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SBA Office of Investment & Innovation
SBIR-STTR Presentation

OCTOBER 2015



Small Business Administration

Office of Investment and Innovation

What do we actually do?

In the Small Business Act of July 30, 1953, Congress created the Small Business Administration, whose function is to "aid, counsel, assist and protect, insofar as is possible, the interests of small business concerns." The charter also stipulates that SBA would ensure small businesses a "fair proportion" of government contracts and sales of surplus property.

“3 C’s & a D”— *capital, contracting, counseling, & disaster*

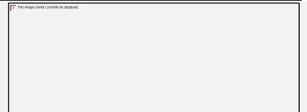
SBA-OII primary work w/ 11 participating federal agencies on efforts related to the 3C’s from both policy and programmatic oversight.



Small Business Administration

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SBA Leadership Flowchart

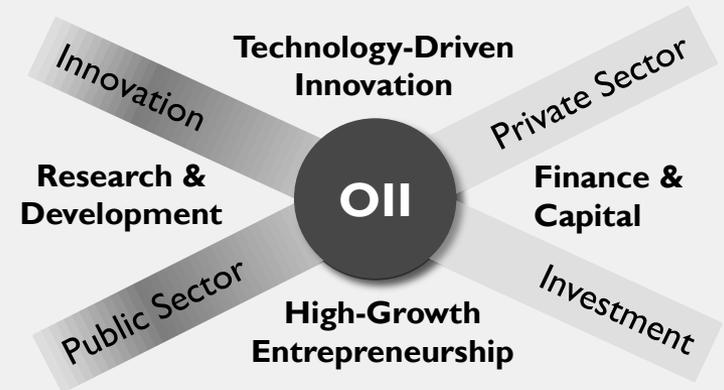


Elevator Pitch

Small Business Administration Office of Investment and Innovation

SBA's Office of Investment and Innovation (OII) leads programs that provide the high-growth small business community with access to two things: financial capital and R&D funds to develop commercially viable innovations.

Our work is underpinned by public-private partnerships that operate on or along a very dynamic and economically important intersection.



Small Business Investment Company (SBIC) Program delivers access to financial capital

\$4 billion authorization per year | \$23.78 billion of assets under management | 299 active SBICs

Small Business Innovation Research (SBIR) and Small Technology Transfer Research (STTR) programs support the R&D + financing of cutting-edge technologies

~\$2.2 billion annual set aside | ~145,000 awards granted | ~10 patents per day

Innovation - Support the American high growth entrepreneurial ecosystem

\$4m Accelerator Program | Start-Up America | Demo Days | Crowdfunding



Goals of the SBIR/STTR Program

- ▶ Meet **Federal research and development needs**
- ▶ Increase private-sector **commercialization** of innovations derived from Federal research and development funding
- ▶ Stimulate technological **innovation**
- ▶ Foster and encourage participation in innovation and entrepreneurship by **socially and economically disadvantaged persons**



History of the Program

- ▶ Created by Roland Tibbetts at the National Science Foundation and signed as a Federal wide program in 1982 by Ronald Reagan
- ▶ SBIR programs have awarded over \$40 billion to research-intensive American small businesses
- ▶ The 450,000 engineers and scientists involved are one of the largest STEM talent concentrations in the world
- ▶ 11 Federal Agencies participate annually in program



The SBIR & STTR Programs

SBIR/STTR Success Stories

Qualcomm	Symantec
iRobot	Genzyme
Nimble Systems	NanoMech
Lift Labs	Adaptec
Ecovative Design	Children's Progress Inc
JENTEK Sensors	SQUID

Small Business Innovation Research (SBIR)

- ▶ A set-aside program for small business to engage in Federal R&D – with potential for commercialization
- ▶ 2.9% of Federal agencies Extramural R&D budgets greater than \$100M per year (FY 2015 ~ \$2.0-2.5 Billion in summation of 11 participating agencies) . Growing to 3.2% by 2017.

Small Business Technology Transfer (STTR)

- ▶ A sister set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions – with potential for commercialization.
- ▶ 0.35% of the extramural research budget (>\$250 million) for all agencies with a budget greater than \$1B per year. Growing to .4% by 2017.

Milestone-Driven Award Process

Phase I | Feasibility Study or Prototype

- ▶ ~\$150 thousand and 6 months

Phase II | Full Research and Development Effort

- ▶ ~\$1 million and 24 months

Phase III | Commercialization Effort

- ▶ Private and Non-SBIR Allocated financing

Participating Federal Agencies



SBIR & STTR in Brief

Quick Stats

FY 2014 in total ~ \$2.4 Billion Obligated

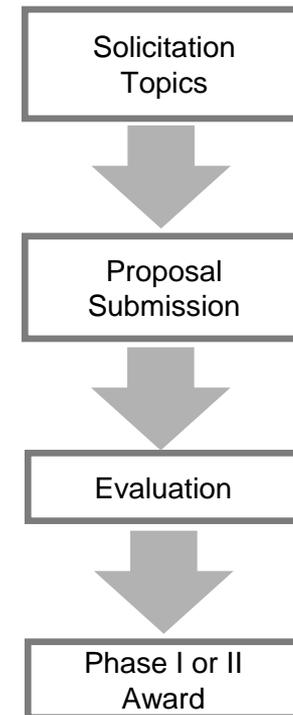
SBIR

- ▶ 4805 Total Awards
- ▶ Phase I Awards | 67% of Awards | 26% of Funds | Average Size \$158,304
- ▶ Phase II Awards | 33% of Awards | 74% of Funds | Average Size \$919,943
- ▶ 23% to women-owned, minority-owned or HUBZone-located small biz
- ▶ 2.5% pre-2011 | 3.2% by 2017 | Floor NOT Cap

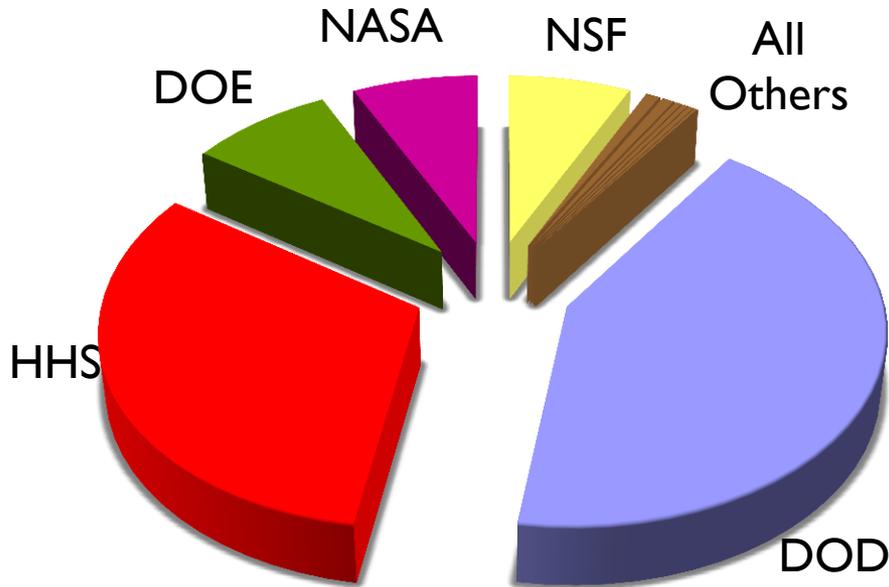
STTR

- ▶ 706 Total Awards
- ▶ Phase I Awards | 70% of Awards | 33% of Funds | Average Size \$189,530
- ▶ Phase II Awards | 30% of Awards | 67% of Funds | Average Size \$862,820
- ▶ 20% to women-owned, minority-owned or HUBZone-located small biz
- ▶ 0.3% pre-2011 | 0.6% by 2017 | Floor NOT Cap

Typical Application Process



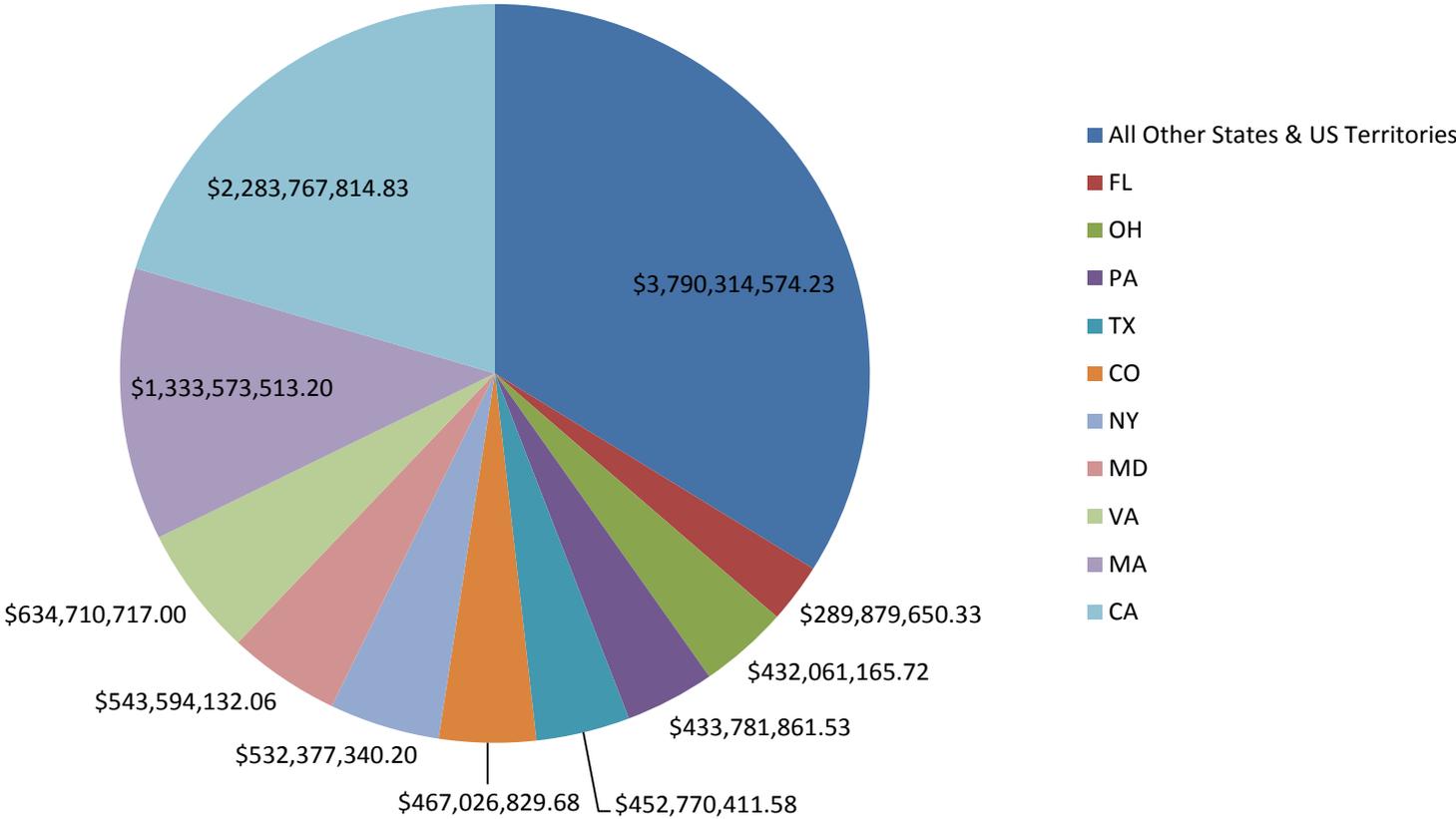
Estimated SBIR/STTR Budgets by Agency, FY2015



**~ \$2.5 B in FY15
across all agencies**

Agencies with SBIR and STTR Programs	Budget
Department of Defense (DOD)	\$ 1.070 B
Department of Health and Human Services (HHS), including the National Institutes of Health (NIH)	\$797.0 M
Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)	\$206.1 M
National Aeronautics and Space Administration (NASA)	\$ 180.1 M
National Science Foundation (NSF)	\$176.0 M
Agencies with SBIR Programs	Budget
U.S. Department of Agriculture (USDA)	\$20.3 M
Department of Homeland Security (DHS): Science and Technology Directorate (S&T) and Domestic Nuclear Detection Office (DNDO)	\$17.7 M
Department of Commerce: National Oceanic and Atmospheric Administration (NOAA) and National Institute of Standards and Technology (NIST)	\$8.4 M
Department of Transportation (DOT)	\$7.9 M
Department of Education (ED)	\$7.5 M
Environmental Protection Agency (EPA)	\$4.2 M

Snapshot Across the US for the Past 4 Fiscal Years



Top total award dollars went primarily to 10 states:
CA, MA, VA, MD, NY, CO, TX, PA, OH and FL

Federal & State Technology (FAST) Partnership Program

- ▶ FAST provides funding to a build a community whose mission is to provide SBIR and STTR awareness and support to science and technology-driven small businesses
- ▶ About \$2 million annual funding, ~\$100,000 per applicant. Only one applicant allowed per state and must be supported by the Governor
- ▶ Particular emphasis on helping socially and economically disadvantaged firms compete in the SBA's SBIR and STTR programs



Federal & State Technology (FAST) Partnership Program 10/1/2014-9/30/2015

State	Entity	Contact POC	Email
Alabama	Economic Development Partnership of Alabama Foundation, Inc.	Angela Wier	awier@edpa.org
Arizona	Commerce Authority, Arizona	Brian Sherman	brians@azcommerce.com
Mississippi	Innovate Mississippi	James Anthony Jeff	tjeff@innovate.ms
California	The Regents of the University of California	Diane Howerton	dhowerton@ucmerced.edu
Alaska	University of Alaska Anchorage	Tana Myrstol	tjmyrstol@uaa.alaska.edu
DC	DC Department of Small and Local Business Development	Ted Archer	ted.archer@dc.gov
Wyoming	University of Wyoming	Greg Jordan	gregj@uwyo.edu
Wisconsin	Board of Regents of the UW-System	Cheryl Vickroy	cheryl.vickroy@uwex.edu
Arkansas	Board of Trustees of the University of Arkansas	Janet Roderick	jmroderick@ualr.edu
North Dakota	University of North Dakota	Bruce Gjovig	bruce@innovators.net
Tennessee	Tennessee Technology Development Corp d/b/a Launch Tennessee	Jim Stefansic	jim@launchtn.org
New York	The Research Foundation for the State University of New York	James King	Jim.king@nyssbdc.org
Kansas	Wichita State University	Karen Davis	proposals@wichita.edu
Nebraska	Board of Regents, Univ. of NE dba Univ. of NE at Omaha	Mary Laura Farnham	unosponpro@unomaha.edu
Idaho	Boise State University	Katie Sewell	ksewell@boisestate.edu
Connecticut	Connecticut Innovations Incorporated	Deborah Santy	deb.santy@ctinnovations.com
Virginia	Center for Innovative Technology	Pat Inman	pat.inman@cit.org
Oregon	Oregon Built Environment & Sustainable Technologies Center	David Kenney	david.kenney@oregonbest.org
Minnesota	Metropolitan Economic Development Association	Yvonne Cheung Ho	yho@meda.net
Illinois	Board of Trustees of the University of Illinois	Kapila Vigas	vigas@uillinois.edu
Puerto Rico	Puerto Rico Trade and Export Company (PR Trade)	Isabel Fernandez	isabel.fernandez@cce.pr.gov
Louisiana	Louisiana State University and A&M College	Roy Keller	rkeller@lsu.edu



Federal & State Technology (FAST) Partnership Program 10/1/2015-09/30/2016

State	Entity	Contact POC	Email
Arkansas	Univ of Arkansas System, DBA Univ of Arkansas at Little Rock	Sharon Kaufman	sekaufman@ualr.edu
Connecticut	Connecticut Innovations Incorporated	Glendowlyn Thames	Glendowlyn.Thames@ctinnovations.com
DC	DC Department of Small and Local Business Development	Phil Reeves	Philip.Reeves@dc.gov
Delaware	University Of Delaware	Portia Garvey	pgarvey@udel.edu
Idaho	Boise State University	Katie Sewell	ksewell@boisestate.edu
Kansas	Wichita State University	Debra Franklin	Debra.Franklin@wichita.edu
Louisiana	Louisiana State University and A&M College	Roy Keller	rkeller@lsu.edu
Minnesota	METROPOLITAN ECONOMIC DEVELOPMENT ASSOCIATION	Pat Dillon	PDILLON@MEDA.NET
Mississippi	Innovate Mississippi	James Anthony Jeff	tjeff@innovate.ms
Montana	Montana Department of Commerce	Michael Sullivan	msullivan2@mt.gov
North Dakota	University of North Dakota	Bruce Gjovig	bruce@innovators.net
Nebraska	Board of Regents, Univ. of NE dba Univ. of NE at Omaha	Marisol Uribe Rodriguez	murodriguez@unomaha.edu
New Mexico	The Regents of New Mexico State University	Kathryn Hansen	hansen@ad.nmsu.edu
New York	The Research Foundation for the State University of New York	James King	james.king@nysbdc.org
Ohio	Ohio Aerospace Institute	Ann Heyward	annheyward@oai.org
Oregon	Oregon Built Environment & Sustainable Technologies Center	David Kenney	david.kenney@oregonbest.org
Pennsylvania	Ben Franklin Technology Partners Corporation	Laura Lawrence	llawrence@nep.benfranklin.org
Puerto Rico	PUERTO RICO TRADE AND EXPORT COMPANY (PR TRADE)	Isabel Fernandez	isabel.fernandez@cce.pr.gov
Vermont	Vermont State Colleges	Linda Rossi	lrossi@vtsbdc.org
Wyoming	University of Wyoming	Greg Jordan	gregj@uwyo.edu

Case Studies – Just Scratching The Surface

FROM A COMPANY PERSPECTIVE

IDA-STPI studied NSF's role in 3D Printing (along with leadership from NASA, DOD, etc...) shows that some of most crucial parts of the technology was financed via the SBIR/STTR program. Z-Corporation which emanated out of **MIT** labs and was recently acquired by 3D Systems, was one of the first 3D Printing companies to enter the market dating back to 1994 and receiving initial financing from NSF through various research financing opportunities including the SBIR/STTR program.

Emanating from upstate NY, founded by two undergraduate students at **Rensselaer Polytechnic Institute**, came up with the idea to use mushrooms as the binding material for composite fabrication of biodegradable materials which in turn offer a promising solution to potentially eliminate petrol-based composites. They received some of their earliest funding via EPA and NSF SBIR Grants.

What Does a SBIR/STTR firm or Entrepreneur Look Like?

- ▶ Doesn't have to have yet formed the company
- ▶ Company must be for profit, US owned and operated, and under 500 people
- ▶ Typically they are primarily a R&D organization both in what they do and their staff. Average firm size is 9. As they get larger (over 30) you see balance or product development and sales in addition to R&D
- ▶ Focus is on performing R&D – Not for purchasing equipment, commercializing a technology that has already been developed, or one that has very low risk and only needs capital



What makes a Great SBIR/STTR Proposal?

- ▶ Evaluation Criteria addresses
 - ▶ How well proposal addresses topic area
 - ▶ Skills of PI and Team
 - ▶ Potential to Commercialize
- ▶ Strong proposal hits all of these, provides clear details on how/why the approach address the Agencies need; Skills of the team; and describes how the firm will move the technology through the Phase's and commercialize the technology in the way that Agency wants them to
- ▶ Understanding needs of the Agency and talking to topic authors before submission is extremely **valuable**
- ▶ Use SBIR.Gov and local resources to help you



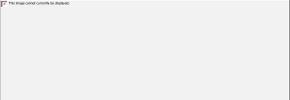
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In Closing

Be Bold...solve a problem for a Billion people in mind...



Glossary of Terminology to Know

- ▶ Non-dilutive
- ▶ Seed
- ▶ Research & Development (R&D)
- ▶ IP Protection – Under SBIR Govt Can't disclose
- ▶ Phase 0 - Ideation
- ▶ Phase I - Proof of Concept/Prototype
- ▶ Phase II - Scale Up Development
- ▶ Phase III - Commercialization & Going Global
- ▶ SBIR/STTR Grants Vs Contracts
- ▶ Research Institute (RI) (STTR related)



Contact Us

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