

SBIR at the Department of Defense: The Committee's Report

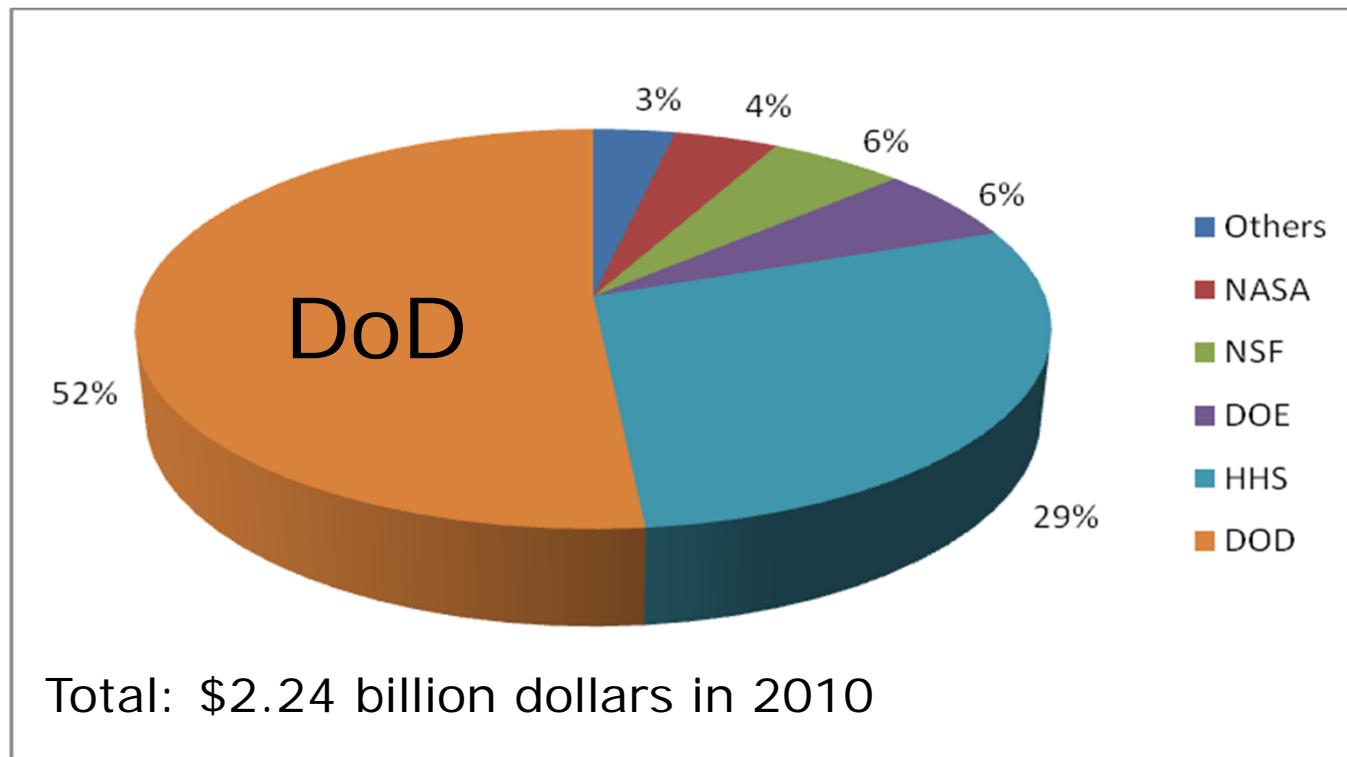
The National Academies
Washington DC
October 7, 2014

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Our National Security depends on Leadership in Technology

- U.S. National Security Strategy from WWII to today has relied on “Technological Superiority”
- U.S. must take advantage of research investments with:
 - Public/private partnerships (Gov./Univ./Industry)
 - Funding for research and commercialization
 - Emphasis on both product and process technology developments
 - Development of high-tech workforce
 - Focus on “dual-use” applications (commercial & government use)

SBIR remains the single largest innovation program for small businesses.



SBIR/STTR funding, FY2010.

SOURCE: <http://www.sbir.gov>, accessed November 1, 2013.

The Committee's Round One Assessment of SBIR

- Improved the public's understanding of the challenges of Early Stage Finance
- Documented the diversity and flexibility of the SBIR programs
- Assessed effectiveness of agency SBIR programs
- Highlighted benefits of SBIR to agency missions and to the US innovation system
- **Key Finding: “SBIR is sound in concept and effective in practice”**

The Study had a Major Impact on the 2011 SBIR Reauthorization

- Many contributions to the 2011 Reauthorization of the SBIR Program including
 - Extension of the program: until 2017
 - Increase in award size: \$150,000 for Phase I and \$1 million for Phase II.
 - Increase in set-aside: From 2.5% to 3.2%
 - Enhanced Agency Flexibility: Can use Phase I from another agency for Phase II award
 - Expanded Management Resources: Up to 3% of program funds
 - Commercialization: Incentives to use SBIR technologies in agency acquisition programs

Focus of the Second Round Assessment

- How can the DoD SBIR program work better to address the four Congressional Objectives of the Program:
 - Stimulate technological innovation
 - Use small businesses to meet federal R&D needs
 - Foster participation by women-owned and minority-owned small businesses
 - Increase private sector commercialization of innovation derived from federal R&D
- Important:
 - We do not seek to provide a value on the contributions of the program, compared to other possible uses.
 - We were not asked to consider if SBIR should exist or not.

Our Methodology

- The Committee assimilated information from a complement of research tools
 - 20 in-depth case studies
 - Public Workshops (on University Participation and Program Diversity)
 - Analysis of agency data (including CCR & FPDS)
 - Surveys that built on the 2005 survey
 - Consultations with agency managers (except Army)
 - Literature review
- Broad definition of Commercialization—from product rollout, to licensing, to patenting, to sales, to procurement.

Key Findings

The DoD SBIR Program is meeting
3 of its 4 legislated goals

- ✓ Stimulate technological innovation
- ✓ Use small businesses to meet federal R&D needs
- Foster participation by women-owned and minority-owned small businesses
- ✓ Increase private sector commercialization of innovation derived from federal R&D

SBIR Projects at DoD Commercialize at a Substantial Rate

- Projects funded by the SBIR program are
 - Reaching the market at an appropriate rate,
 - Attracting substantial amounts of follow-on investment.
 - More than 45% of Phase II projects report sales (NRC 2011 Survey).
 - Over time, about 70 percent of Phase II projects at DoD reach the market. (DoD Commercialization Database)

SBIR projects at DoD are in broad alignment with the agency's mission needs.

- There is substantial evidence that outputs from the program are taken up by federal agencies and in particular by DoD and by its primes.
- Also some outputs have been picked up in civilian markets.

Growing use of SBIR in DoD Acquisitions

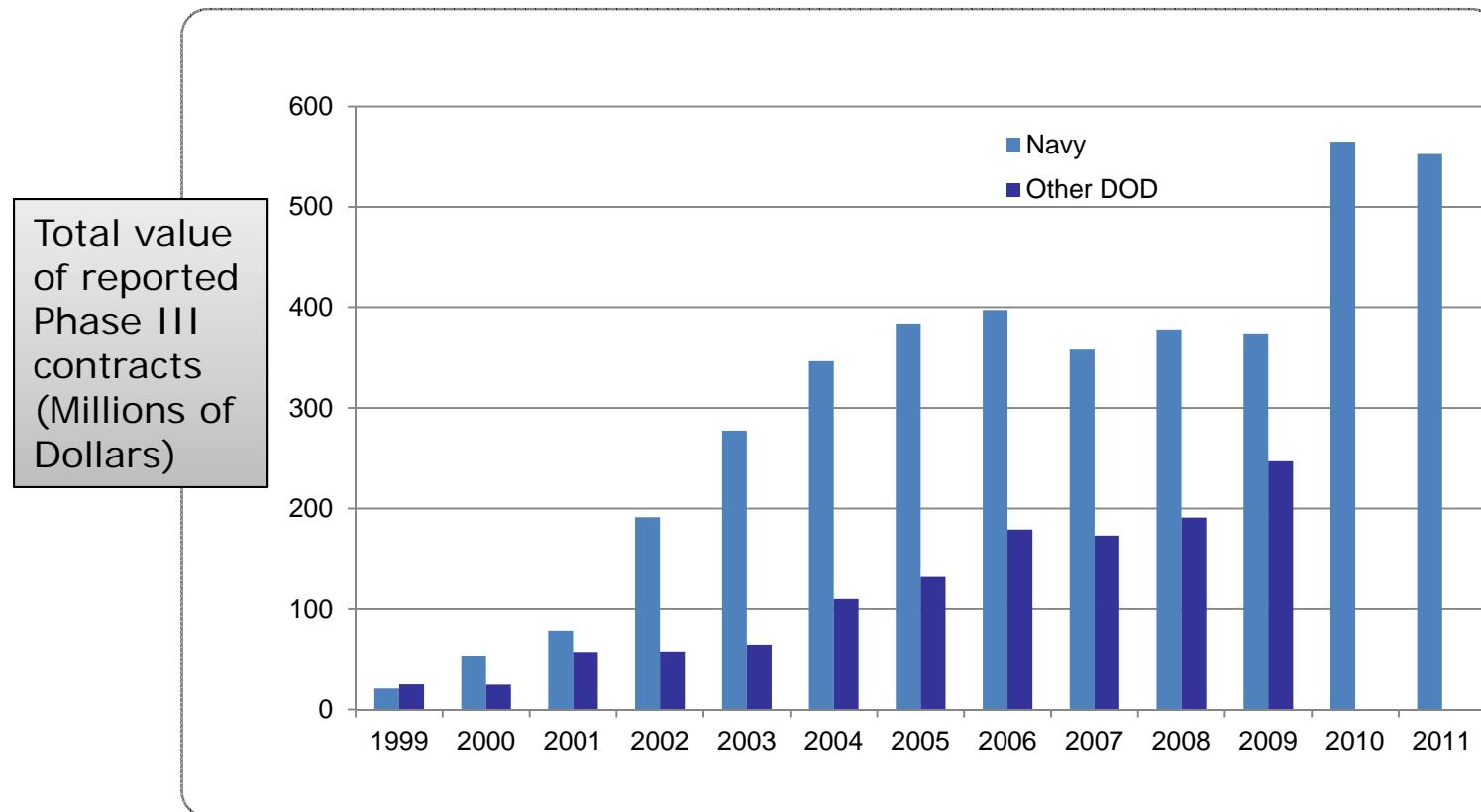
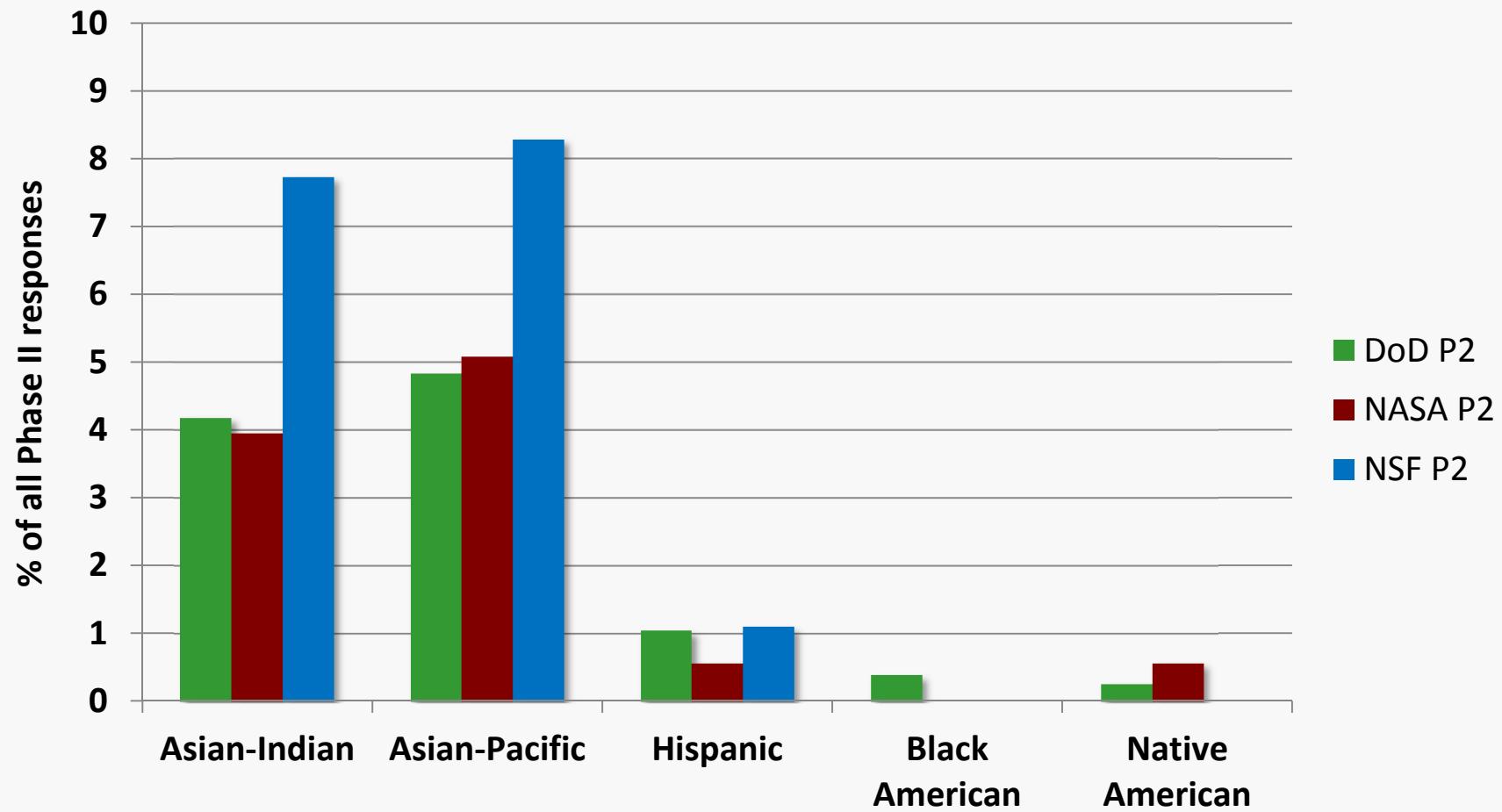


Chart (from Navy) shows aggregate Phase III contracts by FY. Note the steady increase outside Navy.

Current participation of women and other under-represented groups in the SBIR program is low and not increasing.

- Approximately 15 percent of awards went to woman-owned small businesses (WOSB) and 7 percent to minority-owned small businesses (MOSB).
- Black- and Hispanic-owned small businesses are themselves a very small share of MOSB overall. (2011 NRC Survey)
 - Black-owned small businesses accounted for approximately 0.5 percent of all respondents; Hispanic-owned firms, about 1 percent.
- DoD has not made sustained efforts to “foster and encourage” the participation of woman- and minority-owned small businesses.

Phase II - PI's by ethnicity and agency



To address this puzzle, we convened a February 2013 workshop on “Innovation, Diversity, and Success in the SBIR/STTR Programs”

- Workshop participants explored multiple strategies:
 - Improve outreach to Historically Black Colleges and Universities, women minority advocacy organizations
 - Foster peer networks
 - Incentivize Program Managers
 - Speed up processing of awards and contracts
 - Track and analyze data; study demographic trends in entrepreneurship
 - Entrepreneurship training

The SBIR program at DoD supports the development and adoption of technological innovations.

- Selection of topics and individual projects for funding maintains a strong focus on developing innovative technologies.
- More than one-third of DoD Phase II survey respondents reported a link to a university for the surveyed project
 - Including use of faculty as Principal Investigators (PIs), use of graduate students as researchers, licensing of technology from universities, and use of a university as a subcontractor,
 - Participation level has increased from the 2005 survey.

Key Recommendations

Improving the DoD SBIR Program

Encourage Commercialization

- **Encourage Prime Contractors:** Experiment with different kinds of incentives to encourage primes to work more effectively—and more often—with SBIR firms to commercialize new technologies.
- **Brief PEOs:** Use new administrative funding in part to develop better briefing materials for PEOs and PCOs
- **Provide Financial Incentives:**
 - Encourage components to experiment with financial incentives for the adoption of SBIR technologies.
 - Encourage components to add explicit targets to prime contracts

Address Under-Represented Populations

- **No Quotas:** DoD should not develop quotas for the inclusion of selected populations into the SBIR program.
 - Such an approach is not necessary to meet Congressional intent and is likely to reduce program effectiveness.
- **Outreach and Education:** DoD should develop an outreach and education program focused on expanding participation of under-represented populations.
- **Tracking and Metrics:** The DoD Office of Small Business should improve tracking and metrics against which to benchmark the activities of DoD components.

Improve Tracking, Data Collection, and Adoption of Best Practices

- **Alignment:** Better align data collection, agreed metrics, and utilization of effective evaluation and assessment tools to guide program management.
- **Annual Report:** A single, more comprehensive annual report could be used to satisfy the reporting requirements of numerous Congressional sponsors.
- **Data Accuracy:** Improve the the Federal Procurement Data System (FPDS).
 - FPDS does not currently track subcontracts executed through prime contractors (primes) at DoD.
 - FPDS does not currently track SBIR projects as they commercialize within DoD, beyond the first Phase III contract.

Streamline Program Management and Agency Mission Objectives

- **Maintain Continuity of Technical Point of Contact (TPOC):** Consider ways to support ongoing engagement by TPOCs in projects after they have formally handed them on at the end of a rotation.
- **Protect Data Rights:** Work with SBA to explore mechanisms that more effectively protect SBIR data rights.
- **Disseminate Best Practices:** Track experimentation within the SBIR program and develop mechanisms to share best practices.

Improve Contracts and Audits

- **Improve Audits:** Develop less onerous and more effective auditing procedures for small businesses that can be completed in a timelier manner.
- **Improve Contracting Practices:** Provide opportunities for small businesses to raise concerns about contracting practices at the component level.



Thank You

The Honorable Jacques S. Gansler

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