

# Proposal Writing Tips

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# Proposal Writing Tips

The intent of this document is to provide SPSU proposal writers with an overview of what it takes to write a successful proposal. Significant portions of the information that follows have been excerpted from "Strategies for Winning Proposals" by Lucy B. Langworthy, Vanderbilt University School of Engineering, August 1994.

## Establish a Track Record

Developing a successful proposal strategy actually begins well before you start planning a specific proposal. To prepare proposals that respond to the needs and goals of a sponsor, you must position yourself within your field of expertise to both understand the needs of potential sponsors and to become known by them as someone who is both knowledgeable and credible. Proposal writers who are the most successful are those who commit themselves at the beginning of their careers to establishing a track record. This process involves two commonly accepted principles:

### A. Develop an Open-minded, Persevering Attitude

Realize that relatively few specific areas of research remain as top funding priorities for long and keep your mind open to new areas of research. If your attempts at obtaining funding do not succeed at first, then try, try again. Reevaluate your project to determine why it was not funded.

### B. Commit Yourself to Involvement in Your Chosen Field

There are several ways to accomplish this activity. Try to spend a summer as a fellow at an AFOSR, NASA, ONR, or ARO laboratory or, at the very least, send a graduate student. Make appointments to visit with program managers at agencies from which you hope to get funded. Attend national scientific meetings, become involved in national committees, and commit yourself to networking within your field. Get the word out on what you've already accomplished by presenting papers at technical conferences and publish in respected technical journals.

## Analyze the Project

It is always helpful to start writing your proposal by first asking yourself some questions that stimulate your thinking and help to determine if the project is feasible for you and the University. Some of these questions are:

- What is to be done? What hypothesis is to be tested? What questions are to be answered?

- Is your proposed work original?
- Are you aware of what is being done elsewhere in this and related fields?
- Why is the work worth doing?
- What is the long-range goal of the project and the specific objectives?
- Is the methodology to be employed state of the art?
- Does the sponsor you are approaching need your work and why?
- Is your proposal consistent with your professional goals and the philosophy and goals of your institution and department?
- How much will the project cost in terms of time, personnel, and money?
- What facilities will the project require and do you have access to these facilities?
- Do you have a contingency plan if you experience problems with the project?
- What are the benefits of your proposed project to your institution, the sponsor, and society?
- Does the project you are proposing have potential opportunities for commercialization?

Make a serious effort to answer these and other questions you may think of objectively and honestly. If you determine after this exercise that the project you have in mind is feasible, then further analyze the project by narrowing down potential funding sources, the problem to be addressed by the project, the objectives of the project, costs, timing, and resources, and the approach you need to take in developing a specific proposal strategy.

### **Analyze the Sponsor**

The key to developing a winning proposal strategy is thinking about the sponsor to which you are submitting a proposal and the readers at the sponsor. In order to be successful, your proposal must have a positive effect on the people who read it. The chances of success increase if your proposal explains problems from the sponsor's point of view and addresses the kinds of objections that readers will raise to your recommendation. The following list includes several of the reasons why proposals are not funded:

- Lack of trust - the sponsor does not trust you, your institution, or members of your profession in general

- Lack of need - the sponsor does not perceive a problem that needs attention
- Lack of desire - the sponsor sees a problem, but hasn't prioritized it high enough to warrant funding a project
- Lack of value - the sponsor perceives a problem, but does not feel that your solution will provide an adequate return on investment
- Lack of belief - the sponsor does not believe that your solution to the problem will work or that you can deliver what is promised in your proposal

Learn who will be the primary and secondary audiences of your proposal. The primary audience consists of those persons in a position to make decisions or act on your proposal. You should try to determine who these people are at the sponsor and what type of review process the sponsor uses. The secondary audience may consist of those people who are not responsible for reviewing your proposal but who, nonetheless, are affected by it and may have some indirect influence over it.

There are three basic types of review processes that are used by certain sponsors:

- A. Peer Review. Reviewers are fellow researchers in your field. You will not need to spend a significant amount of time "educating" your readers about why your project is significant.
- B. Panel Review. Reviewers are probably involved in your general area, but may not do research in your specific subject area.

Regardless of the type of review process, readers of your proposal will want to address the following recurring topics:

- A. Problem. What problem or concern are you addressing? Why are you submitting the proposal? Why should they be interested in funding your project?
- B. Solution. What do you intend to do or make and how will it solve the problem stated in your proposal? How do you intend to do the things you are proposing? What makes your solution the best one?
- C. Costs. What will your project cost and will it be worth this cost given the limited resources available with which to fund projects?
- D. Capability. Can you be depended upon to perform the work you are proposing? What experience do you have with this kind of project? Are there sufficient support personnel and facilities available for your use?

## Examine the Variety of Potential Funding Sources

A variety of information currently exists regarding potential sponsors of research and other projects. Examine the sponsors most likely to be interested in your project and learn all that you can about them. The Office of Sponsored Programs should be contacted for assistance in identifying these information sources and/or specific potential sponsors. Some of the resources presently available include:

- COS - The Community of Science database to which OSP subscribes annually. Sign up for COS at <http://www.cos.org> to identify your research interests if you have not done so already.
- GRANTS.Gov
- Visit the Funding Opportunities section of the OSP website to review a variety of Federal and other specific opportunities

In addition to the above "official" sources of funding opportunity information, valuable information can also be derived from less structured sources, such as through contacts obtained by networking within your field of interest. The following sources can be helpful in gathering additional information on sponsors:

- Program Managers. Many sponsors welcome direct contact during proposal preparation with program managers, who can provide insights into the sponsor's current funding priorities.
- Professional Committees. Persons serving on professional committees often have contacts at major sponsors for research proposals.
- Conferences. Presenting papers at conferences or other technical meetings at which sponsor representatives are in attendance can provide an opportunity for you to "try out" your ideas and see how these people respond before spending valuable time and money on proposal preparation.

When contacting potential sponsors for information, ask questions such as the following:

- What is the sponsor's mission?
- How is the sponsor organized and who is responsible for approving funding?
- Is there a preferred or prescribed format for proposal submission?
- What is the technical background of those individuals who will be reviewing proposals?

- What is the sponsor's attitude toward your specific area of research and your institution?
- What is the sponsor's policy on white papers and/or preliminary proposals?
- What are the sponsor's methods and criteria for evaluating proposals. Is the sponsor looking for the best technically qualified proposal, the technically qualified proposal with the lowest cost, the proposal providing the highest chance of potential commercial applications, or a combination of criteria?

If you can find the answers to some of these questions, you can determine if your proposal will be of interest to a sponsor. Use this information to create an effect on the sponsor and write from their point of view.

### **Define the Problem**

To implement a successful strategy, you must have a clear understanding of the problem that the proposal addresses. The problem, in terms of basic research, has multiple characteristics. The research must be fundamental and involve technological advances with increases in basic knowledge. At the same time, the research must achieve societal benefits in the short term. Finally, the problem for any sponsor that funds basic research is to "sell" the research internally, both to the sponsor's management and, for Federal sponsors, to the sponsor's source of funds (e.g., Congress).

In describing what it is you wish to accomplish, you should not define the problem in terms of what you are interested in but, rather, in terms of how the agency perceives the problem. In other words, learn how each sponsor defines a problem before trying to sell them on why your approach to solving it is the best method.

If you are submitting an unsolicited proposal, state the problem in terms that will allow the sponsor to sell your proposed solution in competition with other proposals. If you are responding to a Request for Proposal (RFP), interpret the detailed requirements in terms of what the sponsor has defined as the problem addressed by the RFP. Follow the RFP instructions closely and determine what the sponsor is trying to accomplish and what the underlying issues are. When responding to Broad Agency Announcements (BAAs), identify the statement in the BAA that indicates the problem and what the sponsor seeks to address by creating new funding. This often involves doing some research on the current issues and motivations of the sponsor.

Regardless of the specific situation under which you are submitting a proposal, attempt to see the problem from the sponsor's perspective and not the other way around. A sponsor's definition of a problem may require that investigators be flexible in their own research desires so that what they propose offers solutions to the real sponsor problem

### **Define the Objectives**

In order to successfully define the objectives of a project, it is necessary to first identify what criteria the solution to the problem must meet in order to be successful. One criteria that should always be considered is the completeness of the technical approach to the problem. All elements of the proposed approach must support an outstanding solution to the clearly stated problem. Reviewers will judge the completeness of your approach to the problem from the sponsor's perspective, using established evaluation criteria and the chosen type of review process.

Other criteria are often not stated directly by sponsors, but are still important to consider in constructing a proposal. For solicited proposals under RFPs or BAAs, read the sponsor's objectives carefully for words that indirectly express the sponsor's intentions. Words such as the following illustrate objectives:

- Immediate payoff
- Scientific advancement
- Educational or societal benefits
- Transfer of technology
- Commercialization opportunities

For unsolicited proposals, personal visits and telephone conversations with program managers are important methods of determining how much weight these and other objectives may carry in the sponsor's evaluation of your proposal.

### **Identify Management Considerations**

Available resources, such as facilities and personnel, scheduling, and research costs are all management considerations that can affect the approach to be taken in developing a proposal. Each of these factors should be identified clearly to determine the impact that each one will have on your overall strategy.

- A. Resources - Investigators should identify all institutional resources that will be needed to complete the proposed project and verify in advance that access to these resources is available.

Resources are often an integral part of the design of a project and, in cases where the investigator has access to state of the art equipment and facilities, can provide a distinct advantage.

- B. Personnel - If you are the only person who will be working on the project if it is funded, you should identify what makes you uniquely qualified to undertake the effort and deliver the product or service being proposed. When assembling a proposal team, structure the players in such a way as to represent who will play key roles. It is always useful when building a team to consider utilizing the efforts of an individual (e.g., collaborator or other senior person at the University) who is either Well known to the sponsor or highly respected in the area of research you are proposing. Your ultimate goal in presenting the personnel needed to carry out the project is to prove credibility and demonstrate that these persons have the appropriate qualifications.
- C. Costs - How much a project will cost is nearly always an important factor in the evaluation of proposals. In the preparation of a project budget, the two most critical issues are the allowability of certain costs by the sponsor and the prescribed format itself. In the absence of any sponsor guidance regarding either or both of these issues, contact the Office of Sponsored Programs to discuss industry standards for unsolicited proposals.

Project budgets normally contain two distinct categories: direct costs and indirect costs. Direct costs consist of two broadly defined sub-categories: personnel costs and non-personnel (or operating) costs.

- 1. Personnel costs - This part of the budget includes salaries and may include faculty salaries (summer or academic year), research associates (postdocs), research assistants (graduate students), undergraduates, and, in the case of larger proposals, project managers or coordinators. Fringe benefits should be calculated at the currently approved rate (for current year approved rates for research assistants and fringe benefits, please see the Proposal Preparation Reference Sheet) based upon non-student salaries only.
- 2. Non-Personnel costs - Include in this section of the budget all of the other types of expenses needed to carry out the project. Non-personnel costs may be further subdivided into the following categories:
  - a. Equipment

- b. Travel
- c. Consultants
- d. Materials and Supplies
- e. Other Expenses (publication costs, tuition, etc.)

Indirect costs are determined as a percentage of total salaries and wages, not including fringe benefits (for the currently approved indirect cost rate, please see the Grant Proposal Guide). All proposal budgets should include indirect costs at the currently approved rate unless the sponsor specifically does not allow this type of expense.

- D. Schedule - Investigators may need to consider two different schedules in the development of a proposal. The first schedule is for planning when the proposal will be finished. Because of deadline dates, investigators need to plan their development effort so that sufficient time is allowed to complete the proposal and secure the necessary University approvals. In the case of Federal sponsors, the Federal fiscal year begins on October 1st and proposals submitted in time for an October review may have an advantage over proposals submitted at other times of the year.

The second schedule is for completion of the planned project. For small projects, the development of this type of schedule may be as simple as telling one or two people what they need to do and by when. For long-term and/or major projects, the schedule becomes more important in that the tasks involved may be complex and there may be a specific time limitation imposed by potential sponsors. As part of their review, sponsors will compare the proposed work to the planned schedule to determine if they are reasonable in relation to each other.

### **Work with a Team**

Compared with only a few years ago, many proposals are now submitted by a project team comprised of investigators and other key individuals from multiple departments and/or institutions. This phenomenon is at least in part due to the increase in interdisciplinary projects. The most valuable method for identifying potential collaborators for your proposed project is to network within your institution and at conferences and technical meetings. The Office of Sponsored Programs is also developing a comprehensive listing of faculty interests, which may be of help to investigators wishing to collaborate on a project.

Working with other investigators can be both rewarding and challenging. During the life of a project, communication of progress and the ability to straighten out differences that can occur during the course of the project are both essential to success. Initially, team members should assign roles such as writers, production manager, budget expert, graphics expert, and most importantly, a project manager. Investigators can add credibility to their proposal by identifying their project team in terms of an organizational chart that defines the involvement of individuals having expertise in areas specified in the sponsor's criteria for evaluation.

Team members must also evaluate the amount of work required of each person to prevent conflicts over unrealistic expectations. For team members within the same department, regular status meetings and an efficient system for tracking progress are important. When working with team members in off-campus locations, investigators should communicate regularly via e-mail or conference calls to report on progress and any problems with the project (e.g., budgeting concerns, shifts in an assigned scope of work).

### **Identify an Approach**

To be most effective, a proposal should have a specific approach, one that stresses the strengths of the investigator. The approach taken should also address the particular need or problem of the potential sponsor while showing your understanding of their mission. Taking these factors into account, your proposal will most likely have one of the following approaches:

#### **A. Technological or Innovative Approach**

One of the most convincing elements of a proposal is a new product, design, or analysis that is technologically superior and/or that represents an advancement of the state of the art.

Investigators can support a technological approach by showing that their idea, design, or product is superior in such characteristics as performance, capacity, quality, speed, or accuracy. It is always useful to show the potential benefits to be derived, such as scientific advancement, transfer of technology, or commercialization opportunities. The use of the most technically qualified personnel and modern advanced equipment designed to be responsive to potential sponsors' requirements also rates high when a proposal's technological matters are considered. Potential sponsors often look for the latest computer-based technologies for design, manufacturing, testing, materials handling, logistics, and management reporting. A unique design of a product or uniquely useful features of a service can build a strong

technological approach and can give an investigator an advantage over competitors.

**B. Geographical Approach**

The location of an investigator's proposed project can be a significant factor to a sponsor. Proximity to the sponsor's location may result in improved communications among all parties concerned. Location may also result in reduced transportation, travel, and communications expense. Proximity to materials and equipment may offer a cost and scheduling advantage in addition to the geographical advantage. If these advantages are apparent, focus on this approach in your proposal.

**C. Cost Approach**

Given the limited availability of funds, the cost of funding a proposal is usually a major concern of sponsors. In addition to showing the sponsor that your proposal is cost effective in relation to the benefit(s) to be derived, your design may include technological advancements that result in a longer-term savings to the sponsor. If your product or design has a significant cost advantage and you know that cost is an expressed concern of the sponsor, consider building your strategy around the economical nature of your proposed project.

**D. Presentation Approach**

Proposal reviewers often admit that quality proposals can be overlooked simply because they are not noticed among the many proposals being reviewed. To avoid this situation, many investigators emphasize the attention-getting techniques of the presentation approach in their proposal writing efforts.

The two most commonly used presentation techniques are:

1. Graphics - making the physical appearance of the document stand out or in some way relate visually to the sponsor's mission or major concern; and
2. Language - using language, particularly in the opening statements, that gets the reviewer's attention and/or relates to the sponsor's mission.

**E. Techniques such as the ones mentioned above will not alone win support for your proposals. However, in cases where your proposal must compete against many others, these techniques may make your proposals more noticeable and memorable.**

## **Define Your Strategy**

After analyzing your project, the sponsor, the sponsor's problems and objectives, the project requirements, and your approach and advantages, you should be in a position to notice a strategy beginning to emerge. While your strategy will be unique to the particular proposal at hand, it should, in general:

- show an accurate and complete understanding of the sponsor's needs, especially what is of greatest concern to the sponsor,
- present a practical plan that responds to the sponsor's greatest concern,
- identify a specific approach that emphasizes your proposal's strengths and shows the sponsor that your plan is the best choice, and
- prove that you can be depended on to carry out the plan.

Employing a specific strategy does not guarantee success. However, it does encourage a process that is invaluable - a way of thinking about research and scholarship that requires investigators to plan their proposals in response to sponsor needs.

## **Conclusions**

Strategically communicating your proposed ideas is critical if your proposals are to be successful at garnering the positive attention of potential sponsors. Your strategy should be focused, well thought out, and responsive to the sponsor's needs. To help you identify a workable strategy, you should:

- begin with the proper attitude, committed to being open-minded, involved, and communicative in your chosen field,
- understand the scope of your project,
- know your sponsor (customer),
- identify the problem and objective,
- understand the importance of cost, personnel, scheduling, and resources,
- consider ways to incorporate the services of team members, if applicable, and
- focus on an approach that emphasizes the advantages your proposal has to offer.

Preparing winning proposals is the ultimate goal of all investigators who seek external funding. Rejected proposals, though, can offer opportunities to learn if you are willing to follow up on them to better understand why they were not funded. Such perseverance, coupled with expertly designed products and skillfully crafted proposal strategies, should eventually yield winning proposals.