DETECTION OF CHEMICAL EXPOSURE FOR THE WARFIGHTER</b>                                       | Improved/enhanced methods were needed for detecting poisonous chemicals   | New sensor measures performance and health of jet engines   | Novel sensor is compact, lightweight and rugged and provides real-time, continuous monitoring for a wide range of chemical species   |
| <b>SEEKERS NEEDED FOR NEXT GENERATION LASER-GUIDED SMART WEAPONS</b>                           | Pinpoint accuracy and absolute reliability required for laser-guided smart weapons  | Miniaturization of laser radar seeker results in improved imaging laser radar systems, known as "palm technology" | Revolutionized security and surveillance for ground vehicles, civilian airborne collision avoidance systems  |

To read about the successes of Phase I and Phase II programs, access the SBIR | STTR transition success story library at: <https://www.afsbirsttr.af.mil>



# USING PHASE III

## Summary of SBIR | STTR Benefits to Acquisition Programs

In addition to addressing immediate technology needs of acquisition programs, successful use of SBIR|STTR:

- Responds to the statutory requirements of the DoDI 5000.02 and supports USD AT&L and Air Force emphasis on small firm contributions and use of SBIR|STTR;
- Utilizes the skills of SBIR|STTR firms to build complex components and provide complex solutions for aircrafts resulting in efficiencies of cost, schedule and performance;
- Builds confidence for the PM or DPM to offer SBIR|STTR firms a bigger role throughout an acquisition program's development, operational and obsolescence phases, for efficiencies as noted above;
- Supports government-only use of intellectual property owned by SBIR|STTR awardee, with rights reverting to government after a number of years specified in the SBIR|STTR contract.



## Finding Potential SBIR | STTR Solutions

Most Air Force ACAT I, II and III programs submit proposed SBIR|STTR topics in response to program needs. These topics, if approved for announcement publication and then awarded, are a PM or DPM's first choice for finding potential SBIR|STTR solutions. Also, the SBIR|STTR inventory has thousands of technologies. Examples of Finding Potential SBIR|STTR Solutions with Acquisition Technology (AT&L) Plan Sequence illustrated on page 16 provides areas in which potential SBIR|STTR projects are identified.

The SBIR|STTR  
inventory has  
thousands of  
technologies.

USING  
PHASE III





# USING PHASE III

## EXAMPLES OF FINDING POTENTIAL SBIR | STTR SOLUTIONS WITH AN AT&L PLAN SEQUENCE

| AT&L PLAN SEQUENCE              | SBIR   STTR PROJECT LIST (Y/N) | PROJECT QUAD CHARTS (Y/N) |
|---------------------------------|--------------------------------|---------------------------|
| ANALYSIS OF ALTERNATIVES        |                                |                           |
| ACQUISITION STRATEGY OR PLAN    |                                |                           |
| INITIAL CAPABILITIES DOCUMENT   |                                |                           |
| CAPABILITY DEVELOPMENT DOCUMENT |                                |                           |
| TECH DEVELOPMENT STRATEGY       |                                |                           |
| CORROSION PREVENTION STRATEGY   |                                |                           |
| T&E STRATEGY                    |                                |                           |
| TECHNOLOGY INSERTION PLAN       |                                |                           |
| SYSTEM DESIGN SPEC'S PLAN       |                                |                           |
| T&E EVALUATION MASTER PLAN      |                                |                           |

USING PHASE III



# USING PHASE III

## Incorporating SBIR|STTR Projects in System/Component Technology Roadmaps

Profiling SBIR|STTR projects in technology roadmaps is a practice designed to help ensure program focused maturation and its insertion. SBIR|STTR project reference should minimally include the project topic number, title, firm name, current phase, current contract start and end date, transition-insertion funding/budget/delta data against a timeline, platform system and component and the transition-insertion window for the subject technology.

### Quad Charts as a Tracking Tool

While the DoDI 5000.02 Instruction does not provide plan and funding templates, Air Force SBIR|STTR's CRP uses a quad chart, depicted below that can be adapted to track individual SBIR|STTR projects listed in a technology roadmap.

Find SBIR|STTR projects already developed and adaptable at <https://www.afsbirsttr.af.mil>

USING PHASE III

| SBIR STTR PROJECT TITLE  |  |               |       |      |       |       |       |       |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
|--|--|---------------|-------|------|-------|-------|-------|-------|------|-------|------------------|------|------|------|------|------|------|------|-------|--------------------|------|------|------|------|------|------|------|-------|------------------|-------|------|-------|------|-------|-------|-------|------|
| TOPIC #:   | AWARDED POC:   |               |       |      |       |       |       |       |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| PROPOSED TRANSITION ACTION   | FUNDING – PROPOSED CHANGES   |               |       |      |       |       |       |       |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| <ul style="list-style-type: none"> <li>Detailed description of proposed action<br/>(Examples: Action reduces procurement by X in FY09 and X through FYDP; delays IOC X years; requires sustainment of legacy system costing \$X in FYXX)</li> <li>Should include stakeholder position<br/>(concur/non-concur and why)</li> </ul> | <ul style="list-style-type: none"> <li>Cost to complete: \$XXM/QTY to complete:                             <table border="1" style="margin: 10px 0;"> <thead> <tr> <th>(TYSM) - RDTE</th> <th>FY09</th> <th>FY10</th> <th>FY11</th> <th>FY12</th> <th>FY13</th> <th>FY14</th> <th>FY15</th> <th>FYDPT</th> </tr> </thead> <tbody> <tr> <td>BES09 Investment</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>300.0</td> </tr> <tr> <td>Revised Investment</td> <td>45.0</td> <td>80.0</td> <td>45.0</td> <td>60.0</td> <td>45.0</td> <td>45.0</td> <td>45.0</td> <td>320.0</td> </tr> <tr> <td>Proposed Savings</td> <td>(5.0)</td> <td>30.0</td> <td>(5.0)</td> <td>10.0</td> <td>(5.0)</td> <td>(5.0)</td> <td>(5.0)</td> <td>20.0</td> </tr> </tbody> </table> </li> <li>XX (for proc. programs)</li> <li>Investment to date: \$XXM – Entire program funding from budget currently in execution and all prior program years</li> </ul> | (TYSM) - RDTE | FY09  | FY10 | FY11  | FY12  | FY13  | FY14  | FY15 | FYDPT | BES09 Investment | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 300.0 | Revised Investment | 45.0 | 80.0 | 45.0 | 60.0 | 45.0 | 45.0 | 45.0 | 320.0 | Proposed Savings | (5.0) | 30.0 | (5.0) | 10.0 | (5.0) | (5.0) | (5.0) | 20.0 |
| (TYSM) - RDTE  | FY09   | FY10          | FY11  | FY12 | FY13  | FY14  | FY15  | FYDPT |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| BES09 Investment   | 50.0   | 50.0          | 50.0  | 50.0 | 50.0  | 50.0  | 50.0  | 300.0 |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| Revised Investment   | 45.0   | 80.0          | 45.0  | 60.0 | 45.0  | 45.0  | 45.0  | 320.0 |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| Proposed Savings   | (5.0)  | 30.0          | (5.0) | 10.0 | (5.0) | (5.0) | (5.0) | 20.0  |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| PROJECT DESCRIPTION  | PROS/CONS  |               |       |      |       |       |       |       |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |
| <ul style="list-style-type: none"> <li>Description of technology deliverable</li> <li>Requirement</li> <li>Air Force Sponsor</li> <li>Technical Sponsor</li> <li>Technology Warrant Holder</li> </ul>  | <ul style="list-style-type: none"> <li>Risk                             <ul style="list-style-type: none"> <li>Technical</li> <li>Schedule</li> <li>Cost</li> <li>Business Capability</li> <li>Acquisition</li> </ul> </li> <li>Warfighting Impact</li> <li>Pros                             <ul style="list-style-type: none"> <li>Pro 1 (Business related: preserves VYP, maintains MSR, etc.)</li> </ul> </li> <li>Cons                             <ul style="list-style-type: none"> <li>Con 1 (Business related: violates MSR, increased unit cost etc.)</li> </ul> </li> </ul>  |               |       |      |       |       |       |       |      |       |                  |      |      |      |      |      |      |      |       |                    |      |      |      |      |      |      |      |       |                  |       |      |       |      |       |       |       |      |

# USING PHASE III

## Developing a PEO Operating Instruction

A high-level method of ensuring the insertion of SBIR|STTR technologies into an acquisition program is to develop a PEO operating instruction that describes the details of such insertion.

## Enabling SBIR | STTR Transition Managers

Increasingly, PEOs are benefiting from SBIR|STTR transition managers tasked with fully documenting project transition and assisting development and execution of project transition plans. SBIR|STTR PMs should be consulted about funding alternatives to support appointment of transition managers at PEO and ACAT program management office (PMO) levels.

## Reporting

The SBIR|STTR statute not only requires technology transition goal-setting, but also requires annual, special SECDEF reporting of Phase III contracting, as well as subcontracting to SBIR|STTR firms and a description of incentives used to accomplish such subcontracting. The Office of the Secretary of Defense (OSD) Office of Small Business Programs (OSBP) is responsible for development and execution of new reporting protocols.

## COLLABORATION – KEYS TO PHASE III SUCCESS

### Making SBIR | STTR Phase III Awards – the Phase III Package

When a SBIR|STTR technology has been identified for use in addressing a component or system-level need, but the technology requires further development and testing through mission-funding, the PM or DPM can prepare a Phase III package.

**Does Phase III mean:**

More development?

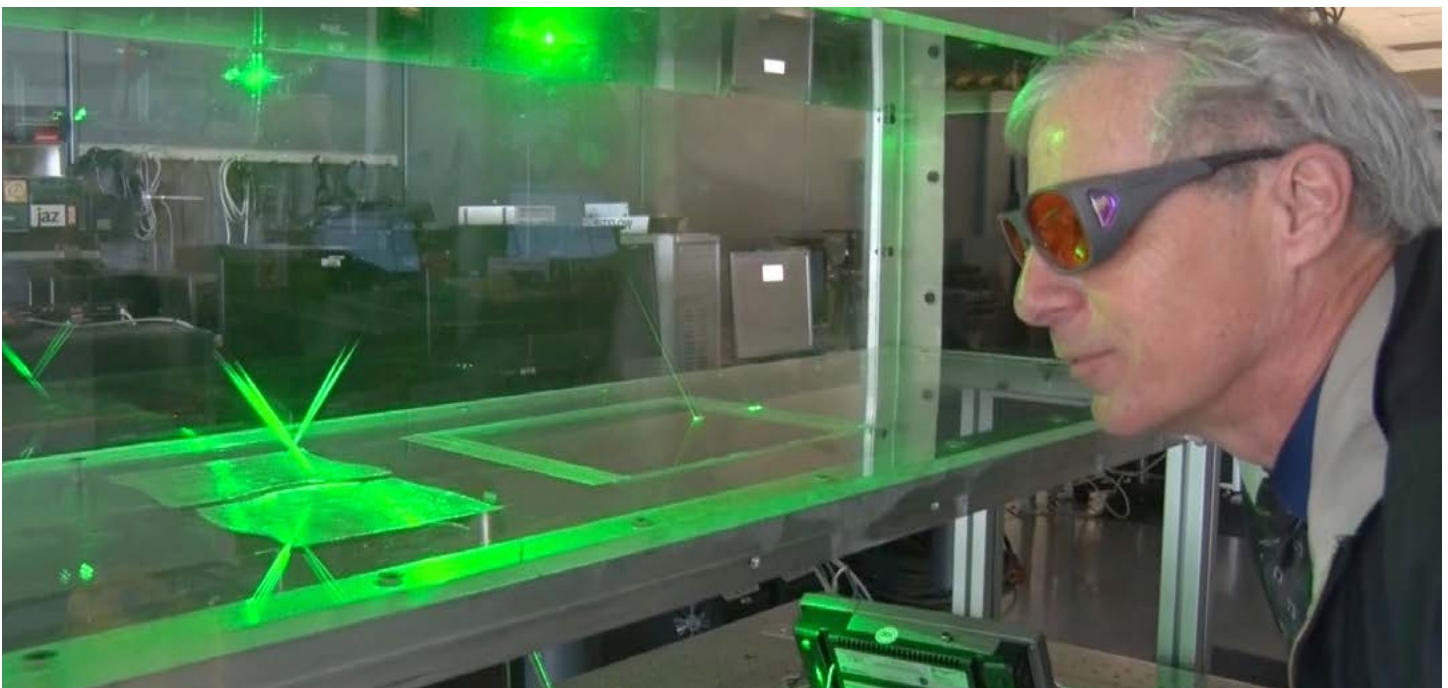
Testing and evaluation?

Configuring for manufacturing?

Actually producing the product?

Maintaining and servicing installed products?

**The answer is YES to all of the above.**





# USING PHASE III

## A Phase III Package includes:

- A brief rationale that this program product or process to be procured is, in fact, a SBIR|STTR. Explain how this is an extension of, or derivation from prior SBIR|STTR efforts, and the context of how – as a Phase III – it will be applied in the program.
- A draft single acquisition management plan (SAMP), or acquisition plan (AP) revision, that adds this SBIR|STTR Phase III to the current program document and once approved, authorizes the actual Phase III procurement. The SAMP/ AP would authorize a Phase III and define the contract type anticipated.

Once a PM or DPM's dialogue with COs on the Phase III package is successfully concluded with SBC concurrence, then a procurement request, like any other contract, is prepared by the PM or DPM and submitted to the CO for contracting.

## Government Furnished Equipment (GFE) and Government Furnished Information (GFI)

GFE and GFI, or use of government facilities, are handled like any other contract. The Air Force includes what GFE/GFI/facilities are expected to be provided and needed in an RFP. When an offeror responds to an RFP's GFE/GFI content, it will agree or modify what it needs in its response.

## How to Get a Prime Contractor to Engage SBIR | STTR Firms

While a PM or DPM may choose to use the Phase III option to contract directly with an SBIR|STTR awardee, PMs, DPMs and COs should also encourage their prime contractor and its supply chain vendors to subcontract with SBIR|STTR firms. Increased subcontracting to small businesses and SBIR|STTR firms is required in various official documents. This includes the DoDI 5000.02, SBIR|STTR Reauthorization Act, memos in the USD AT&L "Better Buying Power 3.0" series and dedicated sections in the FY13 National Defense Authorization Act.



Requests for Proposals (RFPs) with their required small business subcontracting plans, present a **unique opportunity** to build SBIR|STTR projects into a program of record or other Air Force programs from the outset.

While the contracting community exercises authority over RFP drafting, acquisition management should be familiar with the practices of **SBIR|STTR inclusion.**

See the Phase III Incentives section.

# SBIR | STTR PHASE III LEGISLATION

## REQUIREMENTS AND AUTHORITIES

### SBIR | STTR Reauthorization Act

The following sections provide SBIR|STTR Reauthorization Act<sup>3</sup> benefits:

- **Section 5108(4)** establishes special acquisition preference for SBIR|STTR, requiring federal agencies and federal prime contractors to issue Phase III awards to appropriate SBIR|STTR awardees “to the greatest extent practicable.”
- **Section 5122** requires DoD to use or create incentives to meet the goal of increasing the number of Phase III awards and to report annually to the SBA on use of specific incentives and their effective impact.
- **Section 5125** states that Phase III commercialization shall go toward production and delivery of products or services for sale to or use by federal agencies.
- **Section 5138** requires DoD to report Phase III data annually to the SBA.

### USD AT&L Memo “Implementation Directive for Better Buying Power 3.0” (April 24, 2013)

The Better Buying Power Initiative requires component acquisition executives to apply incentives in contracts over \$100 million to meet goals in transitioning SBIR|STTR technology plans.

### Recommended Response Strategy and Actions

Generally, five actions are considered in responding to the Better Buying Power requirements:

- Ensure explicit SBIR|STTR requirements are levied upon competitive and sole source contracts to the extent permitted by the SBIR|STTR Reauthorization Act or other legal authority. Make sure AP and SAMP officials are inclusive of SBIR contracts.
- Ask if there are SBIR|STTR technologies that can satisfy this requirement – either as a prime or sub to a prime – and ask whether or not GFE is a viable strategy.
- Develop a method to count the number and value of SBIR|STTR Phase III contracts or agree that the PEO or acquisition program office will do so.
- Coordinate with SBC professionals to ensure allocated goals are satisfied.
- Ensure that any SBIR-|STTR-related clauses inserted into a contract are up-to-date and accurate.



<sup>3</sup> Title XVI SBIR and STTR Reauthorization Act. Pub. Law 112-81, 125 Stat. 1298. In 2011, SBIR|STTR reauthorization extended the program first enacted in 1982 through 2017 via the 2012 National Defense Authorization Act.

# SBIR | STTR PHASE III LEGISLATION

## Phase III Guidance on Phase III Agreements

The SBA, which administers the federal SBIR|STTR programs, has issued policy directives for both programs available at [www.sbir.gov](http://www.sbir.gov). The following text, on Phase III guidance, from the SBIR Policy Directive updated February 24, 2014, states:

*“4.(c) PHASE III. SBIR Phase III refers to work that derives from, extends, or completes an effort made under prior SBIR funding agreements, but is funded by sources other than the SBIR program. Phase III work is typically oriented towards commercialization of SBIR research or technology.”*

- Each of the following types of activities constitutes SBIR|STTR Phase III work:
  - Commercial application (including testing and evaluation of products, services or technologies for use in technical or weapons systems) of SBIR-|STTR-funded R/R&D financed by non-federal sources of capital (Note: The guidance in this policy directive regarding SBIR|STTR Phase III pertains to the non-SBIR federally-funded work described in (ii) and (III) below. It does not address the nature of private agreements an SBIR|STTR firm may make in the commercialization of its technology).
  - SBIR-|STTR-derived products or services intended for use by the federal government, funded by non-SBIR|STTR sources of federal funding.
  - Continuation of R/R&D that has been competitively selected using peer review or merit-based selection procedures, funded by non-SBIR|STTR federal funding sources.
- A Phase III award is, by its nature, a SBIR|STTR award, has SBIR|STTR status and must be accorded SBIR|STTR data rights. If an SBIR|STTR awardee receives a funding agreement (whether competed, sole sourced or a subcontract) for work that derives from, extends, or completes efforts made under SBIR|STTR funding agreements, then the funding agreement for the new, competed work must have all SBIR|STTR Phase III status and data rights.
- The competition for SBIR|STTR Phase I and Phase II awards satisfies any competition requirement of the Armed Services Procurement Act, the Federal Property and Administrative Services Act and the Competition in Contracting Act. Therefore, an agency that wishes to fund an SBIR|STTR Phase III project is not required to conduct another competition in order to satisfy those statutory provisions. As a result, in conducting actions relative to a Phase III SBIR|STTR award, it is sufficient to state for purposes of a J&A pursuant to FAR 6.302-5, that the project is an SBIR|STTR Phase III award that is derived from, extends, or completes efforts made under prior SBIR|STTR funding agreements and is authorized under 10 U.S. C 2034(b)(2) or 41 U.S. C. 3303(b).
- Phase III work may be for products, production, services, R/R&D, or any combination thereof.

Phase III work  
may be for  
products,  
production,  
services,  
Research/  
Research &  
Development,  
or any combination  
thereof.





# SBIR | STTR PHASE III LEGISLATION

- There is no limit on the number, duration, type, or dollar value of Phase III awards made to a business concern. There is no limit on the time that may elapse between a Phase I or Phase II award and Phase III award, or between a Phase III award and any subsequent Phase III award. A federal agency may enter into a Phase III SBIR|STTR agreement at any time with a Phase II awardee. Similarly, a federal agency may enter into a Phase III SBIR|STTR agreement at any time with a Phase I awardee. A subcontract to a federally-funded prime contract may be a Phase III award.
- The small business size limits for Phase I and Phase II awards do not apply to Phase III awards.
- To the greatest extent practicable, agencies or their government-owned, contractor-operated facilities, federally-funded R&D centers, or government prime contractors that pursue R/R&D or production developed under the SBIR|STTR program, shall issue Phase III awards relating to technology, including sole source awards, to the SBIR|STTR awardee that developed the technology. Agencies shall document how they provided this preference to the SBIR|STTR awardee that developed the technology. In fact, the act requires SBA report all instances in which an agency pursues research, development, or production of a technology developed by an SBIR|STTR awardee, with a business concern or entity other than the one that developed the SBIR|STTR technology. See § 4(c)(8) for agency notification to SBA prior to award of such a funding agreement and §10(h)(4) regarding agency reporting of the issuance of such award. SBA will report such instances, including those discovered independently by SBA to Congress.

The small business size limits for Phase I and Phase II awards **do not apply** to Phase III awards.



# SBIR | STTR PHASE III LEGISLATION

- Agencies, their government-owned, contractor-operated facilities, or federally-funded R&D centers, that intend to pursue R/R&D, production, services, or any combination thereof of a technology developed under an SBIR|STTR award, with an entity other than that SBIR|STTR awardee, must notify SBA in writing prior to such an award. This notification must include, at a minimum:
  - The reasons why the follow-on funding agreement with the SBIR|STTR awardee is not practicable.
  - The identity of the entity with which the agency intends to make an award to perform research, development, or production and;
  - A description of the type of funding award under which the research, development, or production will be obtained. SBA may appeal an agency decision to pursue Phase III work with a business concern other than the SBIR|STTR awardee that developed the technology to the head of the contracting activity. If SBA decides to appeal the decision, it must file a notice of intent to appeal with the funding agreement officer no later than five business days after receiving the agency's notice of intent to make an award. Upon receipt of SBA's notice of intent to appeal, the funding agreement officer must suspend further action on the acquisition until the head of the contracting activity issues a written decision on the appeal. The funding agreement officer may proceed with award if he or she determines in writing that the award must be made to protect the public interest. The funding agreement officer must include a statement of the facts justifying the determination and provide a copy of its determination to SBA. Within 30 days of receiving SBA's appeal, the head of the contracting activity must render a written decision setting forth the basis of his or her determination. During this period, the agency should consult with SBA and review any case-specific information SBA believes to be pertinent.

## Phase III Competition Requirements

Following the SBA policy directives, SBIR|STTR competition for Phase I and Phase II awards satisfies any competition requirement of the Competition in Contracting Act. This means that a Phase III contract can be awarded to an SBIR|STTR firm without seeking further competition. The policy directive also states that agencies pursuing R/R&D developed under the SBIR|STTR program will give special acquisition preference to the SBIR|STTR company which developed a subject technology. A federal agency may enter into a Phase III agreement at any time with a Phase I or Phase II awardee.

The use of other sources for the procurement of products or R/R&D originally developed under an SBIR|STTR contract should be strongly discouraged, as the SBA SBIR Policy Directive indicates in §4(c)(7) and 4(c)(8), and in §10(h)(4) regarding agency reporting of the issuance of such award to small business, which will report such instances, including those discovered independently by SBA, to Congress.



PHASE III  
LEGISLATION

**A Phase III contract  
can be awarded  
to a SBIR|STTR  
firm without  
seeking further  
competition.**

# SBIR | STTR PHASE III LEGISLATION

## PROCUREMENT PROCEDURES

### Direct Awards

Prior to initiating a purchase request for a Phase III contract, a technical requester should contact the appropriate procurement office to discuss the particular requirement. The dollar value and complexity of the effort will determine the appropriate procurement instrument to be used and the type of contract. Typically, an RFP is used to obtain a Phase III proposal from the Small Business. A synopsis of the contract award is not required, in accordance with federal acquisition regulation (FAR) 5.202(a)(7). A synopsis of the contract award is also not required for SBIR contracts [Ref: FAR 5.301(b)(2)].

### Competed Awards

A CO may always decide to compete a requirement for a technology developed under a Phase I or II award or even a previous Phase III award; this may be done, for example, to verify that other more affordable or effective technologies are not available to satisfy the requirement. However, the CO may not release any protected SBIR|STTR information and data in pursuing this course of action. That CO should also review the SBA SBIR and STTR Policy Directive's §4.(c)(7) and 4(c)(8) and §10(h)(4), and then discuss their intention with their SBIR|STTR PM, local counsel and a procurement representative.

A direct Phase III award to an SBIR|STTR awardee may not be appropriate in all cases. If multiple sources are available for an item or if similar technologies are available on the open market, the government's needs may best be met through a competitive procurement. In general, the longer the period of time since the completion of the Phase II, the greater the likelihood that the technology is no longer unique. If more than five years have passed since the completion of the Phase II, a market survey should be performed to determine if the same or similar technology is available from multiple sources. The contract file should be documented to indicate the results of the market survey.

### Data Rights

As discussed earlier, SBIR|STTR data rights convey to Phase III awards. SBIR|STTR data rights are established in the SBIR|STTR Reauthorization Act, described in federal regulations FAR 52.227-20 and DFARS 252.227-7018 and discussed in SBA's current SBIR Policy Directive.

Under the clause at 252.227-7018, the government obtains SBIR|STTR data rights in technical data and computer software generated under the contract and marked with the SBIR|STTR data rights legend. SBIR|STTR data rights provide the government limited rights in such technical data and restricted rights in such computer software during the SBIR|STTR data protection period commencing with contract award and ending five years after completion of the project under which the data was generated. Upon expiration of the five-year restrictive license, the government has unlimited rights in the SBIR|STTR technical data and computer software. In the event an SBIR|STTR awardee is acquired by a large firm, data rights convey with the acquisition through a Novation Agreement. Further, a subsequent award made in response to an RFP or BAA must be considered a Phase III SBIR|STTR contract so long as the work derives from, extends, or completes efforts made under prior funding agreements under the SBIR or STTR programs. The contract award must include the SBIR|STTR data rights clause, DFARS 252.227-7018.

### Phase III Reporting

DoDI 5000.02 requires reporting of the number and dollar amount of contracts entered into for Phase III SBIR or STTR projects for programs of record. The CO should report all Phase III awards as such in the Federal Procurement Data System (FPDS-NG), referencing them in the Contract Action Report under "Competition Information," using the drop-down menu for SBIR|STTR. Because the number and size of Phase III awards are one metric used to gauge the success of the Air Force's SBIR|STTR programs, it is critical that Phase III awards are marked appropriately. The Air Force SBIR|STTR Program Office reports Phase III data annually to the DoD and Congress to address the requirement for Phase III.





# SBIR | STTR CURRENT AND PROPOSED INCENTIVES

The SBIR|STTR Reauthorization Act emphasizes the role of incentives in achieving SBIR|STTR commercialization, including existing or new incentives.

## CURRENT DoD INCENTIVES

### Annual Report on Performance of the Defense Acquisition System

The 2014 Annual Report on the Defense Acquisition System by USD AT&L focused on the key role incentives play in driving cost, schedule and technical performance by industry under contract to government, with findings and recommendations that may be applied as an incentives baseline in meeting DoDI 5000.02 requirements for SBIR|STTR inclusion in programs of record at or above \$100 million. The 2014 Annual Report, tying its analysis back to the 2010 Improve Acquisition Act and the 2009 Weapons System Acquisition Reform Act, states:

*“As our body of analysis grows, we are finding more practical insights from their results. Of particular note, this year’s report shows that the prevalent debate of cost-type versus fixed-price contracting is misguided. The real issue is how effective the incentives are for each contract type within each of those groupings.*

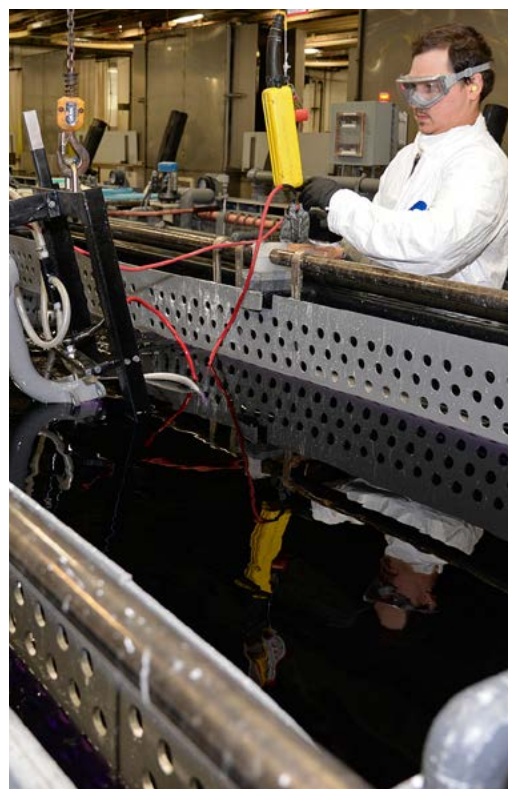
*Thus, a key element for improving acquisition performance is performing how contract incentives are aligned with our performance objectives and how effective those incentives are when measured against those performance objectives. Without effective alignment, our contractors will not make their best effort to deliver the quality products and services our warfighters and taxpayers expect and deserve. We have a wide range of incentive structures available for motivating contractor performance, including:*

- *Incentive fees tied to performance objectives of importance to the government*
- *Award fees tied to subjective measures of performance*
- *Execution of options for continued work in lieu of competition when in the interest of the government*
- *Payments tied to specific performance objectives*
- *Event-based contract obligations tied to successful completion of work scope.”*

Combined with the results from last year’s report, these analyses have produced a number of insights we are acting upon. Not all incentives work. Contractual incentives are effective if (1) we use them; (2) they are significant, stable and predictable; and (3) they are tied directly to our objectives.

The distinction between cost-plus and fixed-price contracts is not the divide on effectiveness. Rather, the emphasis should be on matching incentives to the situation at hand instead of expecting fixed-price contracting to serve as a magical bullet. Fixed-price contracts have lower costs because they are used in lower-risk situations, not because they control costs better. Moreover, prices on fixed-price contracts are only “fixed” if the contractual work content and deliverables remain fixed, which is often not the case. Our analysis showed that objectively determined incentives were the factors that controlled costs, not selecting cost-plus or fixed-price contract types.

There are a wide range of incentive structures available.



PHASE III  
INCENTIVES

# SBIR | STTR CURRENT AND PROPOSED INCENTIVES

The DoD pays for the technical risks on our developmental systems unlike the private sector, where companies pay for R&D on new products. This is partly due to the fact that the DoD is, to some degree, the only customer for new military products (such as, a monopsony-type market).

Thus, it makes sense to use incentives that:

- Link profit to performance
- Control price
- Share in cost savings, especially in production when the risks are low.

Professional judgment is needed, as always, in matching contract type and incentives to the desired outcome.

Another area important to defense acquisition relates to the acquisition workforce. Apart from the qualitative procurement management reviews (overseen by the Defense Contract Management Agency) and the Procurement Management Review/Assessment (conducted by the military departments), we are seeking data to link our data on individuals in our human capital databases to the programs and activities that they perform.

## Manager's Guide to Technology Transition

The updated DoD Manager's Guide to Technology Transition addresses cash and non-cash incentives and cost-based incentives, which could be adapted to meet SBIR|STTR commercialization goals, with appropriate language inserted in RFP Sections "L" and "M".

## Open Systems Architecture (OSA) Contract Guidebook for PMs

This OSA document focuses on cost-based incentives for development contracts, which could be adapted to meet SBIR|STTR commercialization goals. These cost-based incentives include the cost-plus incentive-fee, cost-plus-award-fee and cost-plus-award-term.

The RFP should **clearly define** the size of the **incentive fee**, the criteria for how the fee is earned and be proportional to the level of **SBIR|STTR involvement**.



# SBIR | STTR CURRENT AND PROPOSED INCENTIVES

## SBIR | STTR INCENTIVES PROPOSED BY INDUSTRY

The following incentives concepts derive from a meeting held with major prime contractors in 2012 to obtain their thoughts on what would incentivize them to increase their SBIR|STTR subcontracting. These are the views of those industry participants and pages 29-31 include the views of these selected industry participants; however, these particular incentives have not been specifically approved for Air Force use.

### Use of Award Fee or Incentive Fee (Above the Base Fee)

Use of an award fee or incentive fee (above the base fee) on competitively awarded contracts with an incentive for contractors to include SBIR|STTR technologies in the proposed solution or incorporated during the contract period of performance. The RFP should clearly define the size of the incentive fee (for example, up to three percent), the set of criteria for determining how the fee is earned and should be proportional to the level of SBIR|STTR involvement. The purpose of this recommendation is to go beyond small business participation in large DoD contract efforts to incentivize and reward DoD prime contractors who collaborate with SBIR|STTR firms to plan for and transition SBIR|STTR technologies into their proposed solutions.

Award/incentive fees should be tied to identifiable interim outcomes, discrete events or milestones related to SBIR|STTR technologies. The proposer should state the technical area in which the SBIR technology will be used and level of support to be provided by the SBIR|STTR firm, as well as the SBIR|STTR firm and the SBIR|STTR topic number and contract number from which the SBIR|STTR technology derives. Fee provisions should clearly explain how a contractor's performance will be evaluated and would be commensurate with contractor performance over a range from satisfactory to excellent performance.

### Development and Use of Proposal Criteria Language

Develop and use proposal criteria language that gives weight and/or favors SBIR|STTR technology involvement in proposed solutions to RDT&E announcements. This recommendation would encourage prime contractors to incorporate SBIR|STTR technologies and SBIR|STTR firms into their strategic opportunity planning by rewarding SBIR|STTR firm partnering and transitioning SBIR|STTR technologies by assigning a higher rating on the evaluation. This should be used to achieve the highest rating for small business subcontracting proposal evaluation criteria. Strategically, this approach incentivizes prime offerors to have an established pipeline of partnership with SBIR|STTR firms. Furthermore, these firms must have identified SBIR|STTR technologies that align with their core product and services offerings prior to announcement release. These actions encourage the offeror's proposal team to look beyond traditional small business types by tapping into woman-owned small business, service-disabled veteran-owned business (SBVOSB), and historically underutilized business zones, known as "HUBZones."



PHASE III  
INCENTIVES



# SBIR | STTR CURRENT AND PROPOSED INCENTIVES

## Establish a Goal of 2.5 Percent of RDT&E Funding Contracted to SBIR | STTR Firms for Phase III Follow-ons

This recommendation encourages PMs and senior acquisition personnel to adopt, mature and transition SBIR|STTR technologies into their programs of record and fielded systems through direct SBIR|STTR Phase III awards. This aligns well with Better Buying Power 3.0 to increase small business dollars competitively awarded by DoD military departments and agencies.

This recommendation also supports current department efforts to identify proposed announcements involving bundling of contract requirements and revises the procurement strategy to be suitable for award to a small business, in this case an SBIR|STTR company. Consistent with DoD policy, this recommendation would encourage PMs/PEOs to include SBIR|STTR as part of ongoing program planning processes and ACAT programs to insert SBIR|STTR technologies at milestone reviews. Progress towards the SBIR|STTR prime contracting goal would be tracked through the Federal Procurement Data System (FPDS), where all Phase III contract actions are currently required to be coded as SBIR|STTR Phase III awards.

## SBIR Fee Pool

This recommendation awards a contractor giving an SBIR|STTR firm a notional \$500,000 + subcontract one percent of the subcontract's value up to \$50,000, provided it is of that technology; the SBIR|STTR fee pool is limited to 50 percent of the SB incentive fee pool and the contractor could earn double credit against subcontract goals. Thus, SBIR|STTR transition is both an RFP-evaluated requirement and an evaluated criterion – both in the selection process and post-award during contract execution – separate from SB criteria. Incentive fee determination may best occur at one point during contract execution – separate from SB criteria. Incentive fee determination may best occur at one point in the contract, such as the end of the third year in a five-year contract, after all subcontracts have been awarded.

## Matching Funds Incentive

A SBIR|STTR transition incentive would provide DoD PMs with matching R&D funds for each dollar of the program R&D committed to a Phase III contract with an SBIR|STTR company to continue development and/or insertion of SBIR-|STTR-developed technology. The Phase III SBIR|STTR transition incentive would provide DoD PMs with matching R&D funds for each dollar of program R&D committed to a Phase III contract with a SBIR|STTR company to continue development and/or insertion of SBIR-|STTR-developed technology. The matching funds incentive should include a limit of no more than \$2 million in matching R&D funds for any single SBIR|STTR effort. The second element of the Phase III SBIR|STTR transition incentive would provide matching procurement funds (up to a limit of perhaps \$5 million per SBIR|STTR effort) for procurement of SBIR-|STTR-developed technology end items through direct contracts with an SBIR|STTR company or for SBIR-|STTR-developed items procured under an SBIR|STTR company's General Services Administration (GSA) schedule.



The national  
SBIR|STTR  
program executes  
**\$2 billion**  
and 5,000 awards  
per year  
for **research in**  
new technologies.

# SBIR | STTR CURRENT AND PROPOSED INCENTIVES

## Independent Research and Development (IRAD) Incentive

Primes subcontracting at least one percent of the contract to small business will be eligible for IRAD Incentive in the form of a credit of ten percent of its DoD-audited expenses. For every acquisition contract in excess of \$100 million, the prime contractor shall subcontract not less than five percent of the contract value to small businesses that have completed relevant SBIR|STTR Phase IIs and can meet or exceed the technical requirements of the prime contract. For every one percent of the prime contract subcontracted to small businesses to meet or exceed this goal, the prime contractor shall be entitled to a credit of ten percent of its audited IRAD expenses and the total credit is cumulative up to 50 percent of IRAD expenses.

## Increase the Incentive for Prime Contractors to Achieve Small Business Subcontracting Goals

Where small business subcontracting goals are set by the DoD program office in the RFP, an explicit percentage of the total contracted effort, penalties, such as fee reduction (or incentives, such as award fee increases) should be employed to encourage prime contractor fulfillment of those goals. For example, the prime contract could require at least 75 percent of the small business subcontracting goals be met within each year of the contract or fee reduction of 25 percent would be triggered for that period.

## Cash Reward Incentive

Cash reward incentive is for PMs exceeding SBIR|STTR transition and insertion goals. PMs and their PEO Directors should be eligible for a \$5,000 cash award upon meeting or exceeding the SBIR|STTR transition goals SECDEF is required to establish by the SBIR|STTR Reauthorization Act and the related goal established by SECDEF under this law for insertion of SBIR|STTR technologies into MDAPs.

Although **science** and **technology** play an essential role throughout the SBIR|STTR phases, alignment with end customers and **commercialization efforts** are the true drivers of eventual **success**.



# PHASE III COMMERCIALIZATION

Phases I and II of the SBIR|STTR Program are designed to support small firms during the research phase of their projects. This process makes more innovative research available to support government requirements. It also places small businesses in a better position to commercialize their products, by providing substantial up-front funding. In return for their investment, the government would like to see high success rates converting SBIR|STTR research into new technology and products, which provides both economic and military benefits to the nation. Phase III of the SBIR|STTR Program is the commercialization phase. In this phase, it is up to the small business to find the necessary, non-SBIR|STTR funding support to transform their research into a product or process.

To obtain funding for the commercialization of the research, the following areas are of special interest:

- Marketing Surveys;
- Revenue Sources, and;
- The Business Plan.

A commitment for Phase III funding should ideally be obtained prior to the Phase II proposal submittal. It enhances the chances of winning the Phase II award. Also, when seeking a sponsor commitment from an established company, the “Not Invented Here” syndrome is difficult to overcome. The earlier the sponsor is involved in the development process, the less resistance will be received.

## MARKETING SURVEYS

The marketing survey for a small business concern (SBC) is significantly different from the generic, textbook marketing survey that is targeted at large production companies. The textbook survey primarily deals with methods for surveying private-user wants and needs. The SBC’s marketing survey will deal more with methods for identifying corporate customers, their wants and needs. The main differences include the sources of information and the number of customers. In striving to sell technology, one customer may be enough. However, if the SBC is trying to sell a household-use product, millions of customers would be needed.

Prior to approaching prospective customers, the SBC needs to fully understand their products and company. By understanding their own technology, the SBC can use that knowledge to speculate the applications in which it fits.

This is the point where the company must start thinking in terms of commercial viability of the application, rather than only considering the technical merits of the technology. Customers will immediately want to know how this technology will improve their competitive position in the industry.

Finding applications for this technology will improve the firm’s competitive position in the industry. However, this may be one of the most challenging tasks.

Developing a viable marketing survey requires the identification of market segments that make up the product’s potential customers.





# PHASE III COMMERCIALIZATION

A SBC needs to be aware of the following applications that are integral for targeting corporations (markets) that may have a need of their products. It is imperative to:

- Understand their competitive advantages
- Know the competition: Who are they? What alternatives do they provide?
- Recognize what sets them apart from competitors, such as quality, product support, costs, timeliness or other factors

The SBC needs to focus as creatively on the potential commercial applications as they do on developing the research and technology. Continually exploring the question, “What can the technology do and for whom” will lead to multiple channels for potential commercialization avenues.

The more innovative the market application, the higher the potential the firm will benefit from commercial success. Innovation can contribute substantially to patentability, minimize competition, improve profit margins and increase the interest of potential partners or investors. Prior to beginning the market survey, the SBC must:

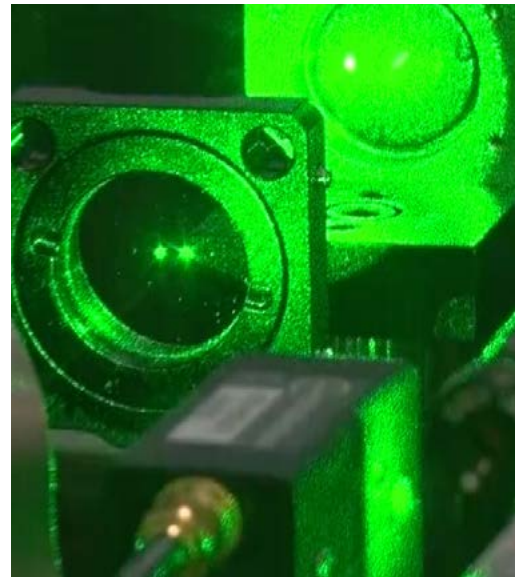
- Review the company objectives
- Understand potential product applications
- Manage financial issues

The marketing survey primarily consists of networking until the right customer(s) is found. Networking consists of systematically talking to as many of the right people as possible, listening to their ideas and learning from their responses. The ultimate goal is to get the firm’s product in front of as many prospects as it takes to sell their product.

## How Do You Begin?

Companies must start with people they know in the industry that work within their field. Chatting with others about their products in an informal setting is much easier and helps to alleviate worries about making mistakes. This type of casual networking can generate leads to other companies that may already be in the market looking for a similar product. The purposes of these discussions are to help the small business to:

- Discover potential weak and strong points in the company spokesperson’s presentation so that it improves with time.
- Gain any bits of insight these contacts may possess that will eventually lead to a customer or financier.
- Help make their ideas more exciting, which may turn these contacts into advocates who champion the company’s cause.



## Tips for Casual Networking

Explain what the company is trying to do and what is believed to be the best options.

Be careful in the discussions so as not to give away valuable trade secrets.

Put on “thick skin” and listen to their responses – both positive and negative – without challenging or correcting their opinions.

# PHASE III COMMERCIALIZATION

## What You Need When Networking

Never attempt to rely solely on memory. Instead, develop and become well versed on a three-to-five-page summary and plan to leave a copy with the company contact at the conclusion of the networking session. This five-page summary report will include the following points about the company's product:

- A brief description of the research and its anticipated results, particularly what is unique or innovative
- The technical and market applications in terms of specific products, processes and services
- Whether patents exist or are possible
- The market size now and in five years, as well as the company's potential share
- Current and prospective competitive products or processes, now and in the future, and the advantages the company's technology might have

SBIR|STTR PMs provide a good starting point for networking as they participate in various conferences, seminars and technology exchanges. These events provide opportunities for obtaining and exchanging information with organizations nationwide. They also routinely interface with commercial organizations, which is a powerful networking source. Armed with information regarding the company's Phase III plans, a willing SBIR|STTR PM may help match your products with another organization's needs. The SBIR|STTR PM can also identify firms that specialize in helping SBIR|STTR recipients commercialize their products.

## How Do Small Businesses Find Leads for Their Product?

The *Encyclopedia of Associations* serves as a comprehensive source for providing nonprofit American membership organization of national scope and can be located at:

[www.find.galegroup.com/gdl/help/GDLeDirEAHelp.html](http://www.find.galegroup.com/gdl/help/GDLeDirEAHelp.html).

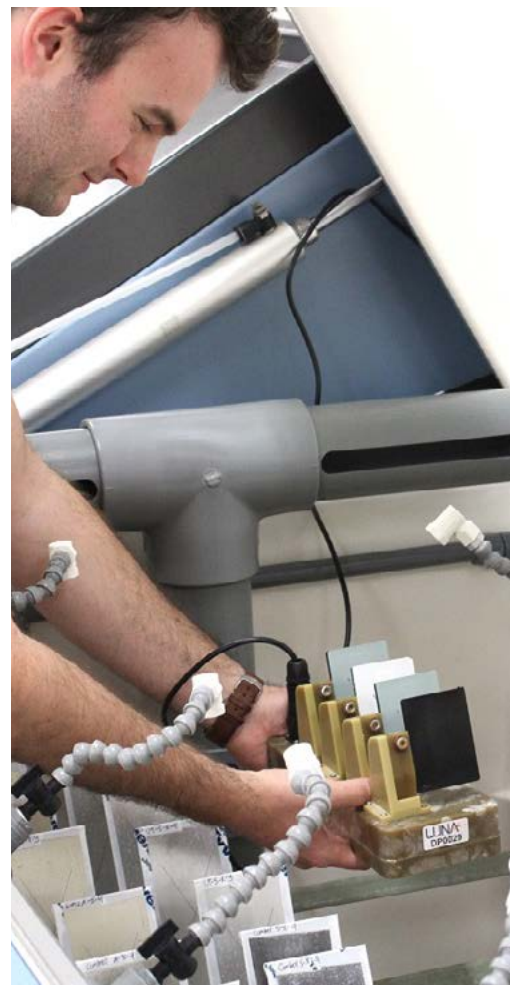
To identify upcoming conventions that may be used for networking, the Global Conference Directory located at:

[www.allconferences.com/Business/](http://www.allconferences.com/Business/)

It provides specific conferences for targeted businesses within the SBC's area of expertise.

## Innovation Solutions

The purpose of the marketing survey is to gain information. Networking is one of the fastest ways to achieve a small R&D business's goals and can also lead to finding the best market for the company's product. Brainstorming with others in the same industry can generate innovative applications and new paradigms that can be used in convincing sponsors or buyers.



Conferences,  
seminars and  
technology events  
provide excellent  
opportunities  
to network  
with organizations  
nationwide.

# PHASE III COMMERCIALIZATION

## REVENUE SOURCES

Once an application is selected and prior to talking to prospective funding sources, a development plan must be formulated to include the following functions:

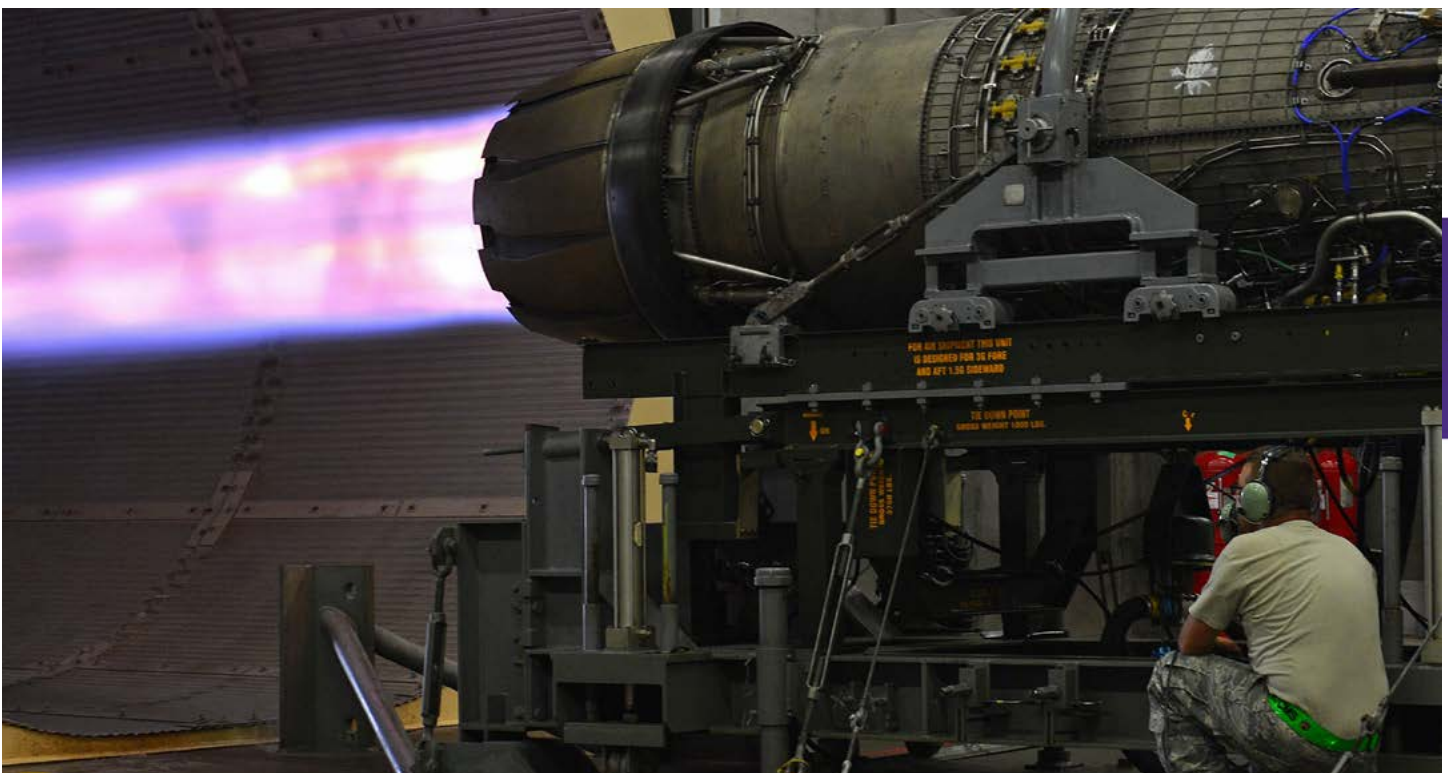
- Describe the application
- Detail the use of the technology in the application
- Outline the steps necessary to get the technology from its current state to its commercial state
- Provide an estimated time of completion by stages or milestone
- Furnish a listing of personnel, materials and other resources necessary for each stage
- Provide a budget for the various stages so that funds and resources will be available at the appropriate times

These are the types of questions that will be asked repeatedly. Having these questions answered and written in a concise form will make a handy quick reference guide.

While Phase I and Phase II awards are funded by the SBIR|STTR program, Phase III funding must come from non-SBIR|STTR sources. There are basically five categories of funding sources to commercialize a product:

1. Debt loans
2. Equity loans
3. Strategic alliances
4. Outright sale of intellectual property and
5. Initial public offerings

The SBIR|STTR program provides a unique opportunity for prime contractors and DoD acquisition programs to **tap into a powerful source** for technological innovation while strengthening the role of small high-tech companies and suppliers.



PHASE III  
COMMERCIALIZATION



## PHASE III COMMERCIALIZATION

**Debt Loans** are typically loans from banks, relatives or friends that are interest bearing. The payback is the principal plus an agreed-to interest or finance charge. With this type of loan, the small business owner would retain management control over the operation of the company. However, new ventures are normally considered high-risk and debt loans are difficult to obtain from traditional lending institutions. However, the availability of debt loans may change over time and become a viable option at the time of the application.

**Equity Loans** generally include investments by venture capitalists, the venturing unit of large corporations and what is known as “business angels.” The equity investor receives part ownership in the company in exchange for the financial investment. If the investor provides a large sum of money, the individual may require a seat on the small business Board of Directors and will take a strong interest in how the company succeeds. This part ownership can have both positive and negative effects on how the small business operates. If the firm does not wish to relinquish any control, equity loans would be considered as a negative. If, however, the skill of a seasoned veteran with a large stake in the outcome is welcome, then the equity loan would be considered a positive.

If the equity loan route is chosen, the small business owner must carefully select the investor – the person or firm – that will help control the small business. The investor will thoroughly investigate the small business prior to agreeing to invest. Likewise, it is advised to investigate their capabilities thoroughly prior to accepting their investment.

**Venture capital firms** are generally privately owned. They are extremely cautious organizations because most of their money comes from pension funds. Generally, they are interested in creating a high rate of return, often 10:1 or higher, by investing in rapidly growing businesses in all stages of development. They tend to specialize by geographic location and type of technology or product. Competition for venture capital is high, which means that small business owners must be prepared to compete for this type of loan and must present a strong management team, a good business plan and a worthy investment opportunity.

Sources for finding venture capitalists are numerous. Guides, such as *Pratt's Guide to Venture Capital Sources* located at [www.prattsguide.com/](http://www.prattsguide.com/) and the hardcopy book *Who's Who in Venture Capital* can be found at this link to local libraries at [www.worldcat.org/title/whos-who-in-venture-capital/oclc/14904739](http://www.worldcat.org/title/whos-who-in-venture-capital/oclc/14904739).

Other sources include the chambers of commerce, attorneys, accountants or bankers to help find venture capitals and receive a referral. Apart from a referral, venture capitalists normally prefer to speak with the small business owner by phone. Advance preparation for this initial discussion includes:

- Stating the reason for the call;
- Discussing the research briefly;
- Highlighting its potential technological applications, and;
- Providing the estimated market potential.

If the small business owner's invention has any commercial viability, it is to their advantage to **obtain a patent**. This provides the owner with the right to prevent others from making, using, or selling the owner's invention for the life of the patent. It provides a 17-year exclusionary right on the invention which makes it more **commercially viable**. Most investors, manufacturers, or venture capitalists are looking for some type of an **advantage in the marketplace** and a 17-year exclusionary right on a new technology can serve as a significant competitive edge.

# PHASE III COMMERCIALIZATION

In general, venture capitalists give preferential consideration to applications in a proven large market and want to be assured of the small business owner's commitment to serve that market. If interested in the prospect of supporting the project, normally a three-to five-page summary will be requested to include:

- A brief description of the company's research and its anticipated results, particularly what is unique or innovative
- The technical and market applications in terms of specific products, processes and services
- Whether patents exist or are possible
- The market size now and in five years and the company's potential share
- Current and prospective competitive products or processes, now and in the near future and the advantages this technology may have

Venture capital units of large corporations work very much the same as private venture capitalists. They simply specialize more in technologies and products that fit within their corporate business plan.

**Business angels** are an informal group of investors seeking capital gains income to increase their already large net worth. They are typically experienced business people that provide money, contacts and management expertise. Business angels are not listed in publications, so word of mouth is the best method to find them. The chamber of commerce, business attorneys, accountants, bankers and business friends are the best sources to initiate a search. The pool of business angels are considered larger than venture capitalists. Therefore, in looking at the advantages associated with equity loans, some effort should be expended for finding a few recommended business angels.

**Strategic Alliances** are teaming arrangement that do not necessarily require debt or equity transactions. Examples include: joint ventures, marketing and distribution agreements, licensing agreements and R&D limited partnerships. They are usually contractual agreements between two or more firms to take advantage of their complimentary skills and develop a synergistic relationship. All of these alliances require mutual respect and trusts.

Types of Strategic Alliances:

- Joint Venture
- Marketing and Distribution Agreements
- Licensing Agreements
- R&D Limited Partnerships



# PHASE III COMMERCIALIZATION

A **joint venture** is a collaboration between two companies to form a separate legal entity while retaining their separate identities. The most common reasons for forming a joint venture for an SBIR|STTR firm might be for personnel exchanges, resources, technology transfer or diversification. The key to forming a joint venture partnership is to clearly understand the company needs and find an organization that can provide these needs.

**Marketing and distribution agreements** are usually formed to take advantage of existing marketing and distribution strengths of a particular company within a specific geographic area. In this contractual agreement, one company provides the product and the other company provides the marketing and distribution.

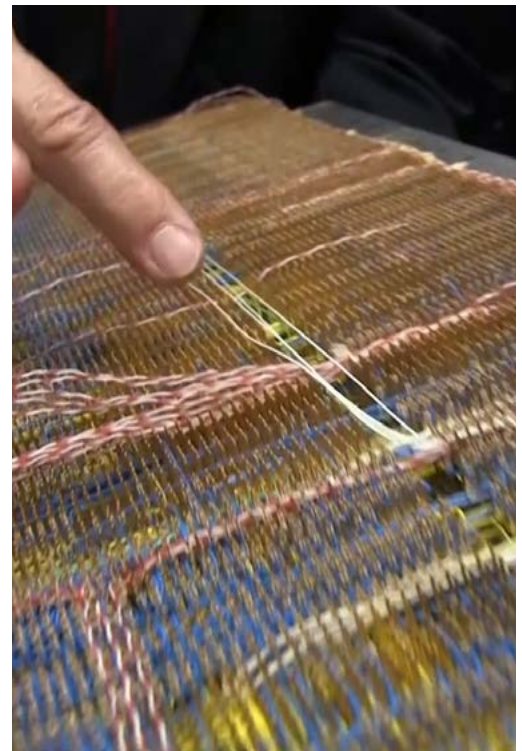
**Licensing agreements** may be the most common for SBIR|STTR companies that plan to devote their efforts to R&D activities and have little interest in production or marketing activities. Licensing is a method to allow another company to utilize conditional aspects of the SBIR|STTR company's intellectual property rights in return for a fee or royalty payments. Intellectual property can be extremely valuable and every effort should be made to protect it. As noted previously, patent protection is the most important type of protection for technologies. Licensing agreements, like the other strategic alliances, embody complicated legal issues that should be overseen by an attorney that is familiar with licensing and non-disclosure agreements. The negotiation phase can be dangerous in terms of disclosing trade secrets. Be careful not to disclose any confidential information until investors' interests have been piqued enough to sign a good non-disclosure statement.

**R&D limited partnerships** are arrangements where a partnership is formed of limited partners for the purpose of investing in R&D. The partnership contracts with an entrepreneur to conduct R&D in exchange for certain ownership rights to the results. In this agreement, the entrepreneur retains the right to buy back the end product of the R&D effort. This alliance was in great favor after a 1974 interpretation of the Internal Revenue Code by which limited partners were not taxed on their investments, as long as they were taking a significant business risk. In 1986, the tax laws were modified and, although limited partnerships are still being formed, their viability as a funding vehicle is reduced.

## OUTRIGHT SALE OF INTELLECTUAL PROPERTY

The outright sale of the SBIR|STTR firm's intellectual property is fairly self-explanatory. If patents, copyrights, trademarks or trade secrets are held by the SBIR|STTR firm, then financial gain can be achieved for other non-related projects by selling these to anyone with whom an agreement can be reached. With selling, as opposed to a licensing agreement, the SBIR|STTR firm sells the entire rights and ownership of the intellectual property. While in a licensing agreement, the conditional use of the intellectual property is sold.

Types of  
Strategic Alliances:  
Joint Venture  
Marketing and  
Distribution  
Agreements  
Licensing  
Agreements  
R&D Limited  
Partnerships





# PHASE III COMMERCIALIZATION

**Initial public offerings** are methods of financing by selling part ownership in the SBIR|STTR firm to the public. This is usually accomplished by selling stocks and bonds in the firm. To gain financing of any magnitude, this process requires transitioning from a privately owned company to a public company. Publicly owned companies must register with, and are regulated by, the Securities and Exchange Commission. The appropriateness of this financing source, the consideration of costs, time lags and the complexities introduced by having private shareholders needs to be reviewed.

## TYPES OF RISKS

The type of funding approach selected will most likely be determined by two factors – risk and control. This is the risk tolerance of the funding sources and the amount of control the SBIR|STTR firm is willing to give up in order to obtain project funding. In the commercialization of new technology, there are three types of risks:

- Technical Risk
- Market Risk
- Financial Risk

**Technical risk** represents the chance that the proposed technology will not work satisfactorily and the funds invested will be lost. This risk is substantially reduced through the SBIR|STTR program. The funding of Phase I provided the basic research which should have proven the concept's feasibility. The funding of Phase II provided the opportunity to work a practical application that usually emerges as a working prototype. Therefore, the risk for the various lending institutions, investors and venture capitalists is considered a marginal risk that the technology cannot be converted to a commercially viable product.

**Market risk** is the possibility that the technology cannot be sold even if it performs as intended. This usually occurs if the marketing data and analysis are wrong, or the costs of production make the technology prohibitively expensive. Under the SBIR|STTR program, even this risk is reduced. If the government is satisfied with the results of the Phase II research, there could be a U.S. Air Force market for the product. This market could help reduce and possibly offset fixed production and servicing costs as well as provide a demonstration of the technology.

**Financial risk** is the return on investment (ROI) risk that this particular investment opportunity will not be as high as other available alternatives. This risk is a function of the overall economy versus the expected ROI this technology will produce.

Many companies in the marketplace are looking to invest their money and make a good return. All have individual preferences, standards, criteria and philosophies with respect to risk. Each SBIR|STTR firm must find an appropriate firm as early in the process as possible.

In conclusion, if an SBIR|STTR firm is willing to bear high technical risk but only moderate financial and market risk, a good licensing agreement may be a good choice. If a moderate technical risk can be assumed but can take on a higher market and financial risk, a joint venture may be considered. If a high technical and market risk can be taken on with only low financial risk, an equity opportunity may be the best approach. The same philosophy applies to the lending companies and financial institutions. Some have an aversion to a particular kind of risk, others to certain fields or types of research and still others invest only at certain phases or milestones of the research.

Phase I and  
Phase II awards  
are funded  
by the SBIR program.

Phase III funding  
must come from  
non-SBIR sources.



PHASE III  
COMMERCIALIZATION

# PHASE III COMMERCIALIZATION

## THE BUSINESS PLAN

Business plans are as diverse as small businesses and explains who the company is, where it is going and how the company expects to get there. As an internal document, it charts the road map that builds confidence and teamwork by showing management and employees that the company has purpose and direction. As an external document, it shows potential investors the company's commitment to financial growth, that the company knows how to get where it is going and has the management structure in place to make it happen.

The first step of the process is to form the development team, and outline the task, with everyone committing to the effort. The middle of the process can be grueling and frustrating when the tough questions are asked and few answers emerge. At this stage the president or CEO needs to keep the team together, moving forward. The final stage of the process is where the answers begin to appear and the process gets exciting. The entire process of developing a company business plan is worth the effort.

The following areas of the business plan are important as they work together to present a potential ROI opportunity to investors:

An **Executive Summary** is a two-page summary that highlights key elements of the plan. This can include:

- The nature of the firm's technology or product
- Sustainable competitive advantage in the market
- Management team information
- Type of financial arrangement the firm is interested in pursuing
- Projected financial data
- Potential ROI

Always remember that the investor is not necessarily interested in helping the small business achieve its goals as much as they are interested in reaping the ROI by helping to make the small business profitable.

**Company Information** is important to include that provides a history of growth. If growth has not yet been achieved, show the reasons and identify the specific measures the firm will take to correct that situation. Include a purpose and a mission or a vision statement. Identify the type of business (partnership, S corporation, or others) and distribution of equity. Identify the company's future in terms of goals and objectives. The goals will indicate the goals and objectives of the firm to achieve its intended growth.



# PHASE III COMMERCIALIZATION

**Product/technology/service** needs to be defined precisely. Include the features, competitive advantages and benefits. Explain what is particularly innovative about the company's research and the anticipated results. Concentrate on the capabilities that make the results marketable. Identify any legal protection the company has received, or applied for, such as patents, copyrights or trademarks. Development milestones need to be clearly defined. Demonstrate an understanding of where the company's product fits within the industry life cycle. Include a discussion of the company's other existing or planned products, technologies or services. Describe the types of technology or products already developed and for whom.

## Market

Describe the market that offers the best opportunity for the company's technology or product. Provide the information that helped to make this decision. How was the market segmented? Why was it segmented in that way? How will the product/service get to market? Describe the five-year forecast for the market. Five years is a typical time period for investors to calculate their total ROI. This governs investment decisions and needs to be thoroughly researched to help ensure the future of the target market.

## Competition

Understanding the competitive position of the product or service is critical to its endeavor. Competitors will not sit idle while other companies work to take away their markets. A strengths/weaknesses/opportunities/threats (SWOT) analysis needs to be performed. Also indicate the share of the market the business intends to capture over the next five years and the reasoning behind this forecast. Competitive strengths and weaknesses need to be portrayed in terms of product performance, price, manufacturability, reliability, style and service. For those areas that are weaker than the competition, enumerate the actions planned to remedy the deficit. Competition awareness is a key element of a business plan even if the intent is to license the technology for form a strategic alliance. It is important not to overstate the company's competitiveness and not to understate others' competitiveness.

## Marketing

If the company requires a marketing capability, then a marketing analysis must be performed with a separate marketing plan. The marketing plan needs to be highlighted within the business plan. These highlights should quantitatively summarize the marketing goals. They should also describe promotional concepts, pricing strategy, distribution channels and distribution plan.



PHASE III  
COMMERCIALIZATION



# PHASE III COMMERCIALIZATION

## Manufacturing and Operations

If the company objectives require a manufacturing capability, include a section about this in the business plan. This section should summarize the kind, quality and extent of the manufacturing capability. It should also contain a discussion of production strengths and weaknesses with indications of the plan to strengthen these weaknesses. If the reason for seeking financing is to initiate or expand production capabilities, an extensive explanation of all the particulars will be required. The explanation should include what resources and facilities, when, why, costs and tax implications.

Resource requirements and cost represent other major areas of concern. Users will want to know if they need any special equipment or if there are any special conditions required in order to use the new technology. If so, the user will have to perform a current and future cost benefit analysis. All such issues must be carefully anticipated and addressed, so that upon presentation of the new technology to prospective customers, investors, venture capitalists and/or lenders, the technology will be judged on its own merit and not on support issues.

## Management

The management team represents the single most important factor in helping to gain external funding. Prospective investors insist on a well-balanced management team. Engaging part-time services of experienced professionals or consultants including business attorneys, accountants, marketing specialists and engineers can help round out the management team. Following are suggested business team members:

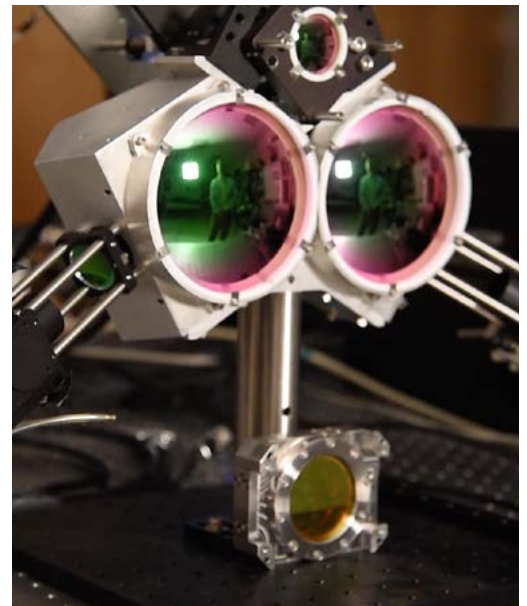
- The **team leader** should be a senior-level person with sufficient authority to obtain the resources necessary to make sure the plan is produced.
- The **technical expert** or **specialist** will know the most about the project including the project growth and progress from previous phases; unresolved problems encountered and overcome during previous phases; and, the amount of time, energy and effort expended to solve problems.
- The **marketing specialist** will work finding a buyer and making the deal; determining changing market conditions and modifying the plan when necessary; knowing what kind of resources are needed for sales efforts; having a good intuitive sense and dissecting research findings; and, understanding the selling process in order to act as a facilitator in key sales meetings. Marketing consultants and university marketing professors can help the smaller firms by providing experience and advice and by developing a comprehensive market analysis.
- The **financial specialist** must be able to provide clear financial direction in the marketing effort and the evaluation of sales; evaluate the company's exposure to risks and possess a good understanding of various accounting systems, pricing and estimating systems and audit procedures; and, develop financial projections and calculate ROI based on provided criteria. An experienced part-time accountant can help smaller firms accomplish many of these tasks.
- The **business attorney** will provide legal advice and should be an attorney experienced with strategic alliance contracts and venture capital dealings. The knowledge and contracts can be extremely valuable.

## Contingency Planning

Every plan is based upon a certain number of assumptions. The contingency plan must identify the assumptions that are critical to the planned actions or have a low confidence factor. Contingency plans should be identified for each of these assumptions.

## Financial Section

Every business plan should include a financial section that incorporates the past three years of financial statements and the five-year projection. Past financial statements should include balance sheets, profit and loss statements and correlating explanations. Future projections should include projected balance sheets, profit and loss projections and cash flow projections. The financial section puts numbers to and pulls together the information provided in the other sections of the plan. Investors will be highly interested in this section because it indicates how encumbered they would be in making a deal with the business.



# HOW TO ACHIEVE PHASE III

## HOW A SMALL BUSINESS CAN GET HELP SEEKING PHASE III COMMERCIALIZATION

### SBIR|STTR Commercialization Readiness Program (CRP)

The Air Force SBIR|STTR CRP provides a strategically driven process that directly links Air Force centers/PEOs to Air Force Research Laboratory (AFRL) TPOCs to identify and evaluate Air Force needs and innovative solutions.

Since its inception in 2006, the program has been improving technology transition outcomes. The primary objective of the CRP is to accelerate the transition of SBIR|STTR-developed technologies into real-world military and commercial applications. To achieve the program's goals, the CRP team is involved throughout the process, from topic generation to technology transition. The continued success of the program can be attributed to its ability to align and connect all transition stakeholders and to leverage the Phase III funds required to mature SBIR|STTR projects.

There are three elements that must be present in order to initiate the transition process and conduct business with the CRP:

- Identified and interested Air Force **customer** (Air Force program office, sustainment or test organization, Major Command USAF (MAJCOM), major defense contractors supporting Air Force programs/systems, etc.) where the customer has been contacted, is aware of the technology and is interested in pursuing it
- Defined **need** (driven by customer)
- SBIR|STTR **technology** (that meets the need and shows high potential for providing viable results)

## HOW A SMALL BUSINESS CAN PARTICIPATE IN THIS PROGRAM

### SBIR|STTR Awardees

Engage with TPOCs and/or interested customers (Air Force program office, major contractor and others) who identify technology needs for your potential solution. These individuals will contact the CRP manager or associated CRP SBIR Acquisition R&D technology analyst (TA) to initiate transition discussions.

- Network at Air Force events to ensure your technology is marketed

### Major Defense Contractors

- Suggest topic ideas for consideration
- Participate in technology interchange workshops
- Work with the TPOCs and TAs to initiate the CRP process

### Air Force Customers

- Participate in generating and sponsoring SBIR|STTR topics
- Participate in PEO workshops
- Work with TAs to identify transition candidates

The **primary objective** is to **accelerate the transition of SBIR|STTR developed technologies into real-world military and commercial applications.**



HOW TO ACHIEVE  
PHASE III



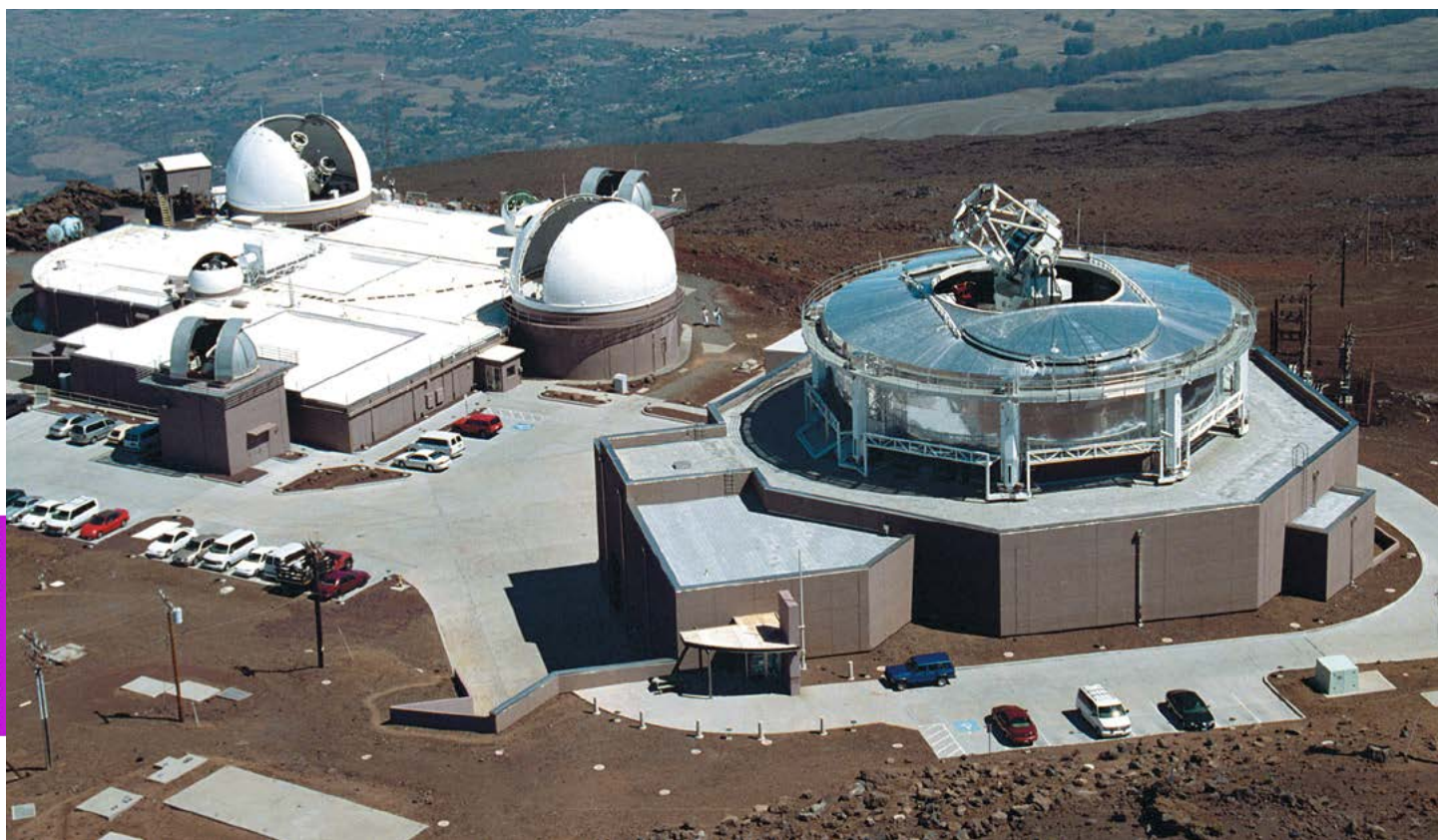
# HOW TO ACHIEVE PHASE III

## APPROACH TO TRANSITION

The TAs are linked to the following Air Force centers or programs:

- Air Force Life Cycle Management Center (AFLCMC)
- Air Force Nuclear Weapons Center
- Air Force Research Laboratory (AFRL)
- Air Force Sustainment Center (AFSC)
- Air Force Test Center
- Space and Missile Systems Center
- Joint Strike Fighter (JSF) Program

As identified previously, the key elements of a CRP transition effort are an identified interested Air Force customer, and a defined need and an SBIR|STTR technology that potentially meets the need. In order to establish better communication and identify needs with Air Force customers, TAs are on location at various Air Force bases supporting Air Force partners, including PEOs, program offices, AFRL and others. The TAs work closely with these organizations to help implement the entire SBIR and STTR process, from topic generation to facilitating the transition of resulting technologies. This close working environment allows the TA to have a better understanding of the customer and their needs. The TAs work as a team to increase the effectiveness of the SBIR and STTR programs by aligning topics with stakeholder needs and promoting major defense contractors' SBIR and STTR transition activities.





# HOW TO ACHIEVE PHASE III

## HOW CUSTOMER, NEED AND TECHNOLOGY ARE IDENTIFIED AND VERIFIED

The TAs identify and verify customers, needs and technologies using several methods:

### Supporting Technology Meetings

TAs participate in a multitude of Air Force, DoD, SBA, and Industry events to work with stakeholders and support SBIR|STTR technology transition.

- **Tailored Events** - this approach involves participating or leading meetings that can be tailored to a variety of stakeholders; Air Force PEO/Center, Industry, or a by SBIR|STTR Phase. Examples of these meetings include, but are not limited to, Air Force Small Business Industry Days, Technology Interchange Meetings, Pitch Days, and Road Tours.
- **Data Mining** - this approach is used in preparation for meetings and also as a tool to assist acquisition program managers to conduct a historical search of DoD SBIR|STTR technologies. The TAs work with the PEOs/program offices and major contractor/suppliers to query the DoD SBIR|STTR databases against identified needs and pinpoint innovative SBIR|STTR technologies that match their needs.

### Transitioning Phase II Portfolio

PEO and industry ad-hoc requests - this approach involves the TA working directly with PEOs/program offices and/or industry partners to data-mine DoD SBIR|STTR databases against identified needs and pinpoint innovative SBIR|STTR technologies based on specific ad-hoc requests.

### Facilitating topic alignment with PEOs

Topic teams - this approach, comprised of the TPOC and the sponsor point of contact, involves regular assessments by the topic teams to determine where there is high interest in moving forward on SBIR|STTR project results.

Major defense contractor topic concepts - this approach involves the major contractors/suppliers providing input to the TAs and topic teams to assist with development of SBIR|STTR topics that match identified future needs. Major contractors/suppliers track and label projects of interest to them, these are occasionally made available on their websites.



# HOW TO ACHIEVE PHASE III

## HOW ACCELERATED TECHNOLOGY TRANSITION AND MATURATION STRATEGIES ARE DEVELOPED AND IMPLEMENTED

For those projects where major contractors/suppliers and/or government partners have expressed interest in engaging with the Air Force in the development of an SBIR|STTR technology, the assigned TA notifies the topic team, the Air Force CRP PM and the Air Force SBIR|STTR PM.

The TA works directly with all stakeholders in order to realize successful technology implementation by understanding the variant stakeholder needs, establishing stakeholder actions, assessing and mitigating risks, and tracking the implementation effort, overcoming hurdles, and quantifying results. They work to ensure that stakeholders all sides are able to assess the technology's current maturity and functionality and what if any developments are needed for implementation.

## RESOURCES

For a more detailed overview about the CRP, please see the Air Force SBIR website at the following link:

<https://www.afsbirsttr.af.mil/Program/CRP-Phase-II/>

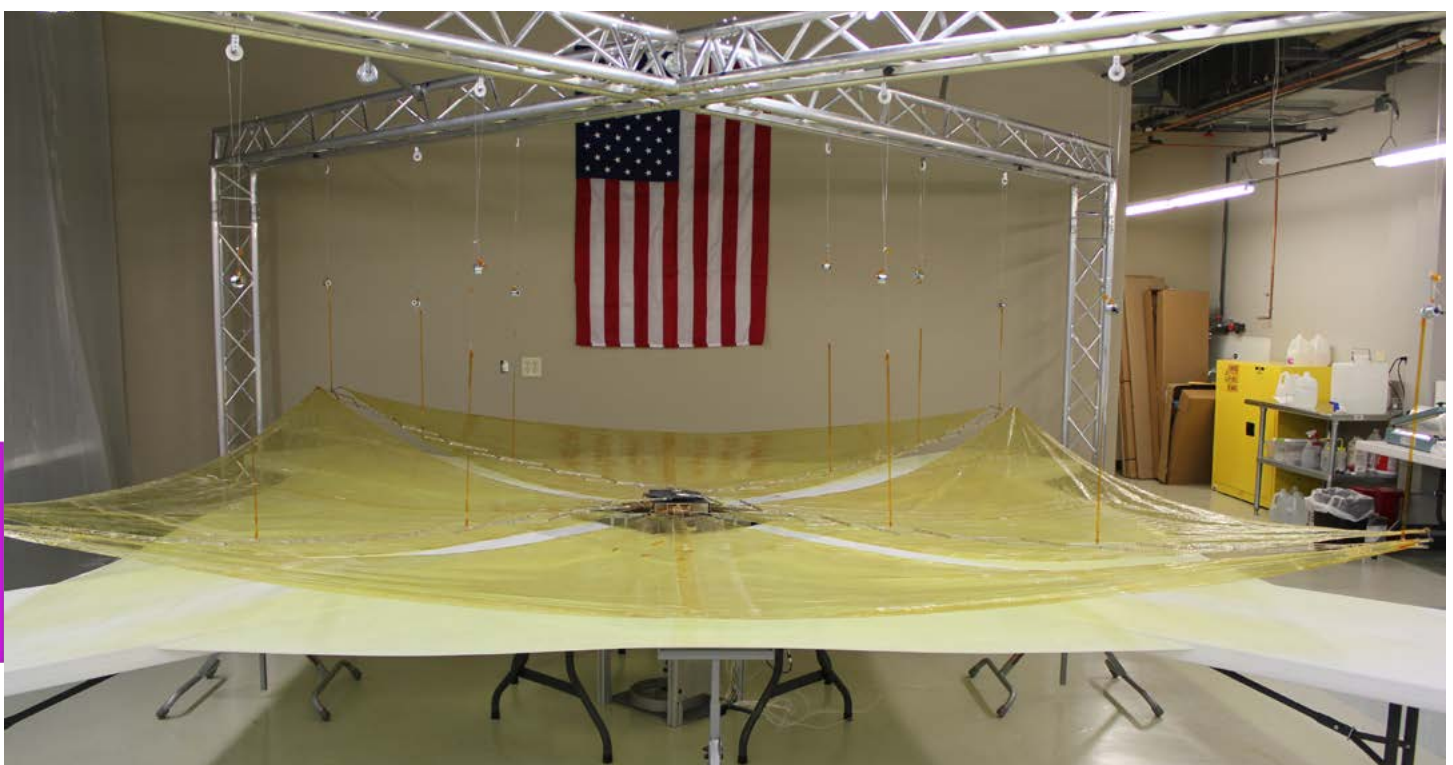
## POINTS OF CONTACT

For CRP questions,  
contact

[afsbircrp@brtrc.com](mailto:afsbircrp@brtrc.com)

For general questions  
about SBIR|STTR,  
refer to

[https://www.  
afsbirsttr.af.mil](https://www.afsbirsttr.af.mil)



HOW TO ACHIEVE  
PHASE III

# FREQUENTLY ASKED QUESTIONS

## **Can a SBIR|STTR Phase III contract be awarded to a company which has either outgrown the small business size standard or which has been acquired by a large business?**

Yes. Per the SBA policy directives, a Phase III contract may be awarded to a firm that has outgrown the small business size standard, or to a novated awardee, or to a successor in interest, such as an acquiring company. There are no National American Industry Classification System (NAICS) code size limits applicable to Phase III and no limits on company or contract size, contract duration, type/color of money or number of Phase III awards on a topic. In cases of successor in interest or novation, an original awardee may be required to relinquish its rights and interests in a SBIR|STTR project in favor of another applicant as a condition for that applicant's eligibility to participate in the SBIR|STTR program for a particular project.

## **Can a Phase III contract be initiated before the Phase II effort is complete?**

Yes. The SBA policy directive indicates that a federal agency may enter into a third-phase agreement at any time with a Phase I or Phase II awardee.

## **Can the Phase III effort be added to an existing Phase II contract?**

Yes. It may be possible to add non-SBIR|STTR funds to a Phase II contract to accomplish additional work. If the new work would significantly increase the value of the contract or is outside the scope of the tasks proposed under the competitive Phase II contract, a new contract would be more appropriate. A separate Phase III contract is preferred so that the Air Force receives credit for the Phase III award.

## **Can a Phase III requirement be procured using simplified acquisition techniques?**

Yes. If the dollar value of the Phase III effort is below the simplified acquisition threshold or if the procurement meets the requirements of FAR 13.5 for commercial items, the simplified process may be utilized.

## **Must an RFP or BAA be issued for a Phase III effort?**

No. A Phase III contract could result from an unsolicited proposal, simplified acquisition announcement, an ordering process allowed under Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts, Multiple award contracts, or a non-competitive award. No J&A is required if the award is based on any competitive announcement (RFP, BAA, etc.) In all cases (competitive and non-competitive), the contract award must include the SBIR|STTR data rights clause (DFARS 252.227-7018).

## The U.S. Department of Defense SBIR|STTR website

[www.acq.osd.mil/osbp/sbir/about/governing-laws-directives.shtml](http://www.acq.osd.mil/osbp/sbir/about/governing-laws-directives.shtml)

Serves as an excellent resource to help address questions and concerns about this program. The website describes program objectives, governing laws and directives, commercialization and program reports.

## **Can a Phase III contract include options for additional work or additional quantities?**

Yes. However, the use of options needs to be justified in accordance with FAR 17.205.

## **Must a Phase III contract be approved by the Air Force SBIR|STTR Program Management Office?**

No. The Air Force SBIR|STTR Program Management Office does not approve Phase III contract, though the program office should be informed of the procurement and may provide advice and support. However, the contract must be correctly reported as Phase III in FPDS-NG, under the "Competition Information" category.

## **How do I know if a proposed effort is an SBIR|STTR derived product or process?**

The product must extend, derive from, or complete efforts developed under a previously awarded Phase I or Phase II funding agreement, as described in Chapter III. The SBIR|STTR Program Management Office for the topic/award for Phase I/II can assist you in determining whether or not the work is appropriate for Phase III.

## **Can multiple Phase III contracts be awarded to the same firm?**

Yes. There is no limit in the number of Phase III contracts that may be awarded to the same firm.

## **Must a Phase III contract be a fixed price effort?**

No. Any type of contract can be used. The CO makes the final determination regarding selection/negotiation of contract type.



# FREQUENTLY ASKED QUESTIONS

## ***How long after the completion of a Phase I or Phase II contract can a Phase III be issued?***

There is no statutory time limit for the issuance of a Phase III contract. Under DFARS 252.227-7018, the DoD SBIR|STTR awardee retains exclusive data rights for five years after the completion of the Phase II effort. Given the rapid pace of technological development in many industries, it is possible that SBIR|STTR technology that is more than five years old may no longer be the most advanced technology available. However, even if five years have passed, it should not be presumed that the SBIR|STTR is not a viable source.

As a general rule, the longer the period of time since the completion of the Phase II, the more carefully the status of the technology and other products available in the open market should be reviewed. As a minimum guideline, if five years have passed since the completion of the Phase II effort, a market survey should be performed to ensure that other sources are not available.

## ***What data rights issues need to be addressed in a Phase III contract?***

Data rights issues will vary. In some cases, the Phase III contract will be for the procurement of a commercialized product. In that case, the data rights provisions used in commercial contracts would apply. (See FAR 12.122, Technical Data Rights provisions under commercial contracts.) The most recent Congressional reauthorization of the SBIR|STTR program includes provisions clarifying that Congress intends to have the special “Rights in Data – SBIR Program” clause at FAR 52.227-20 apply to all three phases of the program. This is addressed in the SBA SBIR Policy Directive and clearly indicates that SBIR|STTR data rights apply to Phase IIIs as well as the first two phases of the program.

## ***Are Phase III sole source awards permissible?***

Yes. Because the competition for SBIR|STTR Phase I and Phase II awards satisfies any competition requirement of the Armed Services Procurement Act, the Federal Property and Administrative Services Act and the Competition in Contracting Act. Therefore, an agency that wishes to fund an SBIR|STTR Phase III project is not required to conduct another competition in order to satisfy those statutory provisions. An unusual aspect of Phase III is that no size limits apply to the awardee, unlike Phase I and II. As a result, these directed award rights accrue to acquirers of SBIR|STTR firms, or firms that receive SBIR|STTR technology rights through novation agreements.

## ***Is use of a Phase III contract mandatory if I am aware of other firms with similar capabilities as the former SBIR|STTR contractor?***

No. Use of a Phase III contract is not mandatory if you are aware of other firms with capabilities similar to the former SBIR|STTR contractor. If multiple sources are available for an item or if similar technologies are available on the open market, the government’s needs may best be met through a competitive procurement. However, in accordance with the policy directive, agencies must notify the SBA of any instance where an agency pursues research, development or production of a technology developed by a SBIR|STTR awardee, with a business concern or entity other than the one that developed the SBIR|STTR technology.

In general, the longer the period of time since the completion of the Phase II, the greater the likelihood that the technology is no longer unique. If more than five years have passed since the completion of the Phase II, a market survey should be performed to determine if the same or similar technology is available from multiple sources. The contract file should be documented regarding market survey results.

## ***What funding should be used for Phase III contracts?***

Phase III monies can come from the government – any color of money except SBIR|STTR funds – and/or the private sector.

## ***Can a proposal from a company that was selected for Phase I funding and has established a new company be transferred to the new company before the award is made?***

No. An award can only be made to the company that submitted the proposal. The contract can then be novated to the new company after contract award.

## ***When a large firm acquires an SBIR|STTR recipient with an active Phase II, are you aware of any special procedures they need to undertake to transfer the contract to the acquiring firm? Is it just a contract mod to reflect the name of the new entity?***

The administrative contracting officer (ACO) would typically modify the SBIR contract to reflect the name of the acquiring company. The ACO would base the action on the supporting documentation provided by the contractors. If the contract wasn’t delegated to an ACO for administration, the awarding CO would be the person to modify the contract.

# FREQUENTLY ASKED QUESTIONS

## **How does a CO perform a Phase III status evaluation?**

Phase III candidacy is rooted in statute language: “Federal agencies, to the greatest extent practicable, shall issue Phase III awards to the SBIR|STTR awardee that developed the technology.” Although an SBIR|STTR awardee is eligible for contract work that “derives from, extends, or completes prior SBIR effort and is funded with non-SBIR funds” – if that firm developed the subject SBIR|STTR technology – there is no right to a contract. Rather, that firm’s Phase III eligibility imposes an obligation to engage in a J&A process whereby a CO, supported by the PM, determines whether the SBIR firm is 1) available to perform the requirement and 2) capable of doing so. The pre/post-business clearances for negotiation with a SBIR|STTR firm should contain a documented assessment, based on price comparisons, past performance and related evidence of competency needed to support a Phase III contract. Although an SBIR|STTR awardee may request Phase III preference prior to or after an RFP, Rapid Innovation Fund (RIF) or BAA has been issued, it is the CO’s responsibility to determine Phase III status and execute contracts, with full documentation.

In conceptual Phase III assessment scenario, the first step is to determine if the work that the SBIR|STTR firm would do to achieve an announcement’s requirement set meets the Phase III definition. If it does, the second step is to evaluate whether the firm could meet all or part of the requirement set. It is possible to split the requirement if the SBIR|STTR firm can only complete a portion, but that may not be an acceptable approach. (If it is determined that a single contract is needed and the SBIR|STTR firm is not proposing an approach that would meet the entire requirement, such as teaming or subcontracting, a CO would move forward with the open announcement and notify bidders of the SBIR|STTR firm’s capability as a potential subcontractor.)

The third step is to determine whether the firm has the capability to perform the work (It would not need to have the capability prior to award, but would need to be able to show how it would develop that capability). The CO should evaluate whether the proposal is competitive through rate comparisons, reviewing past performance and executing market assessments. If the proposals meet required performance parameters, it can be approved. An announcement to receive other bids for comparison could be published, but this should be a last resort and the CO must be extremely careful not to release any SBIR|STTR protected data. If it is determined that the requirement is not a Phase III, or that the firm is not available or capable, that would end an SBIR|STTR firm’s assertion of Phase III rights. All of this must be clearly documented in the Air Force SBIR|STTR Program Managers Database and the Federal Procurement Data System (FPDS-Next Generation.)

## **How do companies go about extending their data rights from Phase I to Phase II to Phase III?**

What action do they need to take, for example, to update their legends? The small business is primarily responsible for ensuring that their data rights are correctly reported and maintained. SBIR|STTR contractors should always ensure that any data or software that they deliver is correctly marked, IAW DFARS 252.227-7018 and they maintain records sufficient to justify the validity of any restrictive markings on data, computer software, or computer software documentation delivered under the contract. Small businesses should assert their data rights from previous SBIR|STTR efforts when proposing follow-on efforts. This will incorporate those data rights into the new award, which will extend the data rights for five years under the new contract.

## **Can a company get scientific consultation with a partner in a foreign country, with or without pay for service? Does it matter?**

If the foreign consultation is part of the contract (paid or unpaid) then approval from the CO must be received. In accordance with the SBIR Policy Directive, for both Phase I and Phase II, the R/R&D work must be performed in the United States. However, based on a rare and unique circumstance, agencies may approve a particular portion of the R/R&D work to be performed or obtained in a country outside of the United States, for example, if a supply or material or other item or project requirement is not available in the United States. The funding agreement officer must approve each such specific condition in writing.

If the topic is subject to export controls, including International Traffic in Arms Regulation (ITAR) and Export Administration Regulations then an export license would be required prior to the foreign consultation.

## **Can a contractor subcontract to an American subsidiary of a foreign firm and still be eligible to participate in the SBIR program? For example, if a U.S. citizen works for the foreign firm and the contractor says eligibility requirements will be met since the U.S. citizen can come back to the states to do the work under the auspices of the U.S. subsidiary; then, does that meet the SBIR requirements?**

The SBIR Policy Directive states work must be performed in the U.S. and the decision to waive that requirement rests with the cognizant CO with adequate justification. Restrictions allow foreign nationals to work on SBIR|STTR contracts, as long as their participation is limited to information that falls within the public domain.

# FREQUENTLY ASKED QUESTIONS

***If a SBIR|STTR Phase II contractor's size limit changes to that of a large business in the course of performance, whether through growth of the company or buy-out of the small business by a large business, can performance of the basic Phase II contractual effort continue?***

Yes. Performance of the basic Phase II contractual effort can continue. However, no new work can be added to the Phase II contract.

SBIR|STTR Phase I and II small business size limits do not apply to SBIR|STTR Phase IIIs. Therefore, a Phase III can be awarded to a large business that has acquired a small business, including its SBIR|STTR data rights, or to an SBIR|STTR company that has grown to exceed the size status limits for a small business.

Although the purpose of the DoD SBIR|STTR Program is to foster the innovative talents of our nation's small technology companies for U.S. military and economic strength, the ultimate objective is development and commercialization of resulting technologies for the benefit of the warfighter. If a small company determines the most appropriate method for accomplishing that objective is to sell their SBIR|STTR data rights to another company, regardless of size status, they have that right.

***Can a Phase III be awarded from a Phase II that recently ended the period of performance or does it have to be awarded before the end of the period of performance?***

A Phase III contract can be awarded at any time as long as it results from the Phase I or Phase II. The Phase II contract would not have to be completed or could have been completed in the past.

***I am getting ready to start working two new SBIR|STTR Phase III requirements, one for about \$13 million, the other for about \$6 million. Both would normally require some kind of acquisition plan, known as "AP," but non-operational actions not requiring a streamlined or formal/written AP, as found under AFMC FARs 5307.104-92(e)(90) include, "The SBIR program, including the STTR program (for example, DoD-wide program planning/announcement)." Is this also the case with Phase III given the funding is not DoD SBIR|STTR money and comes from the organization that is requesting the product of service?***

According to the above referenced AFMC FAR, an AP is not needed, but an AP should be required because it is no longer SBIR|STTR monies paying for the product, or the service and the money has not been accounted for. Because AFMC FAR does not make a distinction regarding the phases of the program covered by the exception, a full-blown AP is not required for Phase IIIs; however, one can be accomplished. At a minimum, a Determination and Finding, signed by the CO, regarding how an SBIR|STTR Phase III was determined to be the appropriate award type should be included in the file.

There is no prescribed format for this documentation. However, the portion of the SBIR Policy Directive relating to Phase IIIs, found in Section 4, "Competitively Phased Structure of the Program," (c), "Phase III," can be used to build your file documentation. The definition of a Phase III is "SBIR Phase III refers to work that derives from, extends, or logically concludes effort(s) performed under prior SBIR funding agreements, but is funded by sources other than the SBIR Program. Phase III work is typically oriented towards commercialization of SBIR research or technology."

To further identify the portion of section (1) met by your specific effort, the three choices include:

- Commercial application of SBIR|STTR-funded R/R&D financed by non-federal sources of capital (Note: The guidance in this policy directive regarding SBIR|STTR Phase III pertains to the non-SBIR|STTR federally-funded work described below. It does not address the nature of private agreements the SBIR|STTR firm may make in the commercialization of its technology.);
- SBIR|STTR-derived products or services intended for use by the federal government, funded by non-SBIR|STTR sources of federal funding; or
- Continuation of R/R&D that has been competitively selected using peer review or scientific review criteria, funded by non-SBIR Federal funding sources.

Language should be included from the PM that verifies which Phase III choice applies. Based on this, you can then logically conclude that the use of an SBIR|STTR Phase III is appropriate for your purposes. If you feel more comfortable accomplishing a full-blown AP for your efforts, there is nothing that would prevent you from doing so.

***Are patent establishment (the initial set up of the patent) costs allowable for a company's general product line for patents established prior to an SBIR|STTR contract? And, are patent annuities (annual fees paid to maintain an already established patent) allowable for a company's general product line for patents established prior to an SBIR|STTR contract?***

None of the costs above could be applied as direct costs to any SBIR|STTR Phase I; however, they might be included in the company's indirect cost pool. Because the patent costs described do not pertain specifically to the Phase I contract, they would not be an allowable direct cost under the Phase I contract.



# FREQUENTLY ASKED QUESTIONS

***Are Phase II awards required to be audited by the Defense Contract Audit Agency (DCAA) regardless of the type of contract negotiated (firmed-fixed price vs. cost-reimbursement)?***

COs may request a DCAA audit to support their determination of price fair and reasonableness and award rationale. This is most typically done with cost type contracts and sole source firm fixed price (FFP) contracts, when information from other sources may not be available. However, DCAA audits may be requested in conjunction with information available from other sources if the Procuring Contracting Officer (PCO) determines that it is necessary.

In accordance with FAR 42.101(a), the auditor is responsible to submit information and advice to the requesting activity based on the auditor's analysis of the contractor's financial and accounting records or other related data as to the acceptability of the contractor's incurred and estimated costs; reviewing the financial and accounting aspects of the contractor's cost control systems; and performing other analyses and reviews that require access to the contractor's financial and accounting records supporting proposed and incurred costs.

DCAA audits are not normally requested for FFP contracts awarded via competition -- since the PCO can usually ascertain price fair and reasonable through the competitive environment in which proposals are offered. In addition, FFP contracts place cost growth risk on the contractor, so the government typically doesn't need an in-depth analysis of contractor cost control systems.

***If I win a Phase II, 50 percent of the work must be done at my firm. I have assumed that 50 percent includes what I spend on parts. What if the parts I need to buy are sold by a subsidiary of my subcontractor? Since it's a direct purchase of standard parts, does that still fall within the 50 percent spent by my company?***

If the prime contractor intends to purchase the material directly from the subcontractor's subsidiary and the charge is included in his direct costs, it would apply to the prime's 50 percent. However, if the material is to be purchased by the subcontractor and is included as a direct charge in the sub's cost proposal, it would not count as part of the prime's 50 percent.

***If a company receives a Phase III contract based on work done in a Phase I SBIR|STTR before they have been awarded the Phase II, is that company disqualified for applying for the Phase II award?***

Part 4, "Competitively Phased Structure of Program," Section (c) "Phase III (5)," on page 13 of the SBA SBIR Policy Directive states that "... a Federal agency may enter into a Phase III SBIR agreement at any time with a Phase I awardee." We can find no follow-on prohibition to preclude the Phase III recipient from then submitting a proposal for the Phase II. The effort proposed must meet the intent of a Phase II and cannot duplicate the effort being performed under the Phase III.

***Regarding DFARS clause 252.204-7000 Disclosure of Information, does it remain in effect at the completion of an SBIR|STTR contract? And if so, for how long?***

The prescription for DFARS 252.204-7000 is 204.404-70. Additional contract clauses, part (a) which states "Use the clause at 252.204-7000, Disclosure of Information, in announcements and contracts when the contractor will have access to or generate unclassified information that may be sensitive and inappropriate for release to the public." The clause applies to any unclassified information generated under the contract and applies indefinitely.

***Is there a definition for "favorable consideration" as it relates to award of a Phase III?***

There is no definition for "favorable consideration." In the case of a major weapons system, it would be more likely that SBIR technology could be introduced at the subcontractor (even 2nd or 3rd tier) level rather than the prime. It would be anticipated that any favorable consideration would go to primes for making an effort to incorporate SBIR technology into their proposed platform. If desired, the acquisition team of any non-SBIR|STTR program could incorporate language into the evaluation factors giving more weight to a proposal incorporating SBIR|STTR technology(ies).

# REFERENCES

**Arnold & Porter LLP**; SBIR Data Rights: Making Sense of the SBIR Laws for the DoD SBIR Training Conference; June 12, 2014.

**Better Buying Power 3.0**, White Paper, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD) (AT&L), the Honorable Frank Kendall, Sept. 19, 2014.

**Chapter II FAQs** for detailed instructions on how to perform a “Phase III preference” evaluation.

“**Commercialization**” is defined in the SBA SBIR and STTR Policy Directives at § 3(f) as “The process of developing products, processes, technologies, or services and the production and delivery (whether by the originating party or others) of the products, processes, technologies, or services for sale to or use by the Federal government or commercial markets.”

**Competition in Contracting Act** of 1984 (CICA), 41 U.S.C. 253.

**Defense Contractors SBIR|STTR Partnering Manual – A Primer on Technology Risk Management**; August 2008.

**Descriptions of SBIR|STTR phases** are found at the SBA SBIR|STTR website: [www.sbir.gov](http://www.sbir.gov); at the DoD SBIR|STTR website: [www.dodsbir.net](http://www.dodsbir.net) and the Air Force SBIR|STTR website: <https://www.afsbirsttr.af.mil>

**Detailed matrix of Air Force SBIR|STTR points of contact**, see [www.sbir.gov](http://www.sbir.gov).

**DFARS 252.227-7018** The prescriptive language for the Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program clause reads as follows: Under the clause at **252.227-7018**, the Government obtains SBIR data rights in technical data and computer software generated under the contract and marked with the SBIR data rights legend. SBIR data rights provide the Government limited rights in such technical data and restricted rights in such computer software during the SBIR data protection period commencing with contract award and ending five years after completion of the project under which the data were generated. Upon expiration of the five-year restrictive license, the Government has unlimited rights in the SBIR technical data and computer software.

**DoD Defense Acquisition University**; *Manager’s Guide to Technology Transition*; June 2005; pg. 2-24 et seq.

**DoD Instruction 5000.02** (January 7, 2015); Table 2. *Milestone and Phase Information Requirements*; Enclosure 1, pg. 5.

**DoD OSA Data Rights Team**; DoD OSA Contract Guidebook for Program Manager v.1.1; June 2013; pp. 77-80.

“**Extramural research**” is defined in the *Small Business Administration’s SBIR and STTR Policy Directives* (Feb. 7, 2014) at § 3(f) as “The sum of the total obligations for R/R&D minus amounts obligated for R/R&D activities by employees of a Federal agency in or through Government-owned, Government-operated facilities.”

**Improving Services Acquisition Tradecraft**, “*Services Acquisition Is Not for Amateurs*,” by Peter Czech and John Mueller, featuring Dr. Ashton B. Carter, Testimony before the Senate Committee on Armed Services, Sept. 28, 2010 retrieved at: [www.dau.mil/pubscats/ATL%20Docs/July-Aug11/Czech\\_Mueller.pdf](http://www.dau.mil/pubscats/ATL%20Docs/July-Aug11/Czech_Mueller.pdf)

**Inspector General** – Department of Defense; “DoD Considered Small Business Innovation Research Intellectual Property Protections in Phase III Contracts, but Program Improvements are Needed;” March 27, 2014.

**National Defense Authorization Act of 2012**; Title XVI *SBIR and STTR Reauthorization Act*; Sec. 5122, Public Law 112-81, 125 Stat. 1298.

**OSD’s Office of Small Business Programs (OSBP)** commenced SBIR|STTR goal setting with USD AT&L memo “FY2014-2018 Defense Planning Guidance (Transition Planning Information for SBIR and STTR),” Jan. 7, 2015; DoD SBIR|STTR Incentives Planning, November 2013.

**P.L. 112-239**; § 1611 – 1615, 1622 – 1623 and 632 – 1633.

**P.L. 112-81 Division E**; SBIR and STTR Reauthorization Act; §5108; pg. 1069.

64 USD AT&L DoDI 5000.02 (Jan. 7, 2015); Table 2. *Milestone and Phase Information Requirements* (Enclosure 1, pg. 57).

**SBA**; *SBIR and STTR Policy Directives*; February 2014 [www.sbir.gov](http://www.sbir.gov); Sec. 4(c); § 4(b)(5); Sec. 4(c)(7).

# REFERENCES

**SBIR|STTR Reauthorization** extended the program first enacted in 1982 through 2020 via the 2018 John S. McCain National Defense Authorization Act.

***SBIR and STTR Reauthorization Act***; P.L. 112-81 Division E; §5108; pg. 1069.

**Section 638, Title 15**, United States Code (15 U.S.C. §638 [2012], 1 subsection r(4).

**Section 5001** Division E of FY 2012 NDAAN SBIR|STTR Reauthorization: Section 5108(4) – SBIR-STTR Special Acquisition Preference, Section 5122 – Goal for SBIR|STTR Technology Insertion and Section 5138 – Technology Insertion Reporting Requirements.

**Small Business Administration**; *SBIR and STTR Policy Directives*; February 2014; § 4(c)(1); § 4(c)(2); 4(c)(6); 4(c)(7). For reporting process and content, see 4(c)(8). Also see FAR 49402.

**Title XVI SBIR and STTR Reauthorization Act**. Pub. Law 112-81, 125 Stat. 1298; Sec. 5122.

**USAC 638(r)(4) Phase III Awards**; SBA; *SBIR and STTR Policy Directives*; February 2014; § 4(c)(8); § 10(h)(4); (e)(4); and (6).

**USD AT&L DoDI 5000.02** (January 2015); Table 2. *Milestone and Phase Information Requirements*.

**USD AT&L**; FY 2014-2018 Defense Planning Guidance (Transition Planning for SBIR|STTR); April 11, 2012.

**USD ATL**; Performance of the Defense Acquisition System, 2014 Annual Report; Jun 13, 2014; pg. iii.; pg. 81; pg. 101-102; pg. 103.

**USD AT&L**; Small Business Innovation Research (SBIR) Program Phase III Guidance; Dec. 8, 2008.

[www.acq.osd.mil/fo/docs/500002p.pdf](http://www.acq.osd.mil/fo/docs/500002p.pdf) (Jan. 7, 2015); Table 2. *Milestone and Phase Information Requirements*; pg. 47.

[www.sbir.gov/about/sbir-policy-directive](http://www.sbir.gov/about/sbir-policy-directive).

[www.sbir.gov](http://www.sbir.gov) inventories SBIR|STTR projects, including such artifacts as the SBIR|STTR Project Title Quad Chart.

[www.acq.osd.mil/osbp/sbir/sb/deskreference/](http://www.acq.osd.mil/osbp/sbir/sb/deskreference/).

**Please note:** Some references may have been updated since their original reference for this document, so page numbers, etc., may no longer be accurate.



# ACRONYM LIST

|                 |   |                      |  |
|-----------------|---|----------------------|--|
| <b>ACAT</b>     | Acquisition Category                              | <b>MAJCOM</b>        | Major Command  |
| <b>ACO</b>      | Administrative Contracting Officer                | <b>MDAP</b>          | Major Defense Acquisition Program                                    |
| <b>AFLCMC</b>   | Air Force Life Cycle Management Center            | <b>NAICS</b>         | National American Industry Classification System                     |
| <b>AFMC</b>     | Air Force Materiel Command                        | <b>OSA</b>           | Open Systems Architecture  |
| <b>AFRL</b>     | Air Force Research Laboratory                     | <b>OSBP</b>          | Office of Small Business Programs (for OSD)                          |
| <b>AP</b>       | Acquisition Plan/Policy                           | <b>OSD</b>           | Office of the Secretary of Defense                                   |
| <b>AT&amp;L</b> | Acquisition Technology and Logistics              | <b>PCO</b>           | Procuring Contracting Officer  |
| <b>BAA</b>      | Broad Agency Announcement                         | <b>PEO</b>           | Program Executive Office/Officer                                     |
| <b>CO</b>       | Contracting Officer                               | <b>PM</b>            | Program Manager  |
| <b>CRP</b>      | Commercialization Readiness Program               | <b>PMO</b>           | Program Management Office  |
| <b>DCAA</b>     | Defense Contract Audit Agency                     | <b>R&amp;D</b>       | Research and Development   |
| <b>DFARS</b>    | Defense Federal Acquisition Regulation Supplement | <b>RIF</b>           | Rapid Innovation Fund  |
| <b>DoD</b>      | Department of Defense                             | <b>R/R&amp;D</b>     | Research/Research and Development                                    |
| <b>DoDI</b>     | Department of Defense Instruction                 | <b>RDT&amp;E</b>     | Research Development Test and Evaluation                             |
| <b>DPM</b>      | Deputy Program Manager                            | <b>RFP</b>           | Request for Proposal   |
| <b>FAQ</b>      | Frequently Asked Question                         | <b>ROI</b>           | Return on Investment   |
| <b>FAR</b>      | Federal Acquisition Regulation                    | <b>SAMP</b>          | Single Acquisition Management Plan                                   |
| <b>FFP</b>      | Firm Fixed Price                                  | <b>SDVOSB</b>        | Service-Disabled Veteran-Owned Small Business                        |
| <b>FPDS-NG</b>  | Federal Procurement Data System                   | <b>S&amp;T</b>       | Science and Technology   |
| <b>GSA</b>      | General Services Administration                   | <b>SBA</b>           | Small Business Administration  |
| <b>GFE</b>      | Government Furnished Equipment                    | <b>SBIR</b>          | Small Business Innovation Research                                   |
| <b>GFI</b>      | Government Furnished Information                  | <b>SBC</b>           | Small Business Concern   |
| <b>HUBZone</b>  | Historically Underutilized Business Zone          | <b>SECDEF</b>        | Secretary of Defense   |
| <b>ID/IQ</b>    | Indefinite Delivery/Indefinite Quantity           | <b>STTR</b>          | Small Business Technology Transfer                                   |
| <b>IRAD</b>     | Independent Research and Development              | <b>TA</b>            | SBIR Acquisition R&D Technology Analyst                              |
| <b>ITAR</b>     | International Traffic in Arms Regulation          | <b>TPOC</b>          | Technical Point of Contact   |
| <b>J&amp;A</b>  | Justification and Approvals                       | <b>USD(AT&amp;L)</b> | Under Secretary of Defense for Acquisition, Technology and Logistics |
| <b>KPP</b>      | Key Performance Parameters                        |                      |  |
| <b>KSA</b>      | Key System Attributes                             |                      |  |



# POINTS OF CONTACT

## Air Force SBIR|STTR Program Management Office

1864 4th Street | Bldg 15, Rm 225 | Wright-Patterson AFB, OH 45433

### Online Resources for Small Businesses

[HTTPS://WWW.AFSBIRSTTR.AF.MIL](https://www.afsbirsttr.af.mil)

[afsbirsttr-info@us.af.mil](mailto:afsbirsttr-info@us.af.mil)

#### **AIR FORCE RESEARCH LABORATORY**

Leads discovery, development and integration of war-fighting technologies for air, space and cyberspace forces

AEROSPACE SYSTEMS - Alternative fuels, unmanned vehicles, hypersonic vehicles, collision avoidance

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH - Basic research, material and life sciences, math, physics

DIRECTED ENERGY - Laser systems, high power electromagnetics, weapons modeling and simulation

711<sup>TH</sup> HUMAN PERFORMANCE WING - Training, decision making, forecasting, performance

INFORMATION - Advanced computing architectures, cyber operations, information exploitation

MATERIALS AND MANUFACTURING - Materials and advanced manufacturing technologies for aircraft, spacecraft, missiles, rockets and ground-based systems

MUNITIONS - Explosives, weapons integration, guidance, fuses, navigation, control

SENSORS - Antennas, radar, reconnaissance, electronic warfare, microelectronics

SPACE VEHICLES - Spacecraft technology, battlespace awareness, experiment integration and evaluation

#### **AIR FORCE SUSTAINMENT CENTER**

Provides depot maintenance, supply chain management and installation support

#### **AIR FORCE TEST CENTER**

Conducts developmental test and evaluation of air, space and cyber systems

#### **AIR FORCE LIFE CYCLE MANAGEMENT CENTER**

Acquires and supports aircraft, engines, munitions, electronics, and cyber weapon systems and sub-systems

#### **AIR FORCE NUCLEAR WEAPONS CENTER**

Acquires and sustains affordable, timely and effective nuclear weapon systems

#### **F-35 JOINT STRIKE FIGHTER PROGRAM OFFICE**

Defines next-generation strike aircraft weapon systems for the Navy, Air Force, Marines, and U.S. allies

#### **SPACE AND MISSILE SYSTEMS CENTER**

Develops, acquires, fields and sustains military space systems

#### **AIR FORCE CIVIL ENGINEER CENTER**

Provides civil engineering services, requirements, RDT&E and systems acquisition supporting Air Force operations

#### **AIR FORCE SPECIAL OPERATIONS COMMAND**

Organize, train, equip, maintain and provide special operations airpower to combatant commanders

#### **AIR FORCE MEDICAL SUPPORT AGENCY**

Provides comprehensive consultant support and policy development to the Air Force Surgeon General

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