SAN DIEGO STATE UNIVERSITY S D R I C San Diego Regional Innovation Cluster	The San Diego Regional Innovation Cluster (SDRIC) Small Businesses Reference Guide

Doing Business with the
Defense Advanced Research Projects Agency (DARPA)

Overview

As part of the San Diego Regional Innovation Cluster (SDRIC)'s services delivery team, The Foundation for Enterprise Development (FED) created this Guide for small businesses who are interested in developing advanced technology-based solutions, products and services, and accessing available funding from the Defense Advanced Research Projects Agency (DARPA).

This Guide provides SDRIC-participating companies with important information on how to successfully approach and do business with DARPA. It includes an introduction to DARPA, its Program Offices, and solicitation practices as well as key Resources and the Steps to take in aligning your business' innovations, technologies and solutions with DARPA's mission and practices in conducting scientific-based "high-risk, high pay-off " research and development activities that focus on solving some of our nation's most complex and challenging problems.

How to Use This Guide

The Guide is organized into three sections

1. **Introduction to DARPA**
2. **Steps and Best Practices for Connecting with DARPA Program Managers**
3. **Resources**

Introduction to DARPA provides an overview of DARPA's history and technology innovations, its organizational structure and program offices, the role of Program Managers, and the types of solicitations issued by the agency.

Steps and Best Practices identifies a road map and process for engaging with DARPA -- from identifying DARPA Program Manager bios and their current programs and specific research areas of interest; researching the current-state-of-the art to determine whether your ideas for projects are new and innovative and mapping them to DARPA Programs' focus areas; to preparing to discuss your innovative ideas and approaches with Program Managers; and developing and submitting proposals in response to solicitations, including Broad Agency Announcements (BAAs) and DARPA's Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) programs.

Resources provides you with easy access to online information and training on how to work with DARPA; research and compare your innovations and solutions with past DARPA-funded projects; pursue SBIR and STTR programs; and stay on top of DARPA solicitations, activities, news, and more.

Introduction to DARPA

"DARPA www.darpa.mil was created in 1958 as the Advanced Research Projects Agency (ARPA) to prevent strategic surprise from negatively impacting U.S. national security and create strategic surprise for U.S. adversaries by maintaining the technological superiority of the U.S. military. The political and defense communities recognized the need for a high-level defense organization to formulate and execute R&D projects that would expand the frontiers of technology beyond the immediate and specific requirements of the Military Services and their laboratories. To fulfill its mission, the Agency relies on diverse performers to apply multi-disciplinary approaches to both advance knowledge through basic research and create innovative technologies that address current practical problems through applied research. DARPA's scientific investigations span the gamut from laboratory efforts to the creation of full-scale technology demonstrations in the fields of biology, medicine, computer science, chemistry, physics, engineering, mathematics, material sciences, social sciences, neurosciences, and more. As the DoD's primary innovation engine, DARPA undertakes projects that are finite in duration, but create lasting revolutionary change." [1]

DARPA's technical accomplishments are significant including the development of the enabling technologies to create the Internet, the Stealth Fighter, Global Positioning Systems (GPS), and the M-16 and Javelin weapons among other major innovations. DARPA also had a key role in developing technologies and solutions in Anti-Submarine Warfare and Ballistic Missile Defense. For information on DARPA projects that have created enduring revolutionary change, visit www.darpa.mil/About/History/History.aspx

DARPA's Organizational Structure

Dr. Arati Prabhakar, the agency's Director, www.darpa.mil/Leadership.aspx leads DARPA today along with Deputy Director Steven Walker. Five of DARPA's six Program Offices fund research and development activities. These Offices include: **Defense Sciences, Information Innovation, Microsystems Technology, Strategic Technology, and Tactical Technology**. Contact information for these Offices is listed under **Resources** in this document. The sixth office, **The Adaptive Exploitation Office (AEO)**, helps accelerate DARPA technologies into military capabilities.

Each office has a Director, Deputy Director, Assistant Director, Program Managers and additional staff who develop and manage DARPA-funded programs and DARPA funded SBIR/STTR projects. DARPA Program Managers help define and build programs, and fund innovative ideas from industry and academia.

DARPA Program Managers

DARPA Program Managers come from the military, industry and academia and are with DARPA for a limited time. Program Managers are interested in connecting with technical teams that have innovative ideas and concepts that align with their individual DARPA programs. The optimal time to discuss your ideas and questions with Program Managers is *before* the release of a final solicitation. Every draft and final solicitation document has instructions on when and what type of interaction with Program Managers is permitted, so it is important to read all of the information in any solicitation document.

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[1] DARPA Public Web Site– www.darpa.mil

DARPA Solicitation Methods

DARPA's interests are in high-risk, high pay-off projects where a specific solution has not yet been achieved. DARPA uses these primary solicitation methods to fund research and development activities during the year.

Broad Agency Announcement (BAA)	A DARPA BAA and supporting documents describe DARPA's research interests -- either for an individual program or for a broadly defined area of interest – and provide the criteria for selecting the proposals, their relative importance, and evaluation method. The BAA defines deadlines for submitting white papers and/or proposals and instructions for preparing and submitting proposals.
	FAR Reference - FAR 35.016 http://farsite.hill.af.mil/vffara.htm describes DARPA solicitations and industry days which provide an opportunity to learn more about a specific DARPA Program and upcoming BAAs. All appear in FedBizOps www.fbo.gov and www.darpa.mil/Opportunities/Solicitations/DARPA_Solicitations.aspx
DARPA Small Business and Research Innovation (SBIR) Grants and Small Business Technology Transfer (STTR) Programs	A Congressional mandate requires all Federal agencies with an annual extramural R&D budget exceeding $100 million to participate in the SBIR Program. The SBIR program budget is computed as 2.5 percent of the Agency's extramural R&D budget. Reference: http://www.darpa.mil/Opportunities/SBIR_STTR/Programs/Small_Business_Innovation_Research_Program_Overview.aspx
	The mandate also requires all Federal agencies with an annual extramural R&D budget exceeding $1 billion to participate in the STTR program. The STTR program budget is computed as 0.3 percent of the extramural R&D budget. Reference: http://www.darpa.mil/Opportunities/SBIR_STTR/Programs/Small_Business_Technology_Transfer_Program_Overview.aspx
	The combined DARPA budget for SBIR/STTR programs is typically more than $60M per year.

Steps and Best Practices for Connecting with DARPA Program Managers

Follow the steps below to successfully connect with DARPA Program Managers *before* you submit any proposal. Use the **"Resources"** in this document to learn all about DARPA, solicitations, and previously funded programs.

Step 1   Research Your DARPA Contacts

1. Review information on the DARPA Web Site about each Program Office to learn about their respective focus areas http://www.darpa.mil/our_work
2. Review the Program Managers' Biographies to identify who is working in the areas where your company and technical teams have expertise and, most importantly, have innovative ideas for technology development and application.
   a. For each Program Office, click on "Personnel Link" for a list of all Program Managers in that Office. Click on the PM's name to view their biography and email address next to the biography.
   b. To learn more about the programs that individual Program Manager's manage, click on any program link.
3. Create a DARPA customer contact list with the name and email for the Program Managers that map to your

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company's area of expertise and your innovative ideas for solving a challenging DoD-related problem.

Step 2   Conduct a Survey on Your Innovation

4. Use the **"Resources"** in this document to conduct your own survey on relevant, current state-of-the-art innovations, and research and development activities to determine whether your idea is new or has already been funded by DARPA.
    a. Perform web searches, review scientific and technical publications, and mine publically available sources such as the Defense Technical Information Center (DTIC) www.wwdtic.mil/dtic and the Defense Innovation Marketplace www.defenseinnovationmarketplace.mil
    b. DTIC is the largest central resource for DoD and government-funded scientific, technical, engineering, and business related information. The Defense Innovation Marketplace provides information about Department of Defense (DoD) investment priorities and capability needs.
    c. Search FebBizOps to identify contract awards in specific technology areas https://www.fbo.gov
    d. Search DoD's SBIR and STTR Program database that has abstracts on previously funded R&D projects www.dodsbir.net

5. Assess the findings from your state-of-the-art survey (in 4. above). Has the problem that you are interested in addressing been solved? Do you believe your idea can push the state-of-the-art forward? If the problem has not yet been solved and/or you think your idea can push the state-of-the-art, then your next step is the contact the DARPA Program Manager.

Step 3   Schedule a Call or Meeting with the DARPA Program Office

6. Now is the time to send the Program Manager(s) a short email expressing your interest in having a discussion with them about an idea that maps to a specified area of interest and request a phone call or meeting.
    a. DARPA Program Managers are interested in hearing innovative concepts directly from members of your technical team. The email should include an overview of your company, area of research interest and highlights of any previous work that you have done under contract for DARPA.
    b. The Program Manager's office will respond to your email and schedule a call or meeting if they are interested in learning more about your idea or concept.

7. If a call or meeting is scheduled, ask what specific information should, and should not be included in your presentation, and if they have a preferred template for preparing your briefing materials. If you will be meeting in person, ask whether you will be permitted to use your personal computer during the meeting, and how many copies of your briefing you will need to bring.

Step 4   Meet with DARPA

8. During the call or meeting with the Program Manager, this is your opportunity to learn more about their areas of interest and the technical challenges they are addressing. This information may lead you to modify your concept and approach for the technology or system you are proposing be funded by DARPA or lead you to develop some new ideas.
    a. Be open and flexible during the discussion and take notes for later review.
    b. Always discuss next steps and follow-up activities *before* the meeting or call ends. If DARPA has potential interest in funding your idea, they may discuss funding mechanisms including submitting proposals in response to DARPA BAAs, or the SBIR or STTR Solicitations.

Step 5   Follow-up

9. Send a thank you email after the call or meeting, reiterating the next steps and restating how your proposed

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idea maps to a DARPA area of interest and that your technical team is qualified to engage with DARPA.

GOOD LUCK!

Resources for Learning About DARPA, Program Offices, Activities, and More

The more you know about DARPA, their Program Offices, the innovations and technologies they have funded, and the upcoming solicitations, the better your business can be at engaging with DARPA Program Managers to discuss your innovative ideas and respond to DARPA solicitations. Use the Resources below to build your knowledge base to more effectively engage with DARPA. *REMINDER – The DARPA SBPO continuously updates the information on their web site. Check to see what's new every day!*

Topic	Resource	Access
Watch "How Small Business Can Work with DARPA" to develop innovative technologies and solutions that fill gaps identified by the DoD	Series of four online video presentations by the DARPA Office of Small Business Programs (OSBP)	http://www.darpa.mil/Opportunities/SBIR_STTR/TransitionAssistance/Section_1_1_Small_Business_Introduction.aspx **THE VIDEO PRIMER: How to do Business with DARPA** 1. An Introduction to DARPA 2. How Small Businesses Work with DARPA 3. SBIR/STTR Transition Overview 4. Your Next Steps to Success
Read "Doing Business with DARPA"	The OSBP-prepared document on this DARPA Web page	http://www.darpa.mil/Opportunities/SBIR_STTR/
Understand Individual Program Offices focus areas, personnel, programs and solicitations to contact the RIGHT office with your technology	**DARPA Program Offices:** http://www.darpa.mil/our_work Defense Sciences Office (DSO) - Basic, Materials & Biological Science Information Innovation Office (I2O) - Information, Innovation & Cyber Microsystems Technology Office (MTO) - Electronics, Photonics & MEMS Strategic Technology Office (STO) - Networks, Cost Leverage & Adaptability Tactical Technology Office (TTO) - Weapons, Platforms & Space	
Follow the Latest News on DARPA Innovations and Activities	DARPA Web Site –including their News Items page	www.darpa.mil www.darpa.mil/NewsEvents/Releases.aspx
Subscribe to DARPA Tweets	**Twitter**	www.twitter.com/DARPA
Friend DARPA on Facebook	DARPA Facebook Page	www.facebook.com/DARPA
View videos on DARPA -Sponsored Technology & Innovations	DARPA YouTube Channel	www.youtube.com/user/DARPAtv
Read Success Stories on DARPA-Sponsored Technologies	DARPA SBIR Success and Feature Reports	www.darpa.mil/Opportunities/SBIR_STTR/SBIR_STTR_Success_Reports.aspx
Monitor the web for DARPA content by creating a search query	Example: Google Alert	www.google.com/alerts
Create custom searches for small	FedBizOps – reference Small Business	www.fbo.gov/?s=getstart&mode=li

Topic	Resource	Access
business technology and innovation opportunities and for contract awards in specific technology areas	Training Videos	st&tab=list&tabmode=list&static=sb_vids
Search abstracts on previously funded DoD R&D projects	DoD's SBIR and STTR Program database	www.dodsbir.net
Mine DTIC - the largest central resource for DoD and government-funded scientific, technical, engineering and business related information	Defense Technical Information Center (DTIC)	www.wwdtic.mil/dtic
Learn about DoD investment priorities and capability needs	Defense Innovation Marketplace (DIM)	www.defenseinnovationmarketplace.mil
Learn about the SBIR program	DARPA Small Business Innovation Research (SBIR) grants	www.darpa.mil/Opportunities/SBIR_STTR/Programs/Small_Business_Innovation_Research_Program_Overview.aspx
Learn about the STTR program	DARPA Small Business Technology Transfer (STTR) programs	http://www.darpa.mil/Opportunities/SBIR_STTR/Programs/Small_Business_Technology_Transfer_Program_Overview.aspx
Learn More about DoD SBIR and STTR programs	DoD SBIR and STTR Programs	http://www.acq.osd.mil/osbp/sbir/sb/index.shtml
View the DoD SBIR/STTR Solicitation Schedule	DoD SBIR/STTR Solicitation Web Site	http://www.acq.osd.mil/osbp/sbir/sb/schedule.shtml
Small Business Planning Tool for Technology Transition and Commercialization Plan Development	DARPA SBPO Website	http://dtsn.darpa.mil/sbpt/
Access Additional Resources and Information for Small Businesses	DARPA SBPO Website	http://www.darpa.mil/Opportunities/SBIR_STTR/

REMINDER – *The DARPA SBPO continuously updates the information on their web site. Check to see what's new every day!*