

U.S. ARMY

SBIR/STTR PROGRAMS



USER GUIDE

**SMALL BUSINESS INNOVATION RESEARCH (SBIR)
SMALL BUSINESS TECHNOLOGY TRANSFER (STTR)**

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INTRODUCTION AND PROGRAM OVERVIEW

This booklet provides a general overview of the Army Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs and the Chemical and Biological Defense (CBD) SBIR program. The following program information is included:

- » Introduction and Program Overview
- » The Army SBIR/STTR Programs
- » Proposal and Award Process
- » Phase III and Commercialization
- » Doing Business with the Government
- » Marketing Opportunities
- » Additional Information and Assistance

For the latest information on program schedules, policy changes, and business opportunities, visit the Army SBIR/STTR Web at www.armysbir.com or contact the Army SBIR or STTR Program Management Offices:

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Federal Program Overview

Congress established the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs to provide small businesses and research institutions opportunities to participate in government-sponsored research and development (R&D). SBIR was established in 1982 and has been reauthorized through 2008, while STTR was established in 1994 and has been reauthorized through 2009.

The goals of the SBIR and STTR programs are to: (1) stimulate technological innovation; (2) use small business to meet Federal R&D needs; (3) foster and encourage participation by socially and economically disadvantaged small business concerns (SBCs), and by SBCs that are 51 percent owned and controlled by women, in technological innovation; and (4) increase private sector commercialization of innovations derived from Federal R&D, thereby increasing competition, productivity and economic growth.

Congressional mandate requires that all federal agencies with an annual extramural R&D budget exceeding \$100 million participate in the SBIR program. The SBIR budget is computed as 2.5 percent of the agency's extramural R&D budget. The STTR budget is computed as 0.3 percent of the agency's extramural R&D budget.

The U.S. Small Business Administration (SBA) is responsible for administrative oversight of the Federal SBIR and STTR programs and develops policy and guidance and reports SBIR/STTR data and statistics to the Administration and Congress. Each federal agency manages its SBIR/STTR programs independently in accordance with SBA policy. The Army participates under the Department of Defense (DoD) SBIR/STTR program structure.

Three-Phase Program Structure

Both the SBIR and STTR programs use a three-phase program structure, reflecting the high degree of technical risk involved in developing and commercializing cutting edge technologies.

Phase I is a feasibility study that determines the scientific, technical, and commercial merit and feasibility of a selected concept. Phase I projects are competitively selected from proposals submitted against solicitations. Each solicitation contains topics seeking specific solutions to stated government needs.

Phase II represents a major R&D effort, culminating in a well-defined deliverable prototype (i.e., a technology, product, or service). The Phase II selection process is also highly competitive. Successful Phase I contractors are invited to submit Phase II proposals as there are no separate Phase II solicitations.

In **Phase III**, the small business or research institute is expected to obtain funding from the private sector and/or non-SBIR/STTR government sources to develop the prototype into a viable product or service for sale in the Government or private sector markets.

Eligibility Requirements

To qualify for the SBIR and STTR program, a firm must meet the following criteria:

Organized for profit, with a place of business located in the United States, which operates primarily within the United States or which makes a significant contribution to the United States economy through payment of taxes or use of American products, materials or labor;

In the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the form is a joint venture,

there can be no more than 49 percent participation by business entities in the joint venture;

At least 51 percent owned and controlled by one or more individuals who are citizens of, or permanent resident aliens in, the United States, or it must be a for-profit business concern that is at least 51% owned and controlled by another for-profit business concern that is at least 51% owned and controlled by one or more individuals who are citizens of, or permanent resident aliens in, the United States -- (except in the case of a joint venture);

And

Has, including its affiliates, not more than 500 employees.

The small business may subcontract a portion of its work, as long as the small business "prime" performs at least two-thirds of the Phase I work and half of the Phase II work. For the purposes of determining compliance, percent of work is usually measured by both direct and indirect costs; however, the actual method of measurement will be verified during contract negotiations.

The STTR program is open to any team consisting of a small business (as defined previously) and a research institution. Central to the program is expansion of the public/private sector partnership to include the joint venture opportunities for small business and the nation's premier nonprofit research institutions. STTR's most important role is to foster the innovation necessary to meet the nation's scientific and technological challenges in the 21st century. The research institution may be any U.S.-based nonprofit research institution, federally funded research and development center (FFRDC), or university or college. The small business must perform at least 40% of the Phase I and Phase II work. The research institution must perform at least 30% of the Phase I and Phase II work. Any part of the remaining 30% of the work may be subcontracted.

For the SBIR program Phase I and II efforts, the primary employment of the principal investigator must be with the small business firm at the time of the award and during the conduct of the proposed effort. Primary employment means that more than one-half of the principal investigator's time is spent with the small business. For the STTR program Phase I and II efforts, the principal investigator may be primarily employed with either the small business or the research institution.

In both programs, the Phase I and Phase II work must be performed in the United States, to include the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia.

Department of Defense (DoD) Program Overview

DoD issues four solicitations, three SBIR and one STTR, each year. The DoD SBIR/STTR Office coordinates with twelve DoD components to develop and execute SBIR and STTR solicitations:

- » U.S. Army (USA)
- » U.S. Navy (USN)
- » U.S. Air Force (USAF)
- » Defense Advanced Research Projects Agency (DARPA)
- » Missile Defense Agency (MDA)
- » Defense Threat Reduction Agency (DTRA)
- » Chemical and Biological Defense (CBD) Program
- » Special Operations Command (SOCOM)
- » National Geospatial-Intelligence Agency (NGA)
- » Defense Logistics Agency (DLA)
- » Defense Microelectronics Activity (DMEA)
- » Office of the Director, Defense Research and Engineering (DDR&E)

The Army SBIR/STTR Programs

The Army SBIR/STTR effort consists of three distinct and independent programs:

Army SBIR. The Army SBIR program is designed to provide small, high-tech businesses the opportunity to propose innovative R&D solutions in response to critical Army needs. The executive agent for the Army SBIR program is the Program Manager (PM), Army SBIR, a non-acquisition activity within the Army Research, Development and Engineering Command. PM, Army SBIR coordinates SBIR activities across the Army research laboratories and centers and Program Executive Offices (PEOs) spanning the Army's R&D efforts.

Army STTR. The Army STTR program is managed by the the U.S. Army Research Office (ARO), in Research Triangle Park, North Carolina. The management of the STTR program mirrors the SBIR program in many respects; however, the most important distinction is that all proposals must be submitted by a small business that has established a strategic partnership with a research institution. ARO oversees the Army's investment in Basic Research, which is generally performed by the nation's research institutions. As such, ARO plans and coordinates the Army's STTR program. Like SBIR, the STTR program spans Army R&D. Although ARO performs and manages most STTR Phase I efforts, it delegates a significant number of Phase II contracts to other organizations as the technology moves beyond basic research and towards a well-defined product.

CBD SBIR. The Army is responsible for executing the Chemical and Biological Defense (CBD) SBIR program for the Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD). JSTO-CBD is part of the Defense Threat Reduction Agency (DTRA). PM Army SBIR coordinates with JSTO-CBD and the relevant Army, Navy, and Air Force laboratories and the Special

Operations Command to execute the CBD SBIR program. The JSTO-CBD oversees CBD SBIR topic generation in addition to Phase I and Phase II proposal evaluation and selection. A Capability Area Program Officer (CAPO) assigns individual SBIR projects selected for award to a Technical Monitor who is responsible for contract execution and technical oversight of approved Phase I and Phase II Work Plans.

Participating Organizations

The following Army participating organizations are responsible for generating SBIR and STTR topics to be included in solicitations, for evaluating proposals received against these topics, and for awarding and monitoring all contracts:

U.S. Army Research, Development and Engineering Command

- » Army Research Laboratory and Army Research Office
- » Aviation and Missile Research, Development and Engineering Center
- » Communications-Electronics Research, Development and Engineering Center
- » Natick Soldier Research, Development and Engineering Center
- » Edgewood Chemical Biological Center
- » Armament Research, Development and Engineering Center
- » Tank Automotive Research, Development and Engineering Center
- » Simulation and Training Technology Center

U.S. Army Test and Evaluation Command

- » Developmental Test Command

U.S. Army Corps of Engineers

- » Engineer Research and Development Center

Deputy Chief of Staff for Personnel

- » Army Research Institute

Army Medical Command

- » Medical Research and Materiel Command

U.S. Army Space and Missile Defense Command

- » Space and Missile Defense Command

Additionally, Army Acquisition Program Executive Offices and Army/Joint direct reporting programs participate in the SBIR program:

Army Acquisition Program Executive Offices (PEOs)

- » PEO Aviation
- » PEO Simulation, Training and Instrumentation
- » PEO Ammunition
- » PEO Ground Combat Systems
- » JPEO Chemical and Biological Defense
- » PEO Combat Support and Combat Service Support
- » PEO Intelligence, Electronic Warfare and Sensors
- » PEO Soldier
- » PEO Missiles and Space
- » PEO Enterprise Information Systems
- » PEO Command, Control, Communications – Tactical
- » PM Future Combat Systems Brigade Combat Team
- » PM Joint Tactical Radio System
- » Single Integrated Air Picture Joint Programs Office

Program Structure

The Army follows the Federal three-phase program structure for SBIR and STTR, with one unique opportunity within SBIR:

Phase I Option. The Phase I Option is designed to reduce and mitigate the effects of the traditional funding gap

between Phase I and Phase II SBIR contract efforts. Historically, this gap has placed an undue burden on small businesses with limited resources as they struggle to retain their personnel and facilities pending a Phase II decision.

Each SBIR Phase I contract has an embedded option, which may be exercised at the Army's discretion to fund initial Phase II activities while the Phase II contract is being negotiated. Phase I options will be exercised only for those Phase II proposals selected for negotiation and award. The Phase I Option may be up to \$50,000, covering a period of up to four months. Therefore, each Phase I proposal must address the Phase I effort (6 months, up to \$70,000) and the Phase I Option to conduct initial Phase II efforts (four months, up to \$50,000).

There are several basic differences between the SBIR, STTR, and CBD SBIR programs within the three-phase structure. The following table compares the three programs.

	SBIR	CBD SBIR	STTR
PHASE I	6 months \$70,000 max	6 months \$70,000 max	6-12 months \$100,000 max
Phase I Option			
	4-month option (Government's discretion), \$50,000 max, to fund interim Phase II efforts	4-month option (Government's discretion), \$30,000 max, to fund interim Phase II efforts	No option
PHASE II	2 years \$730,000 max	2 years \$750,000 max	2 years \$750,000 max
PHASE III	Unlimited time Non-SBIR funding	Unlimited time Non-SBIR funding	Unlimited time Non-STTR funding

Proposal and Award Process

Topic Development

Each year the Army participating organizations develop topics addressing their current missions and priorities. Topics generally are influenced by the Army Science and Technology Master Plan (ASTMP), identified deficiencies in Army programs, and the Army's Force Operating Capabilities (FOCs) as defined by the Army Training and Doctrine Command (TRADOC). These topics receive a multi-level review, both by the Army and independently at the Department of Defense level by the Office of the Director, Defense Research and Engineering, prior to approval for inclusion in an annual solicitation.

Current and past topics may be found on the DoD SBIR/STTR Interactive Topic Information System (SITIS) at www.dodsbir.net/topics.

Solicitations

DoD issues four solicitations (three SBIR and one STTR) each year. The table below references specific months of the year, but the actual dates are subject to change. Check the DoD SBIR/STTR Web at www.acq.osd.mil/osbp/sbir for the latest solicitation date information.

	SBIR 20xx.1 (e.g., 2008.1)	SBIR 20xx.2 (e.g., 2008.2)	SBIR 20xx.3 (e.g., 2008.3)	STTR 20xx (e.g., 2008)
Presolicitation	November	April	August	January
Opens	December	May	September	February
Closes	January	June	October	March

The Army participates in all four DoD solicitations each year while the CBD SBIR program typically only participates in the 20xx.1 Solicitation.

How to Ask Questions

All questions and answers must be conducted in an open forum to provide all offerors with equal access to information. The SBIR Interactive Topic Information System (SITIS) at www.dodsbir.net/sitis/ allows potential offerors to submit their topic questions via the Internet. All answers will be posted on SITIS through the end of the solicitation period. Answers will also be sent to the submitter of the question via E-mail or Fax if return information is provided (no regular mail responses will be provided). Answers are generally posted within seven working days following question submission.

Proposals

The Army provides specific instructions for proposals responding to an Army topic. These instructions are contained in the introduction to the Army section of each DoD SBIR/STTR solicitation. Successful proposals will provide sufficient information to persuade the Army that the proposed work represents an innovative approach to the investigation of an important scientific or engineering problem and is worthy of funding.

The SBIR/STTR programs place great emphasis on the commercialization potential of the sponsored projects. Small businesses must be prepared to demonstrate their commitment to Phase III commercialization in their proposals and during their contract efforts.

A small business must be invited by the Phase I sponsoring organization to submit a Phase II proposal. The invitation is based upon Phase I progress to date and the continued relevance of the project to future Army requirements. Invitations are issued four to

five months after the Phase I contract award, with the Phase II proposals due one month later.

Evaluation, Selection, and Awards

The quality of the scientific or technical content of the proposal is the principal basis upon which proposals are evaluated. Specific evaluation criteria are listed in each solicitation (www.acq.osd.mil/osbp/sbir). The proposed research must be responsive to the chosen topic, although need not use the exact approach specified in the topic. Any small business contemplating a bid for work on any specific topic should determine that (a) the technical approach has a reasonable chance of meeting the topic objective, (b) this approach is innovative, not routine, with potential commercial application and (c) the firm has the capability to implement the technical approach, i.e. has or can obtain people and equipment suitable to the task.

Two-Tier Evaluation and Selection Process. The Army conducts a two-tier evaluation process of Phase I and Phase II proposals received in response to a solicitation topic. First, the participating organizations that “own” the topics perform a thorough technical evaluation and forward the most responsive proposals to the second level of review. A panel of senior level Army scientists and technologists reviews the forwarded proposals from an Army-wide perspective and determines which of those merit consideration for funding. This process results in the selection of proposals that best satisfy Army needs.

Awards. After selections have been made, a Contracting Officer from the respective participating organization begins the negotiation process. Actual contract awards are contingent upon the successful completion of contract negotiations and availability of SBIR funds. The goal is to award Phase I contracts within four months after the

solicitation closes. If the Phase I award recipient is invited to submit a Phase II proposal, this will occur four to five months after the Phase I award. The proposal will then be due one month later, typically one month before the end of Phase I. The Army has streamlined its two-tier evaluation and selection process for Phase II, resulting in a maximum gap of one and a half months between the end of Phase I and the Phase II selection decision (at which time any Phase I Option may be exercised). The goal is to award Phase II contracts within six months after proposal receipt.

The Competition. The Army SBIR and STTR programs are extremely competitive. Approximately one in ten Phase I proposals and one in two invited Phase II proposals are selected for negotiation and award.

Phase III and Commercialization

A goal of the SBIR/STTR programs is to increase private sector commercialization of innovations derived from Federal R&D, thereby increasing competition, productivity and economic growth. Phase III represents the successful culmination of an SBIR/STTR project. 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.

While Phase II success is measured by whether the prototype product or service developed by the small business can meet an Army need, Phase III success can also be indicated by the small business marketing and selling the products or services outside of the SBIR/STTR programs. Sales can include cash revenue from the Government or private sale of new products or non-R&D services embodying the specific technology and/or spin-off technology. Commercialization can also include additional investments in activities that further the development and/or commercialization of the specific technology.

Commercialization Pilot Program

The U.S. Army has established its new SBIR Commercialization Pilot Program (CPP) in response to the 2006 National Defense Authorization Act, with the purpose of increasing SBIR technology transition and commercialization success. The Army has selected MILCOM Venture Partners (MILCOM) to help manage the CPP. MILCOM will assist the government with: 1) identifying a focused set of ongoing SBIR Phase II participants for inclusion in the CPP and 2) recommending the amount of additional funding from this fiscal year's anticipated \$15 million CPP allocation to support the selected participants' commercialization plans developed under the CPP.

The objective of this effort is to increase Army SBIR technology transition and commercialization success thereby accelerating the fielding of capabilities to Soldiers and to benefit the nation through stimulated technological innovation, improved manufacturing capability, and increased competition, productivity, and economic growth. While technology transition to Army acquisition activities is the program's primary focus, the civilian marketplace and commercialization opportunities cannot be ignored. The Army can gain significant value through commercialized dual-use products.

Doing Business with the Government

Any qualified small business may compete in an Army SBIR or STTR solicitation, and all offerors will be treated equally and fairly. As with any business endeavor, the small business should strive to understand its potential customers and their requirements. There are several features about doing business with the Government of which the small business should be aware:

Working Capital. Small businesses should make plans for having adequate working capital to weather potentially significant delays between invoicing and receipt of payment. Also, even though the Army has taken great strides to reduce the gap between Phase I and Phase II efforts, small businesses may still experience a funding gap on rare occasions.

Accounting Structure. Phase I contracts do not place any restrictions on the corporate accounting structure of the small business, because they are generally fixed price in nature and are relatively small. However, be aware that a Phase II contract, because of its size and structure, requires that small businesses meet the requirements of the Defense Contract Audit Agency (DCAA) (www.dcaa.mil). DCAA ensures that a company's cost structure and accounting methods meet the Government's requirements. This ensures that a submitted cost quote and invoices resulting from a contract effort are accurate, reliable, and acceptable. For information on cost proposals and accounting standards, see the DCAA publication called "Information for Contractors" (www.dcaa.mil/dcaap7641.90.pdf).

Contracting Registration. All businesses must be registered with the DoD's Central Contracting Registration system (www.ccr.gov).

However, SBIR/STTR participants gain several distinct advantages in doing business with the Government:

Phase III SBIR/STTR Awards. There is no limit on the number, duration, type, or dollar value of Phase III SBIR/STTR awards made to a small business. 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. Also, the small business size limits for Phase I and Phase II awards do not apply to Phase III awards. Congress intends that agencies that pursue R&D or production developed under the SBIR/STTR programs give preference, including sole source awards, to the awardee that developed the technology.

Satisfied Competition Requirements. Phase III awards may be made by any Government entity without further competition. The competition for SBIR and STTR Phase I and Phase II awards satisfies any competition requirement when processing Phase III awards. Therefore, an agency is not required to conduct another competition in order to satisfy any statutory provisions for competition.

Protected Data Rights. An SBIR/STTR firm retains full rights to data generated by the firm in the performance of an SBIR/STTR contract. Each agency must refrain from disclosing SBIR technical data to anyone outside the Government (except reviewers) and especially to competitors to the firm, or from using the information to produce future technical procurement specifications that could harm the firm that discovered and developed the innovation for a period commencing with contract award and ending five years after completion of the project, unless other provisions or agreements are made. Additionally, a Phase III award is by its nature an SBIR/STTR award, has SBIR/STTR status, and must be accorded SBIR/STTR data rights.

If an SBIR/STTR awardee wins a competition for work that derives from, extends, or logically concludes that firm's work under a prior SBIR/STTR funding agreement, then the funding agreement for the new competed work must have all SBIR/STTR Phase III status and data rights. An agency must not, in any way, make issuance of an SBIR Phase III award conditional on data rights.



Marketing Opportunities

Quality Awards

The Army sponsors an annual Quality Awards program that recognizes exceptional Army SBIR/STTR Phase II projects. Each year, a distinguished panel of Army and industry experts selects the highest quality projects from nominations submitted by participating organizations across the Army. In recognition of their accomplishments, the small business and the government team are invited to a ceremony held in the Pentagon to receive the Quality Award. The selected projects are showcased in a brochure that is distributed at Army and small business conferences and symposia throughout the year.

Commercialization Brochure

The U.S. Army SBIR/STTR Commercialization Brochure highlights the positive impacts made by small firms that commercialize SBIR/STTR-sponsored products or services and is published annually. PM Army SBIR distributes this high-quality, full color brochure within the Army/DoD community and to the private sector at a number of conferences and other venues across the country. These brochures provide excellent visibility for small businesses to showcase their products and services. There is absolutely no fee to participate. To view previous brochures, visit <http://www.armysbir.com/commercialization/comm.htm>. To submit a story for an upcoming commercialization brochure, please log into the Army SBIR Small Business Portal (<http://www.armysbir.com/smallbusinessportal/Firm/Login.aspx>) and follow the online instructions.

Additional Information and Assistance

Army SBIR/STTR Website

Information about participating in the Army SBIR/STTR programs.

www.armysbir.com

Chemical and Biological Defense (CBD) SBIR Website

Information about participating in the Chemical and Biological Defense SBIR program.

www.cbdsbir.com

DoD SBIR/STTR Website

Information about participating in the programs, responding to solicitations, and past awards.

www.acq.osd.mil/osbp/sbir

DoD SBIR/STTR Help Desk

Information about solicitation, proposal preparation, doing business with the government, and intellectual property protection.

**www.acq.osd.mil/osbp/sbir/help/index.htm
or (866)-724-7457**

Defense Technical Information Center (DTIC)

Free information services to assist SBIR/STTR participants.

www.dtic.mil/dtic/sbir/

Online Technical Information Package System (OLTIPS)

Bibliographic listings of DoD-funded work related to a topic.

www.dtic.mil/dtic/sbir/otip.html

Scientific and Technical Information Network (STINET)

An online technical database to search DTIC documents for projects in a particular area of interest.

stinet.dtic.mil/

Army Acquisition Programs Points of Contact

Contact information for Army Acquisition Program Offices.

www.armysbir.com/sbir/sbir_poc_lc.htm

Army Small and Disadvantaged Business Utilization Office
 Promotes and assists small businesses, small disadvantaged businesses, woman-owned small businesses, and Historically Black Colleges and Universities and Minority Institutions seeking opportunities within the Army.

www.sellingtoarmy.com

Small Business Administration (SBA)

Information about the programs, agency pre-solicitation announcements, tips on proposal preparation, and more.

www.sba.gov

Joint Program Executive Office for Chemical and Biological Defense

Principal advocate and single point of contact for all acquisition efforts associated with chemical, biological, nuclear and radiological detection, and vaccine and medical diagnostic equipment and materiel.

www.jpeocbd.osd.mil/

Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBD) Defense Threat Reduction Agency, Chemical/Biological Technologies Directorate

Science and technology necessary to develop state-of-the-art defense capabilities to allow military forces of the United States the capability to operate and successfully complete missions in chemical and biological warfare environments.

www.dtra.mil/rd/cbt/index.cfm

Credits:

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FOR MORE INFORMATION

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