



# Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)

## *Overview*

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# Statutory Basis

## SBIR & STTR



- **PUBLIC LAW USC TITLE 15 – “Commerce and Trade”**
  - Chapter 14A – “Aid to Small Business,”
    - Section 638 – “Research and Development”
  - Establishes SBIR Program
    - Applicable to all ‘agencies’ of Executive Branch with extramural R&D funding
      - 11 Federal agencies including DoD: 12 DoD Components
      - Originally Enacted in 1983 (SBIR only)
      - Percent set-aside of extramural RDT&E
    - Reauthorized in 1992
      - Percent SBIR set-aside is increased: originally 1.25% in 1983; 1.5% in 1993 and 1994; 2.0% in 1995 and 1996; 2.5% in 1997 and thereafter
    - SBIR reauthorized in 2000 – Authorized through 2008
      - Added STTR (STTR differs from SBIR – Requires partnership between small business and research institute to participate)
    - STTR reauthorized in 2001 (PL107-50) – Authorized through 2009
    - SBIR Extended through 2010



# Statutory Required Funding

## USC Title 15, Chapter 14A



### FUNDING:

*SBIR Requires Each Federal Agency With An “Extramural Budget” For R&D > \$100M shall expend 2.5% of such budget on SBIR programs which meet the requirements of this section, policy directives and regulations issued under this section.*

- The following definitions are required by law:
- “Extramural Budget” – Sum of **total obligations minus** amounts obligated for activities by employees of the agency in GO-GO Facilities (**DoD Salaries**)
  - Intelligence Activities (defined by Executive Order 12333) – are exempt
  - FY92 PL 102-564 specifically included DoD “Operational Systems Development” (Set-aside includes all RDT&E)

*STTR Requires Each Federal Agency With An “Extramural Budget” For R&D > \$1B shall expend 0.3% of such budget on STTR programs*

Note: In 2009, Defense Appropriations Section 8006 excludes earmarks from SBIR set-aside (must be made up by disproportionate tax of Mission Programs)



# The Four Congressional Goals of SBIR

## 15 USC 638 (note)

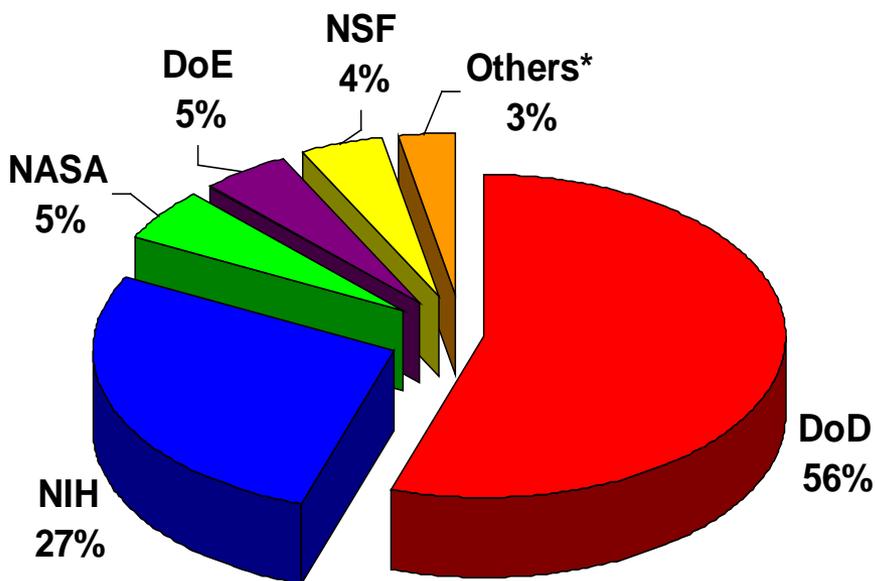


- Stimulate technological innovation
- Increase private-sector commercialization of innovations derived from federal research and development
- Use Small Business to meet federal (DoD) research and development needs
- Foster and encourage participation by minority and disadvantaged persons in technological innovation



# Federal Participation

	DOD	NASA	DOT	EPA	DOE	DHS	DOC	NSF	USDA	DoED	NIH
SBIR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
STTR	✓	✓			✓			✓			✓
Contract/Grant	C	C	C	C	G	C	C	G	G	G/C	G/C



- ✓ Small Business Administration (SBA) oversees the federal SBIR/STTR programs
  - Policy Directive
  - Congressional Report
  - Size determination
  - Waivers
- ✓ DoD is half the program



# DoD SBIR/STTR Policy, Oversight, Management and Administration



## Policy: AT&L/OSBP

- Manage the SBIR Website – Electronic RFPs and proposal submission
- Input and Coordination from all Services and Defense Agencies
- Prepares Reports to Congress and SBA

## Funding

- Service & Defense Agency RDT&E Extramural Set-aside 2.5% SBIR & .3% STTR in service and defense agency appropriations
- Funds remain in PE (0605502A/N/F/C/E/D) of each service/defense agency

## Technical Quality Oversight: AT&L/DDR&E/RD staff

- Reviews all RFP topics – Quality
- Insure Innovative Research
- Insure every topic addresses defense technology areas/needs
- Review for policy compliance, resolve or raise policy issue to OSBP

## Execution and Management

- Army, Navy, Air Force, MDA, DARPA, SOCOM, DTRA, NIMA executes all contracts
  - **Collects and Reports all contract awards to OSBP**



## SBIR/STTR funded as a Set-Aside of RDT&E

- **SBIR Funding:**

- Requires Each Federal Agency With An “Extramural Budget” For R&D over \$100M -- “shall expend 2.5% of such budget\* on SBIR programs which meet the requirements of this section, policy directives and regulations issued under this section.”
- In FY92, Small Business Act Reenactment specifically included DoD Operational Systems Development – Interpreted (in practice by Comptroller) to include all RDT&E 6.1 through 6.7 program elements.

(note: \*sum of TOA minus amounts obligated for employees’ salaries)

- **STTR Funding:**

- Requires every agency with an extramural budget for R&D over \$1B – shall expend 0.3% on STTR programs



# SBIR Programs Three Phased Projects



	SBIR	STTR
✓ Phase I: Project feasibility	6 months up to \$100,000	12 months up to \$100,000
✓ Phase II: Project development to Prototype	2 years up to \$750,000	2 years up to \$750,000*
✓ Phase III: Commercialization	Commercialize, with non-SBIR/non-STTR funds, the technology in military and/or private sector markets	

- ✓ Small businesses first apply for a **Phase I** contract award to validate the technical and commercial feasibility of a particular concept addressing a technical need advertised by a DoD component.
- ✓ **Phase II** is the principal R&D effort to continue the effort from Phase I typically through prototype demonstration.
- ✓ **Phase III** represents work that derives from, extends, or logically concludes efforts performed under prior SBIR/STTR funding agreements.



# SBIR PHASE III Commercialization



SBIR PHASE III – Definition: Commercialize, with non-SBIR/non-STTR funds, the technology in military and/or private sector markets.

- ✓ Phase III is unique because **set-aside SBIR/STTR funding is not available** to continue development of technology
- ✓ Phase III work may be for **products, production, services, R/R&D**, or any combination thereof, **including testing and evaluation** of products, services or technologies for use in technical or weapon systems
- ✓ There is no limit to the number, duration, type, or dollar value of Phase III awards
- ✓ Small business **size limits do not apply** to Phase III

## SBIR PHASE III Commercialization Reporting

The DoD captures sales and investments of a product or service from SBIR/STTR Phase II projects as metrics for assessing the commercialization of SBIR/STTR developed technology.

Firms are required to prepare and submit a Company Commercialization Report (CCR) with every SBIR and STTR proposal to the DoD. This report contains a brief listing of all prior Phase II projects and the sales and investment resulting from the technology developed under these projects. All information on the Company Commercialization Report, along with the commercial strategy described in the technical proposal, are used to evaluate commercial potential, which is one of three proposal evaluation criteria.

**SUMMARY DATA OF PHASE III COMMERCIALIZATION IS LIMITED TO SBIR COMPANIES RETURNING TO BID ON FUTURE PROPOSALS, AND IS CUMULATIVE IN NATURE**



# PROPOSAL EVALUATION CRITERIA



SBIR and STTR proposals are evaluated on:

- ✓ Soundness, technical merit, and innovation of proposed approach and its incremental progress toward topic or subtopic solution
- ✓ Qualifications of the firm and team to perform R&D and commercialize results
- ✓ Potential for commercial application —government or private sector

Same criteria for Phase I and II

Weighting determined by the Component





# OSD SBIR Proposal Process and Cycle



- Topic managers
  - The government scientist / engineer who submitted the topic to OSD for consideration
  - Manage Phase I SBIR research
  - Later consider the SBIR project for Phase II funding
- OSD representative
  - Coordinates project reviews
  - Advocates for the research



# Important Dates for SBIR Process



- **The next Request For Proposal (RFP) pre-release is April 21, 2010**
  - **New SBIR topics announced**
  - **Opportunity to ask questions of the topic authors begins**
- **RFPs are open for bidding May 19, 2010 through June 23, 2010**



# Current SBIR Themes



- **DDR&E BioSystems is sponsoring two themes this cycle:**
  - **(1) Cognitive Readiness Technology (CRT)**
    - Ten topics
  - **(2) Human Social and Cultural Technology (HSCT)**
    - Nine topics
- **Specific topic names and details**
  - Released April 21, 2010



# The Successful SBIR Project



- Starts with a thorough technology development roadmap
- Is carried out by exceptional researchers, who:
  - Think past the fundamental research question to see the long-term use of the technology
  - Manage the SBIR project like a true business model
  - Have clear deliverables and benchmarks, and meet them
  - Know well ahead of time how their new technology can be inserted into existing systems or technologies
  - Anticipate potential roadblocks and have thought of potential solutions



# The Successful SBIR Project



- Comes from exceptional proposals, which show:
  - **Soundness**
  - **Technical merit**
  - **Innovation**
  - **A clear focus on the eventual customer (i.e., the acquisition customer that would ultimately sustain what is developed as part of the SBIR program)**
  - **Plans for a transition-friendly deliverable that meets the needs of the eventual end-user of the technology**
  - **“Big Picture” perspective**