



# Funding Innovative Research

**Small Business Innovation Research (SBIR)  
Small Business Technology Transfer (STTR)**





# **Proposal Preparation Schedule**

# 150 HOURS

Preparing, drafting and revising your proposal takes time.

# The SBIR/STTR Proposal Journey?

- Developing innovative solutions
- Searching for commercial opportunities
- Understanding an agency's needs
- Following an agency's guidelines
- Multiple registrations
- Building a team and/or partnerships
- Financial preparation



NO FUN

# Week 1: Commit to ~10-week schedule

Request to be on agency List Serv or E-mail list

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2							
Week 3							
Week 4							
Week 5							
Week 6							
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_

# Week 1: Study Topics

- Review the topics and identify fits
- Draft questions regarding topics –prepare to reach out to topic author, if allowed
- Evaluate your strengths and team

## Contracts

- DoD** Department of Defense
- NASA** National Aeronautics and Space Administration
- DHS** Department of Homeland Security
- DOT** Department of Transportation
- EPA** Environmental Protection Agency
- NIST** National Institute of Standards and Technology (CRADA)

## Both

- HHS** Health and Human Services (*mostly grants*)
- DoED** Department of Education

## Grants

- NSF** National Science Foundation
- DOE** Department of Energy
- USDA** United States Department of Agriculture
- NOAA** National Oceanic and Atmospheric Administration

# Differences

## Proposal Prep

### Grants

Questions and answers about solicitations are NOT made public

Potential applicant can contact the topic author throughout the period that the solicitation is open.

### Contracts

Questions and answers about solicitations MUST be made public

There are restrictions regarding contacting the topic author



## Week 2: Study Solicitations

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author, locate resources that can help you						
Week 3							
Week 4							
Week 5							
Week 6							
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

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# You apply in response to a Solicitation



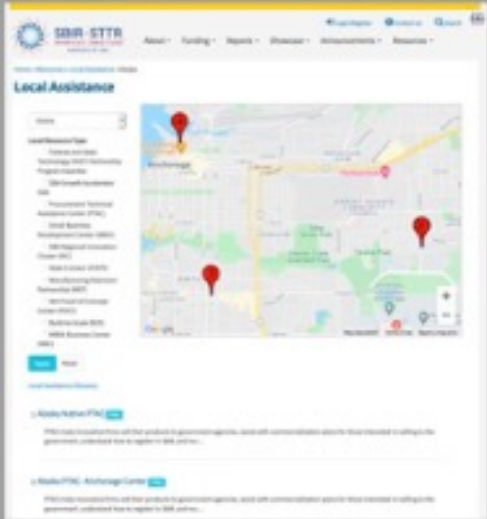
The screenshot shows the SBIR/STTR website home page. At the top left is the SBIR/STTR logo. Below it is a navigation menu with links for Home, Funding, Alerts, News, Events, Resources, and Contact Us. A large banner on the left side features the text "ONLINE TUTORIALS" and a description of the program. Below the banner is a "COURSES" section with a list of items: PROGRAM GUIDE, AGENCY INFORMATION, AGENCY SOLUTIONS, and FUNDING TOPICS. Each item has a small icon and a plus sign to its right.

**Learn About SBIR/STTR**



The icon consists of a dark blue square with a lighter blue border. Inside the square is a white document icon with a blue arrow pointing downwards. Below the document icon is a white box with the letters "PDF" in blue.

**Download Solicitations**



The screenshot shows the "Local Assistance" page on the SBIR/STTR website. It features a map of the United States with several red location pins. To the left of the map is a list of assistance providers, including the National Science Foundation, National Institutes of Health, and others. Below the map and list are sections for "Apply for a POC" and "Find a POC" with brief descriptions and links.

**Find Local Assistance**

# Approximate schedule for solicitations

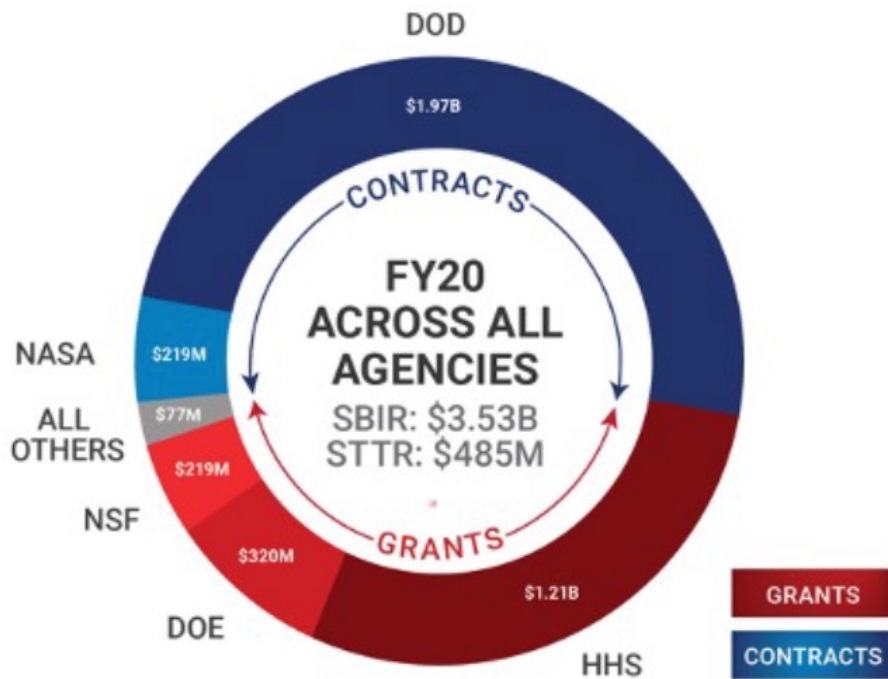
	2020			2021												2022	
Agency	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB
DHS			█	█											█		
DOC – NIST				█	█	█	█									█	█
DOC – NOAA	█	█	█	█									█	█	█	█	
DoD				█	█	█		█	█	█		█	█			█	█
DOE			█	█	█						█	█	█				
DOT					█	█											
ED			█	█											█	█	
EPA									█	█	█						
HHS – Omnibus	MULTIPLE DUE DATES																
HHS – R&D Contracts										█	█	█	█				
NASA		█	█	█											█	█	
NSF	MULTIPLE DUE DATES																
USDA	█									█	█	█	█				

# How do I know when solicitations are released?

**SIGN UP TO RECEIVE ANNOUNCEMENTS FROM AGENCIES**

AGENCY	Website
DHS	<a href="https://sbir2.st.dhs.gov/portal/SBIR/">https://sbir2.st.dhs.gov/portal/SBIR/</a>
DoD	<a href="https://rt.cto.mil/rtl-small-business-resources/sbir-sttr/">https://rt.cto.mil/rtl-small-business-resources/sbir-sttr/</a>
DOE	<a href="https://science.osti.gov/sbir/Funding-Opportunities">https://science.osti.gov/sbir/Funding-Opportunities</a>
DOT	<a href="https://www.volpe.dot.gov/work-with-us/small-business-innovation-research">https://www.volpe.dot.gov/work-with-us/small-business-innovation-research</a>
ED	<a href="https://ies.ed.gov/sbir/">https://ies.ed.gov/sbir/</a>
EPA	<a href="https://www.epa.gov/sbir">https://www.epa.gov/sbir</a>
HHS	<a href="https://sbir.nih.gov/">https://sbir.nih.gov/</a>
NASA	<a href="https://sbir.nasa.gov/">https://sbir.nasa.gov/</a>
NSF	<a href="https://seedfund.nsf.gov/">https://seedfund.nsf.gov/</a>
NIST	<a href="https://www.nist.gov/tpo/small-business-innovation-research-program-sbir">https://www.nist.gov/tpo/small-business-innovation-research-program-sbir</a>
NOAA	<a href="https://techpartnerships.noaa.gov/SBIR">https://techpartnerships.noaa.gov/SBIR</a>
USDA	<a href="https://nifa.usda.gov/program/small-business-innovation-research-program-sbir">https://nifa.usda.gov/program/small-business-innovation-research-program-sbir</a>

# FY20 SBIR/STTR Budgets (Combined)



Agencies with SBIR and STTR Programs	2020 Budget
Department of Defense (DoD)*	\$1.97 B
Department of Health and Human Services (HHS)**, including the National Institutes of Health (NIH)	\$1.21 B
Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)	\$320 M
National Science Foundation (NSF)	\$219 M
National Aeronautics and Space Administration (NASA)	\$219 M
Agencies with SBIR Programs	2020 Budget
U.S. Department of Agriculture (USDA)***	\$30 M
Department of Homeland Security (DHS)	\$14 M
Department of Commerce (DOC): National Institute of Standards and Technology (NIST)	\$3.7 M
Department of Commerce (DOC): National Oceanic and Atmospheric Administration (NOAA)	\$10 M
Department of Transportation (DOT)	\$12.7 M
Department of Education (ED)	\$7.7 M
Environmental Protection Agency (EPA)*	\$3.7 M

NIH also issues contracts; and, within DOC, NIST uses cooperative agreements.

# Week 2: Study Solicitation

- Due date
- Format, Page limits, font size
- Maximum Award Amounts –SBIR or STTR
- How it will be submitted: Grants.gov, FastLane, etc.
- Registration requirements: D&B, SAM, PAMS, grants.gov, etc.
- Any other special requirements
- Can you ask questions? Topic author, date restrictions
- How it will be evaluated –you write to the evaluation criteria

## Week 3: Complete Registrations

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author, locate resources that can help you						
Week 3	Begin completing registrations / Start drafting technical sessions of proposal						
Week 4							
Week 5							
Week 6							
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_



## Three Registrations Every Program Requires

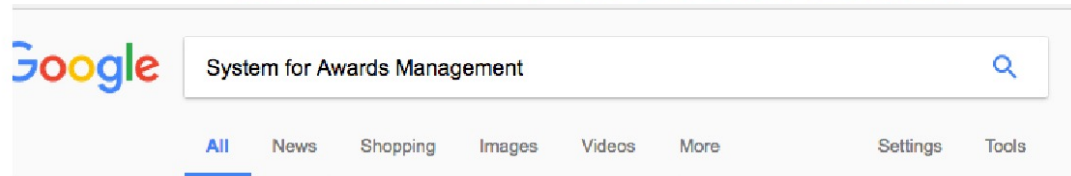
- System for Award Management (SAM) - *annual*
- Dun and Brad Street (D&B): DUNS number – *one time*
- Small Business Administration's (SBA) Company Registry – *one time*

Missing Registrations is the biggest reason for missing deadlines!



Make  
Sure You  
Go to  
the  
Correct  
Website

## WATCH OUT FOR LOOK ALIKES!



About 51,600,000 results (0.70 seconds)



**System for Award Management - SAM.gov Federal Registration**  
**Ad** [www.uscontractorregistration.com/USFCR-GOV/SAM](http://www.uscontractorregistration.com/USFCR-GOV/SAM) (888) 416-2086  
Registration Service for Businesses Looking to Work with the Federal Government  
Rush Service Available · DSBS Search Keywords · Contract Alerts · FPDS Past Performance  
SAM New Registration      SAM Migration  
Contract Search      Contracting Officers



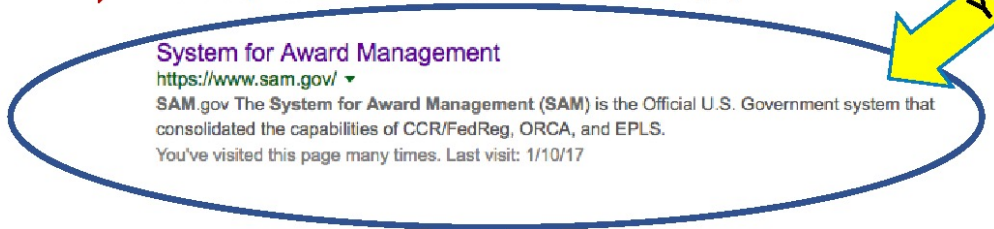
**OpenWater - Award Management Software - getopenwater.com**  
**Ad** [www.getopenwater.com/](http://www.getopenwater.com/)  
Judging, Nominations, Soliciting. Effective Software for Awards Management.  
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Download Awards Guide · Case Studies & Guides · Request a Demo · Awards Software



**SAM.gov Registration - System For Award Management Reg - famr.us**  
**Ad** [www.famr.us/SAM-Registration](http://www.famr.us/SAM-Registration)  
Speak To A Registration Advisor Now  
SAM - CAGE - CCR - ORCA · Completed For Only \$195 · Advisors Can Assist Now  
Federal Contracts For Bid · SAM Registration Online · What Is A CAGE Code?



**SAM Register & Renewal - Fast & Easy SAM Registration**  
**Ad** [www.federalcontractorregistry.com/](http://www.federalcontractorregistry.com/) (877) 348-1376  
The 1st Step In Government Contracting. Call Federal Contractor Registry!



**System for Award Management**  
<https://www.sam.gov/>  
SAM.gov The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS.  
You've visited this page many times. Last visit: 1/10/17

# Other Registrations

- Some Annual; Others One Time

	NASA	HHS	NSF	DOE	DoD
DUNS	X	X	X	X	X
SAM	X	X	X	X	X
SBA Company Registry	X	X	X	X	X
EHB [Electronic Handbook]	X				
eRA Commons		X			
Grants.gov		X		X	
NSF Fastlane			X		
Portfolio Analysis and Management System (PAMS)				X	
Fedconnect.net				X	
Funding Accountability and Transparency and Sub-Award Reporting System				X	
DoD Submission website <a href="https://www.dodsbirsttr.mil/submissions/login">https://www.dodsbirsttr.mil/submissions/login</a>					X



# Week 4: Continue Drafting Technical Proposal

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author locate resources that can help you						
Week 3	Begin completing registrations / Start drafting technical sessions of proposal						
Week 4	Continue drafting technical sessions, request feedback on technical proposal						
Week 5							
Week 6							
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_

# Technical Proposal (See solicitations)

- ▶ USDA – Project Narrative (PN)

- ▶ 20 pages, 10 point

- a) Responsiveness to USDA NIFA SBIR Program Priorities
- b) Prior USDA Support
- c) Identification and Significance of the Problem or Opportunity
- d) Background and Rationale
- e) Relationship with Research or Research and Development
- f) Technical Objectives
- g) Work Plan
- h) Related Research or Research and Development
- i) Potential Post Application

- ▶ Navy – Technical Volume

- ▶ 10 pages, 10 point

- ▶ Identification and Significance of the Problem
- ▶ Phase I Technical Objectives
- ▶ Phase I Statement of Work (including subcontractors efforts)
- ▶ Related Work
- ▶ Relationship with Research or Research and Development
- ▶ Commercialization Strategy
- ▶ Key Personnel
- ▶ Foreign Citizens
- ▶ Facilities/Equipment

# Week 5: Build Your Winning Team

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author locate resources that can help you						
Week 3	Begin completing registrations / Start drafting technical sessions of proposal						
Week 4	Continue drafting technical sessions, request feedback on technical proposal						
Week 5	Build your team, keep drafting technical proposal, benchmark labor costs						
Week 6							
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_

# Week 6: Focus on Financials

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author locate resources that can help you						
Week 3	Begin completing registrations / Start drafting technical sessions of proposal						
Week 4	Continue drafting technical sessions, request feedback on technical proposal						
Week 5	Build your team, keep drafting technical proposal, benchmark labor costs						
Week 6	Get help with financials, revise technical proposal						
Week 7							
Week 8							
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_

## Weeks 7-10: Stick with it!

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1	Study topics and prepare to reach out to topic author						
Week 2	Study solicitations, reach out to topic author locate resources that can help you						
Week 3	Begin completing registrations / Start drafting technical sessions of proposal						
Week 4	Continue drafting technical sessions; request feedback on technical proposal						
Week 5	Build your team, keep drafting technical proposal, benchmark labor costs						
Week 6	Get help with financials; revise technical proposal						
Week 7							
Week 8					Stay Focused		
Week 9							
Week 10	Plan to upload the proposal two days before it is due						

Exact Release Date: \_\_\_\_\_

Exact Due Date and Time: \_\_\_\_\_



## Week 7-10: Additional Steps

- Continue drafting and revising commercialization plan
- Obtain letters – allow up to 4 weeks
- Make sure you have registrations
- Revise technical proposal and budget; compare with agency guidelines.



# **Proposal Evaluation Criteria**

# Understanding How Proposals are Evaluated

- Contact Topic Authors
  - Contacts vs Grants
- Study evaluation criteria
- Confirm that your proposal matches the evaluation criteria

AGENCY	Can you contact personally?	What do they call Topic Author
Department of Defense	Pre-R	Technical Point of Contact (TPOC)
Department of Education	No	-----
Department of Energy	Yes	Topic Author (TA), Topic Manager
Department of Homeland Security	Pre-R	Technical Point of Contact (TPOC)
Department of Transportation	No	-----
National Aeronautics and Space Administration	No	-----
Environmental Protection Agency	No	-----
National Institutes of Health	Yes	Program Officer, Program Director
National Institute of Standards and Technology	No	-----
National Oceanic and Atmospheric Administration	No	-----
National Science Foundation	Yes	Program Officer, Program Director
United States Department of Agriculture	Yes	National Program Leader (NPL)

# Sample E-mail

Dear {insert topic manager name}

My name is \_\_\_\_\_ and I am {describe affiliation}. I have reviewed the agency website and current solicitation and am interested in Topic #. After reviewing the topic, as well as the links and references, I have a few questions. My questions relate to: {insert 1 or 2 key questions}.

Please let me know if you have time for a 10-15 minute call to discuss. A brief conversation will help determine if I can submit a responsive proposal. I am available on the dates below, but can also work around your schedule:

9/1/21: 12- 4pm PST

9/12/21: 9 – 5pm PST

9/27/21: 9-5pm PST

Thanks for your consideration.

# Tips for Call with Topic Manager

- **DON'T** talk about your company
- **DON'T** ask questions that are addressed in the solicitation
- **DON'T** talk too much
- **DO** ask questions of clarification regarding topic
- **DO** ask if certain approaches are of interest
- **DO** listen more than you talk

# Understand the agency's objectives

- ▶ Solicitation topics relate to an agency's mission
- ▶ The mission of each agency that participates in the SBIR/STTR programs is unique
- ▶ An applicant must demonstrate in their proposal that their proposed work will address their mission
  - Review the references provided in each solicitation

# “Win Themes” for federal proposals

- ▶ Things for small business to consider
  - ▶ What advantages can you provide the agency in terms of your solution, your team, your ability to commercialize?
  - ▶ What are your competitors likely to say that they can do and how can you differentiate yourself?
  - ▶ What are the messages that you want the reviewers to walk away with?



# Strong Writing Skills

- ▶ The applicant must present a strong case for funding
- ▶ The case must be logical, compelling, and well written
- ▶ Follow the outline that is presented in the solicitation – this makes it easy for reviewers



**Writing to the  
evaluation criteria**

# Agencies DO NOT Review All Proposals

## STEP 1: The administrative review process

*“The Government administratively screens all proposals and reserves the right to reject any proposal that does not conform to following formatting requirements.” from NASA SBIR/STTR solicitation*

A 3D rendering of a grey trash can with a lid that features a clock face. The trash can is overflowing with crumpled brown paper bags, representing waste. The clock face shows the time as approximately 1:50. The background is a plain white surface.

❖ Don't Waste Time and Money

❖ Get Information about the Administrative Review Process

# What does NASA say you need to do to pass the Administrative Review?

## 3.3.2 Format Requirements:

The government administratively screens all proposals and reserves the right to reject any proposal that does not conform to the following formatting requirements. Offerors that repeatedly violate solicitation formatting instructions are at higher risk of rejection for nonconformance on subsequent SBIR/STTR proposals.

# USDA guidelines from FY20 and FY21 solicitation....58 pages

**Initial Screening Criteria:** Applicants should be aware that applications that do not satisfy all of the screening criteria will be returned to the proposing entity without review. Returned applications may not be resubmitted (with or without revision) under this solicitation. The initial screening criteria are the following:

- (1) The proposing firm must qualify as a small business concern. USDA NIFA uses the Small Business Administration (SBA) SBIR company registry certification that the applicant is to provide with the application to confirm the applicant is a small business concern.
- (2) The application must meet the Application Content and Format requirements as described in this RFA. This includes page length requirements, all required forms and all files in PDF.
- (3) The proposed budget must be within the dollar ceiling identified in this RFA.
- (4) The proposed Phase I project must fall within one of the USDA NIFA SBIR topic areas.
- (5) An application must contain adequate scientific/technical and market opportunity information that clearly states the project plan and objectives. USDA NIFA reserves the right not to submit for review any application that it finds to have insufficient information.

# DOE guidelines from FY21 Phase I Release 2 solicitation.....70 pages

- ▶ Applications that have a probability of resulting in classified work will be administratively declined.
- ▶ The project title must be the same as submitted in your LOI; applications not meeting this requirement may be administratively declined.
- ▶ If the Commercialization Plan is not included at the time of application submission, your application will be administratively declined without review.

<https://science.osti.gov/sbir/Funding-Opportunities>

# DoD guidelines.....very simple

- ▶ DoD does NOT use the phrase “Administrative review” or “Administratively” .....it uses “will not be considered for review”
- ▶ This term appears only in component or service BAA guidelines and is limited to pages to be reviewed.
- ▶ USSOCOM - Phase I proposals shall NOT include:
  - Any travel for Government meetings. All meetings with the Government will be conducted via electronic media.
  - Government furnished property or equipment.
  - Priced or Unpriced Options.
  - A Technical Volume exceeding five pages. USSOCOM will only evaluate the first five pages of the Technical Volume. Additional pages will not be considered or evaluated.
  - “Basic Research” (or “Fundamental Research”) defined as a “Systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and/or observable facts without specific applications toward processes or products in mind.”
  - Human or animal studies.



# Merit Review

## STEP 2 – Three Key Criteria

- 1) Innovation / technical merit
- 2) Experience, qualifications, and facilities
- 3) Commercialization

A hand in a business suit pointing towards the word 'INNOVATION'. The word is formed by white letters inside blue-outlined hexagons. The background is a blurred image of a person in a suit.

**I** **N** **N** **O** **A** **T** **I** **O**

# Criterion 1: INNOVATION

## NSF

All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.

## NASA

The proposed R/R&D effort will be evaluated on whether it offers a clearly innovative and feasible technical approach to the described NASA problem area. Proposals must clearly demonstrate relevance to the subtopic as well as one or more NASA mission and/or programmatic needs. Specific objectives, approaches and plans for developing and verifying the innovation must demonstrate a clear understanding of the problem and the current state of the art. The degree of understanding and significance of the risks involved in the proposed innovation must be presented.

## USDA

### (A) Phase I Scientific and Technical Feasibility:

These evaluation criteria will be used for the review of all applications.

1. Project objectives and outcomes are clearly described, adequate, and appropriate. All project components (i.e., research and commercialization) are reflected in one or more project objectives;
2. Proposed approach, procedures, or methodologies are innovative, original, clearly described, suitable, and feasible;
3. Expected results or outcomes are clearly stated, measurable, and achievable within the allotted time frame;
4. Proposed research fills knowledge gaps that are critical to the development of new innovations to address the stated problem or issue;
5. Proposed research is up-to-date on the current state of the art (i.e., literature reviews have been completed).
6. Proposed research includes Agriculturally-related Manufacturing and/or Energy Efficiency and/or Alternative and Renewable Energy technologies.

# Criterion 1: INNOVATION

## DOD

“The soundness, technical merit, and innovation of the proposed approach and its incremental progress toward topic or subtopic solution.

## HHS

“Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?”

## DOE

Strength of the Scientific/Technical Approach as evidenced by (1) the innovativeness of the idea and the approach, (2) the significance of the scientific or technical challenge, and (3) the thoroughness of the presentation.

## Criterion 2: Your people and facilities



# Merit Criteria – Your People and Facilities

## ▶ DoD

The **qualifications** of the proposed principal/key investigators, supporting staff, and consultants. Qualifications include not only the **ability to perform the research and development** but also the **ability to commercialize the results**.

A hand is shown at the bottom center, with fingers touching a glowing digital network. The network consists of numerous white nodes connected by thin white lines, creating a complex web-like structure. The background is a soft, light blue gradient. The word "Commercialization" is centered in the middle of the image in a bold, black, sans-serif font.

# Commercialization

⚠ SBA Guidance for Businesses Impacted by Coronavirus (COVID-19) [LEARN MORE](#)



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### Entrepreneur

- Learn how to apply
- Confirm eligibility
- Register my company



### Support Organization

- See awards in your area
- View training opportunities
- Submit an award



### Federal Agency

- Procure cutting edge technology
- Share a success story
- Request an agency login

## Stay In Touch

Denise McKenzie  
[denisemc@hawaii.edu](mailto:denisemc@hawaii.edu)

<http://bit.ly/JoinSBIRList>

[www.sbir.gov](http://www.sbir.gov)