# How to Write Winning Proposals

# "Keys to Success"

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# Getting Started

- No lack of opportunities

- Challenges of finding the right fit

- Assess your chance of success

- Build the right team

- Know your customer

- Get organized!

# Funding Opportunities

- Firstgov.org
- Air Force Research
- Army Research Office
- Catalog of Federal Domestic Assistance
- Congressionally Directed Medical Research Program
- Defense Advanced Research Projects Agency
- Environmental Protection Agency
- FedBizOpps.Gov
- Federal Acquisition Jumpstation
- Federal Register
- Grants.gov (all federal funding opportunities)
- Health & Human Services (HHS) GrantsNet
- National Aeronautics and Space Administration
- National Endowment for the Arts
- National Endowment for the Humanities
- National Institutes of Health
- NIH Parent Announcements
- NIH Basic Behavior and Social
- National Oceanic and Atmospheric Administration
- The Foundation Center (foundationcenter.org)

- National Science Foundation
- Office of Naval Research
- U.S. Department of Agriculture
- U.S. Department of Education
- U.S. Department of Energy
- Office of Science
- National Energy Technology Lab
- Office of Nuclear Energy
- Office of Energy Efficiency and Renewable Energy
- Advanced Research Projects Agency
- U.S. Department of Homeland Security
- U.S. Department of Housing and Urban Development Information about Grants
- Federal Register
- Federal Business Opportunities
- NIH Guide to Grants & Contracts
- NSF Bulletin
- NSF Guide to Programs
- Catalog of Federal Domestic Assistance

# Two Major Research Funding Paths

1. Responding to an agency-published research solicitation.

2. Following agency specific guidelines to submit an unsolicited or investigator-initiated research proposal.

   • These are best done after building a relationship with a program manager or responding to a multi-year BAA.

   • Agency websites are the best places to go to get information – each one has a different process, but it usually includes a white paper, (for example, DOE (energy) has a guide for unsolicited proposals.)

Solicitation
- May be too late
- Lots of competition
- Advertised project details
- Respond to larger agency needs
- Can be complicated

Unsolicited
- Targets a known problem
- Must know your end user
- May not have funding
- Might not get response
- Better know a name

# A Strategic / Realistic Approach

- Assess:
    1) Does your project answer their need?
    2) Do you have a unique approach?
    3) Do you have, or can you get the right expertise?
    4) Do you have enough time to
        - Develop your approach
        - Write your proposal <u>and</u> have it reviewed at least twice by numerous people
        - Finalize a budget and budget narrative (for all partners)
        - Obtain letters of commitment
        - Finalize a teaming agreement
        - Get signatures for NDA's
        - Start the IRB process
        - Write other required documents (like a DMP)
        - Get all partners CV's/biosketches completed in the right format

# Get Tactical

- Define the research need and the purpose of the solicitation

    Research expectations
    - Project scope
    - Expected outcomes/deliverables
    - Schedules

- Outline competitive information
    - Eligibility
    - Number and size of awards
    - Conditions of award
    - Review process and timeline

- Application instructions
    - Deadlines
    - Content requirements
    - Format requirements
        - Page length
        - Margins/fonts
        - Headers/footers
        - Page numbers
        - URLs
        - Completion of required forms

- Sponsor contact information
    - Program officer and technical support

- Conditions of award/reporting requirements/deliverables

- Limited submission?

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# Get Organized

- Once you are satisfied with your approach, contact the agency Program Manager for feedback.

- Finalize the required personnel to meet project requirements.

- Agree on partner responsibilities.

- Determine how you will maintain configuration management.

- Assign partners writing tasks, be as specific as possible and limit them to a reasonable space relative to your page count.

- Develop or use letter templates, DMP templates, CV's/biosketches, organizing the proposal, providing strategic comments, editing, adherence to requirements, and alignment of your proposal to the solicitation.

# In the Proposal Itself. . .

- Upfront state specifically what your effort will do for that agency and convince them their money will be well spent.

- Tell them why it is unique/innovative, etc.

- Start with the big picture, then explain details to convince them you have a solid plan.

- Use figures, graphs, tables, pictures to offer a snapshot and pique their interest.

- Present a solid team and how they will interact.

- Use confident language.

- Explain how your work will advance knowledge and impact society!!

# Points to Consider

- Your reviewer may not know/understand your language.

- Provide a clear explanation of what you are doing; don't confuse them.

- Know and be able to explain *why* your effort furthers the "state of the art".

- Show leverage whenever possible:
    - Previous dollars spent
    - Preliminary work completed
    - Existing equipment, software, facilities
    - Other programs/projects that compliment
    - Existing personnel/resources that can be used

- Can you provide details on how you will sustain the effort after the PoP is over?

- Show how you are organized (personnel) with a strong management structure.

- How will you manage the project itself? Data/analysis/dissemination.

- Demonstrate in text that you have a full understanding of what it takes to deliver.

- Provide a realistic budget – too little – too large?

# Partnering

- Locate the best partners that add unique expertise to your project.

- Look for partners that broaden your opportunities for funding. Small business, academia partners (HBCU/MI/Rural/URM), large business (sponsorship), non profits.

- Seek sponsorship for interns, equipment, advisory panels/boards, events, scholarships.

- Use existing programs to expand to new opportunities.

- Continue to develop your network.

- Be Aware of National/International Research/Funding Trends.

**Major Research Initiatives OSTP**
for FY 2022 Budget Priorities

1. American Public Health Security & Innovation
   -Diagnostic, Vaccine, Therapeutic R & D
   -Infectious Disease Modeling, Prediction & Forecasting
   -Biomedicine and Biotechnology
   -Bioeconomy

2. American Leadership in Industries of the Future and Related Technologies
   -AI
   -Quantum Information Science
   -Advanced Communications Networks
   -Advanced Manufacturing
   -Related Technologies – Future Computing
   -Related Technologies – Autonomous and Remotely Piloted Vehicles

3. American Security
   -Resilience
   -Advance Military Capabilities
   -Semiconductors

4. American Energy and Environmental Leadership
   -Energy
   -Earth System Predictability
   -Oceans and Artic

5. American Space Leadership

# Process and Programs

- CRADA – Cooperative Research and Development Agreement

- EPA – Educational Partnership Agreement

- IRAD – Independent Research and Development (industry funds)

- ILIR – In-house Laboratory Independent Research (Mainly 6.1 hi-risk/hi-payoff)

- SBIR – Small Business Innovative Research (3.2% of research budgets greater than 100M per year.

- STTR – Small Business Technology Transfer Program 0.45% of research budgets greater than $1 billion per year

  (Over 5,000 new awards every year)

# Further Tips

**What to provide . . .**
- Approaches that emphasize cost avoidance/reduction
- Understanding of research application and need
- Shortened research cycles
- Multiple applications
- Innovation – results, relevance and responsiveness

**What to look for . . .**
- Budget cycles (CRA crisis)
- Programs in chaos
- Who has ownership of the problem
- Conference, opening meetings where government organizations brief research efforts
- Association memberships/meetings
- Opportunities to serve on panels, chair sessions

**Remember . . .**
- Doing business with the government is like a 3-legged stool
  1) Relationship      2) Credibility      3) Delivery

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# If you don't win:

- Request your review comments and/or get a meeting with the program manager to discuss.

- Recycle your material with other opportunities.

- If you apply again, address the concerns of the previous review in your new proposal.

- Find out who the winners were. Make friends.