U.S. Small Business Administration

SBIR · STTR
America's Seed Fund™
POWERED BY SBA

Leveraging America's Seed Fund

Small Business Innovation Research (SBIR)

Small Business Technology Transfer (STTR)

Elden Hawkes
Partnership and Innovation Specialist
Office of Investment & Innovation

August 2020

Why the SBIR and STTR Programs Were Created

- Meet federal **research and development needs**
- Increase private-sector **commercialization** of innovation derived from federal research and development funding
- Stimulate technological **innovation**
- Foster and encourage **participation** in innovation and entrepreneurship by women and socially/economically disadvantaged individuals
- Foster **technology transfer** through cooperative R&D between small businesses and research institutions (STTR)

Small Business Innovation Research (SBIR)

- 3.2% of the extramural research budget for agencies with a budget greater than $100 M per year

~$3.3 billion set-aside each year

Small Business Technology Transfer (STTR)

- 0.45% of the extramural research budget for agencies with a budget greater than $1B per year

~$450 million set-aside each year

Over 5,000 new awards every year

SBIR/STTR Funds the Following and More
With the goal to Commercialize Science

Defense

Health

Energy

Space

Environmental

Agriculture

Materials

Sensors

Cybersecurity

Autonomy

AI

Data Analytics

Three Phase Process

Solicitation to Award Process

SBIR & STTR Participating Agencies

Department of Agriculture (USDA)	Department of Commerce (DoC) NIST, NOAA	Department of Defense (DoD)	Department of Education (ED)
Department of Energy (DOE)	Dept of Health and Human Services (HHS) NIH, FDA, CDC, ACL	Department of Homeland Security (DHS)	Department of Transportation (DOT)
Environmental Protection Agency (EPA)	National Aeronautics and Space Administration (NASA)	National Science Foundation (NSF)	

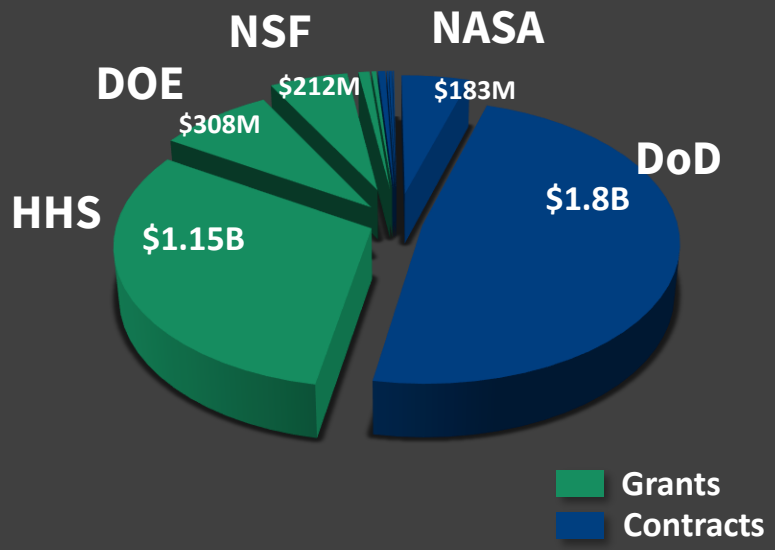
Differences Between SBIR and STTR

	SBIR	STTR
Partnering Requirement	Permits partnering	Requires a non-profit research institution partner
Principal Investigator	Primary employment (>50%) must be with the small business	PI may be employed by either the research institution partner or small business (check solicitation)
Work Requirement	May subcontract up to: 33% (Phase I) 50% (Phase II)	Minimum: 40% Small Business 30% Research Institution Partner
Program Size	3.2% (FY19 - $3.28B)	0.45% (FY19 - $453M)
Majority VC ownership	Allowed by some agencies	Not allowed
Participating Agencies	11 agencies (extramural R&D budget > $100M)	5 agencies (extramural R&D budget > $1B)

FY2019 SBIR/STTR Budgets by Agency

Agencies	Budget
Department of Defense (DoD)*	$1.80 B
Department of Health and Human Services (HHS)**, including the National Institutes of Health (NIH)	$1.15 B
Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)	$308 M
National Science Foundation (NSF)	$212 M
National Aeronautics and Space Administration (NASA)	$183 M
U.S. Department of Agriculture (USDA)	$30 M
Department of Homeland Security (DHS)	$17 M
Department of Commerce: National Oceanic and Atmospheric Administration (NOAA)	$9.5 M
Department of Education (ED)	$8.4 M
Department of Transportation (DOT)	$5.2 M
Department of Commerce: National Institute of Standards and Technology (NIST)	$3.9 M
Environmental Protection Agency (EPA)*	$3.6 M

* Budgeted Amount; other Agencies Obligated Amount
** Provides grants and contracts



SBIR: $3.28 Billion
STTR: $453 Million

Contracting Agencies	Granting Agencies
▪ Agency establishes plans, protocols, requirements ▪ Highly focused topics ▪ Procurement mechanism ▪ More fiscal requirements ▪ Invoiced on progress ▪ Binding agreement between a buyer & seller for goods/services **DoD, DHS, NASA, EPA, DOT, DoED**	▪ Principal Investigator initiates approach ▪ Less-specified topics ▪ Assistance mechanism ▪ More flexibility ▪ Allows upfront payment ▪ Funds support a public purpose, best efforts in research **NSF, DoE, USDA, NIST, NOAA**
Contracting and Granting: **HHS/NIH** (mostly grants)	

What does an SBIR/STTR firm look like?

- Company must be for profit, U.S. owned/operated, and under 500 people
- Work must be done in the U.S.
- Focus is on performing R&D – Not purchasing equipment, commercializing a technology that has already been developed, or one that has very low risk and only needs capital

Principal Investigator (PI)

- → Must be employed by the small business (or partnering research institution for STTR) at **time of award** (check solicitation)
- → Should have appropriate expertise to oversee project scientifically and technically
- → Expertise of the PI and team are one of the three evaluation factors

Why We Work on America's Seed Fund

www.sbir.gov/news/success-stories

Why You Want to Work with America's Seed Fund

- Create impact from your institution's research
- Opportunities for your students and community
- Build the innovation ecosystem around your institution
- Partnerships with small businesses
- Successful companies give back – create a virtuous cycle

Colleges, Universities are Frequent Partners & Beneficiaries in Both SBIR/STTR

- Nearly 50% of SBIR & 95% of STTR projects across agencies have university involvement
  - For some agencies, universities are involved in more than 50% of SBIR projects (e.g. NIH 70%, NSF 58%)
- ~20% of SBIR awards have sub-awards to universities
- Over 350 **different** research institutions have been involved in SBIR projects alone

National Academies of Sciences, Engineering, and Medicine. 2016 Assessments of SBIR & STTR programs

Phase 0: Strengthening the Pipeline
DOE Applicant Assistance Program for SBIR/STTR Applications

- Phase 0 is aimed at helping eligible small businesses successfully prepare a grant application and apply for DOE SBIR/STTR Phase I funding.
- Eligibility: first-time applicants to the DOE SBIR/STTR programs.
  - Particularly interested in serving groups that are under-represented: women-owned small businesses, socially and economically disadvantaged small businesses, and small businesses from under-represented states.
- Overall goal is to increase the number of responsive, high quality proposals submitted to the DOE from all first-time DOE SBIR/STTR applicants.

http://www.dawnbreaker.com/doephase0/

Phase 0: Strengthening the Pipeline
NIH Applicant Assistance Program for SBIR/STTR Applications

- 10-week coaching program offered at **no cost** to who have never received an NIH SBIR/STTR award
  - Needs assessment/mentoring
  - Assistance with required registrations
  - Application preparation support
  - Application review
- Aims to increase successful applications from small businesses owned by under-represented individuals, including women, African Americans, Hispanic Americans, Native Americans, Americans with disabilities, and businesses in under-represented states
- Offered once per funding period, ~3 months before standard due dates

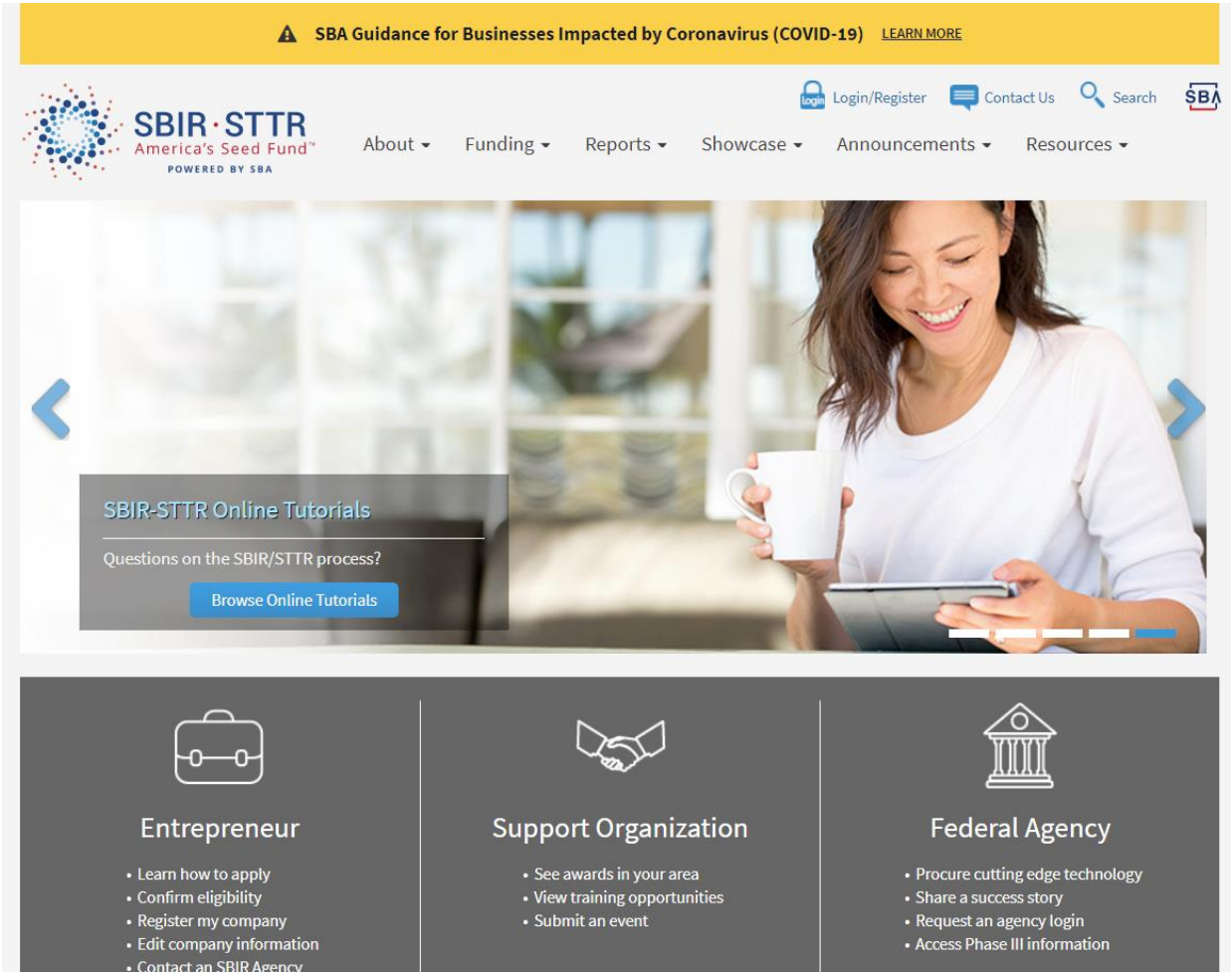
Phase 0: Strengthening the Pipeline
I-Corps National Innovation Network

- Leverage existing network of I-Corps partners
- Past efforts for I-Corps to feed into SBIR
  - NSF Phase 0: Provides funding for teams to go through I-Corps training as a precursor to preparation of a Phase I SBIR/STTR proposal
  - USDA I-FAST (Innovations in Food and Agricultural Science and Technology) for university-based pre-company teams
- Various agencies also support I-Corps for Phase I SBIR/STTR awardees

The SBIR Road Tour Has Gone Virtual

- Live panel discussions on Monday
- One-on-one meetings with agency program managers for each host state
- Additional events organized by host partners
- On-demand SBIR/STTR overview & agency pitches

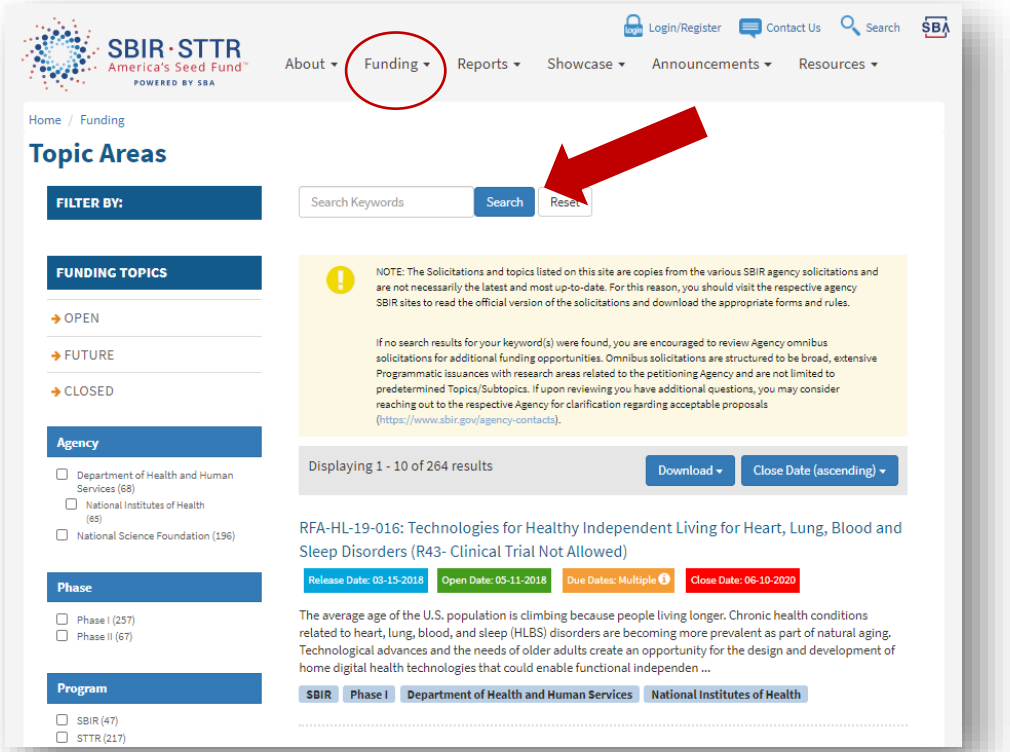
https://www.sbirroadtour.com/about/



Resources on SBIR.gov

- News
- Solicitations
- Tutorials
- Agency 101s
- Local Resources
- Award Database

Topic Searches

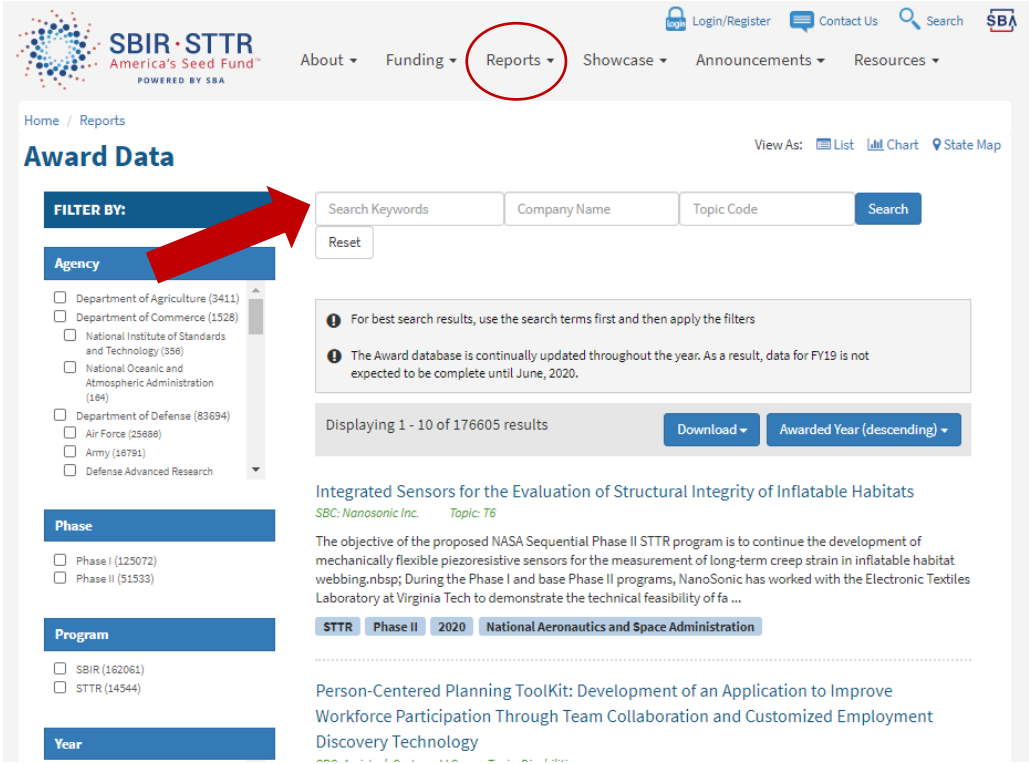


Learn which agencies fund different technology areas!

www.sbir.gov/sbirsearch/topic/past

Award Searches

- Identify successful firms
- Identify agency investments in technology areas



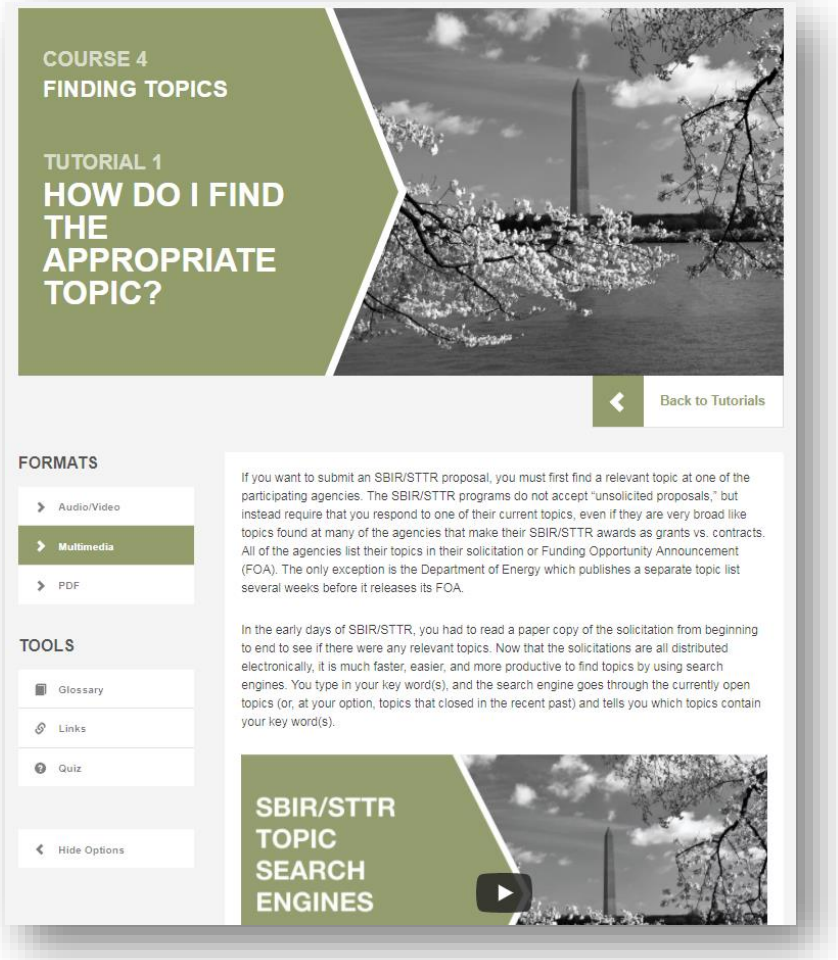
www.sbir.gov/sbirsearch/award/all

Online Tutorials

55+ Courses including:

- Agency overviews
- Program basics
- Data rights
- IP protection

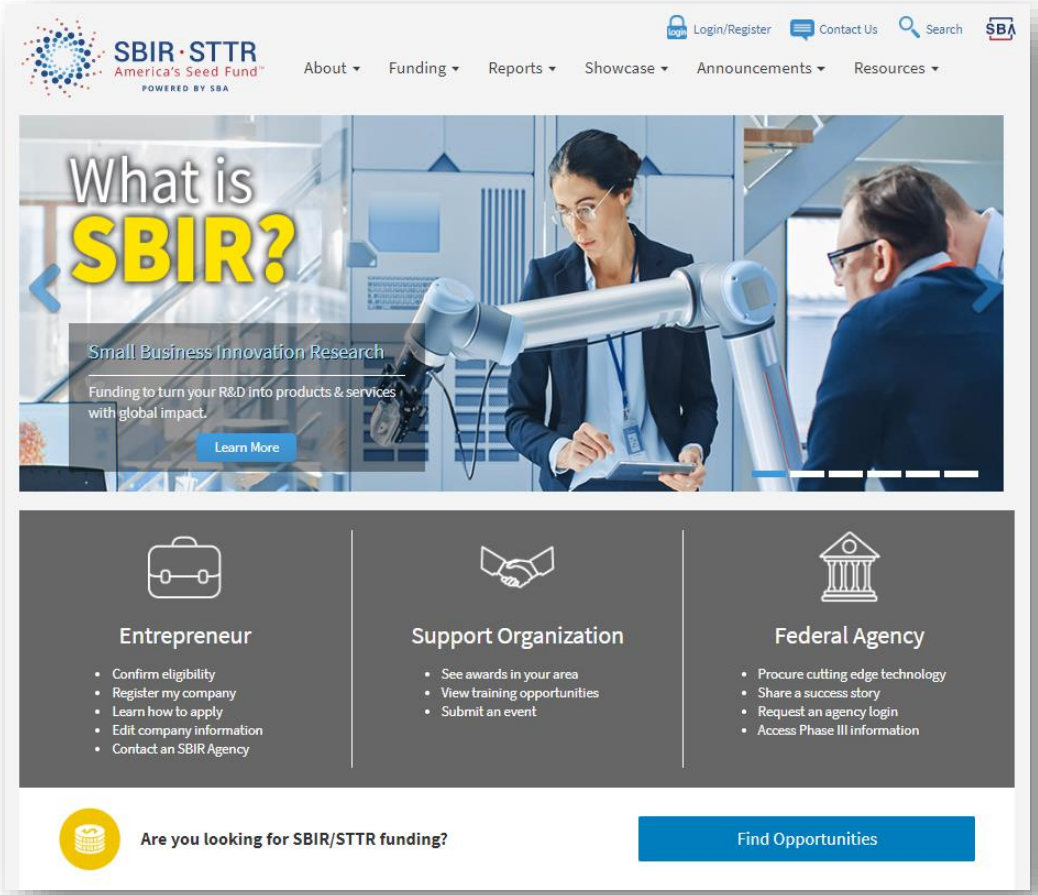
www.sbir.gov/tutorials



Connecting the Innovation Ecosystem

SBA works with a number of local partners to counsel, mentor, and train small businesses in the innovation ecosystem.

www.sbir.gov/local-resources/DC



Stay In Touch

@SBIRgov
#seedthefuture

www.sbir.gov

technology@sba.gov

MSI STEM
Research & Development
CONSORTIUM

Engage diverse talent. Promote innovation. Engineer futures.

2020 SBIR Pre-Road Tour Webinar

Ahsan Choudary & Charlotte Germain-Aubrey, Ph.D.
Assistant Directors of Research Development

What is the MSI STEM R&D Consortium?

Since 2015, the Minority Serving Institutions STEM Research & Development Consortium (MSRDC) is an RDT&E partner and strategic asset to ~70 minority-serving research institutions, as well as collaborative, industry, and government partners.

Members include Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges and Universities and small/medium-sized businesses.

- Established under the authority of the FY10 National Defense Authorization Act (NDAA).
- Cooperative Agreement (W911SR-14-2-0001) with the U.S. Army's Combat Capability Development Command.
  - Research authorization areas include basic (6.1) and applied (6.2) research as well as advanced technology development (6.3).
  - Cooperative Agreement allows research with <u>any</u> federal agency.
  - Direct project oversight by Program Manager with no blackout date.

SBA – MSRDC Strategic Alliance Memorandum (SAM)

Common Mission and Purpose

Engage diverse talent to promote innovation, research, and commercialization.

Strengthen/expand small business development.

Common Goals

Increase awareness & participation in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

Increase one-on-one Road Tour meetings with Program Managers (PMs).

Next Steps

Step 1

BEFORE SEPTEMBER 8

- https://www.sbirroadtour.com/about
  https://www.sbirroadtour.com/resources
- Set up 1-on-1 meetings with PMs
- Submit your research capabilities to MSRDC
  https://forms.zohopublic.com/msrdc1/form/ResearchCapabilitiesGeneralSubmissions/formperma/DNlT3x2T26JxoU3fcebsGXYdElSWBAbc-t37XU_gQv4

Next Steps

Step 2A

READY TO SUBMIT SBIR/STTR

- Continue with submission application
- Setup 1-on-1 meetings with Program Managers on the Road Tour
- Join our future webinars

Next Steps

Step 2B

FUTURE SUBMISSION SBIR/STTR

- Attend next webinar to learn how to leverage MSRDC funding vehicle
- Additional webinars on how to do business with federal government
- Additional webinar featuring a panel of Program Managers

MSI STEM Research & Development CONSORTIUM

MSI STEM
Research & Development
CONSORTIUM

Engage diverse talent. Promote innovation. Engineer futures.

Questions?

Assistant Directors for Research Development

Ahsan Choudary – ahsan.ahoudary@msrdconsortium.org
Charlotte Germain-Aubrey – charlotte.germain-aubrey@msrdconsortium.org

Intro to MSRDC

- Increase participation in SBIR/STTR, increase participation in one-on-one meetings with PMs
- Intro to MSRDC (the universities and businesses are members)
- How it benefits MSIs/SBCs
  - Goal is to increase one on ones (what is the purpose and items for discussion in this meeting and what happens after?) to increase competitive SBIR/STTR submissions and collect capabilities for future projects
  - Raise awareness of SBIR/STTR program among our member universities and SBCs to increase number of non-traditional performers.
    - We are engaging universities to gather capabilities to align with federal research priorities
    - We are engaging businesses to apply to SBIR and to partner with universities for STTR
    - Facilitate MSI researchers and SBCs by aligning their research with federal agency research priorities

How MSRDC can work with you

- Discussion on how members and collaborative partners can leverage the funding vehicle if not ready for SBIR/STTR.

- Leveraging the funding vehicle to pursue research funding leading up to submission to SBIR/STTR program
    i. Description of how MSRDC funding vehicle can fund research leading to submission to SBIR Phase I.
    ii. Walk through MSRDC process to pursue funding opportunities – important to gather capabilities
    iii. Discussion of next steps to engage with MSI researchers and SBCs.

Why Use a "CA" Contracting Vehicle?

MSRDC's *unique funding vehicle* has many benefits that make for an *optimal mechanism for research funding*:

- Largely exempt from Federal Acquisition Regulations (FAR) constraints
- Direct award authority to member institutions
- Streamlined process with most awards received in 90 or fewer days (on average)
- No communications blackout periods
- Federal program managers allowed direct program oversight
- Ability to compete research and development opportunities among member institutions

What Does the Government Get From MSRDC?

In addition to Minority-Serving Institutions, MSRDC has “majority” university and industrial Partners that work to provide solutions tailored to our Government sponsors’ unique RDT&E needs. Specifically, our organizational structure and CA contracting vehicle provide:

- Easy access and agile contracting to “non-traditional” defense research institutions and partners
- Identification and recruitment from a largely untapped and under-represented pool of science and engineering talent
- Dedicated MSRDC Research Development Team available to collaborate and facilitate research ideas from proposal to post-award administration

How Do We Work?

Internal information platform identifies and catalogs member universities' individual and unique research development test and evaluation (RDT&E) capabilities:

- Research expertise in relevant areas such as materials, biotechnology, cybersecurity, etc.
- Unique physical infrastructure and capabilities of member institutions.

Federal sponsors and partners include, but are not limited to:

- Department of State
- Department of Homeland Security
- Maritime Administration
- Department of Energy
- Small Business Administration
- Office of Naval Research
- Test Resource Management Center
- Army Research Laboratory
- Defense Threat Reduction Agency
- Combat Capabilities Development Command Center
- Army Material Systems Analysis Activity
- Combat Capabilities Development Command Armaments Center

MSRDC Aspirational Research Enterprise Ecosystem