GENERAL STRATEGY FOR PROPOSAL PLANNING

The rigors of writing a detailed research proposal, followed by the highly competitive review and evaluation process that occurs at most sponsoring agencies, make it mandatory for applicants to consider their strategy carefully, well in advance of picking up pen and paper. Members of national review panels state repeatedly that it is no longer good enough to write a solid proposal - it has to be an "outstanding" proposal. Applicants must be prepared to sell their ideas with professional finesse.

The most important initial step in the development of a proposal, given the fundamental technical concept, is the identification of the funding agency or agencies for which the proposal should be prepared. OSR can assist investigators in this process by targeted web searches, and the listing of new funding opportunities on its website.

Generally, it is very important to contact agency staff directly to discuss the project and to inquire about the likelihood of funding. These initial contacts are strongly encouraged by most funding agencies. Reviewers' comments emphasize the advisability of a "sharp-shooting", rather than "shot-gunning" approach in the targeting of proposals to potential sponsors.

A criticism heard often from review panels is that some faculty propose using procedures for which they have little or no experience according to their curriculum vitae or publication list. With the collaboration of experienced colleagues within the University, or with the assistance of outside consultants, the success of such studies is more realistic and reviewers will approve them more readily.

Experienced research faculty on campus may also be helpful in providing an unofficial "peer" review for an application and should be drawn in to provide advice whenever their research expertise permits. Many established faculty assist agency staff as "field readers" and thus have experience as reviewers as well as researchers. Their reading of the draft proposal may well assist applicants to gain necessary perspective and help to test the clarity, completeness, and persuasive power of the draft copy.

Many agencies publish rosters of review committee members. Faculty are advised to check pertinent publications from the various agencies. The composition of a review committee may well lead a faculty applicant to amplify certain sections of his/her proposal. It is also appropriate to include with the proposal, in a letter, suggestions as to additional or alternate reviewers who might augment an agency's review expertise.

Applicants should also remember to draft the Abstract carefully, including key words to target it directly to the study section of their choice. Also, if the project is funded, the Abstract is often the one part of the proposal that is included in the agency database.

Faculty should plan to follow up on their proposals after they have been received by the agency. Reviewers sometimes indicate that it is possible to submit additional "pilot" data. This could include

further preliminary data, new publications, and even revisions in strategy due to research findings that were gathered after the proposal was originally drawn up. Such action underlines the applicant's seriousness regarding his/her proposal, and could possibly forestall the reviewers' negative critiques during agency review. Although agencies do not like to be inundated with trivial mailings, they will respect and accept pertinent research materials.

In summary, proposal writers should use campus faculty expertise as well as agency advice during the conceptual planning as well as during the proposal writing stage. OSR can assist the faculty members in establishing such contacts.

THE PROPOSAL PROCESS

Specific requirements regarding content and format differ markedly, and change frequently among sponsoring agencies, so much so it would be pointless to detail them all here. However, some general guidelines are appropriate and have been included in this section.

A research proposal is expected to include a title, an abstract, a detailed description of the proposed research (including goals and objectives), significance of the proposed research (including an overview and evaluation of related research), a detailed methodology section, a statement of facilities and special resources that will be used, the curricula vitae of key personnel, a specific line item budget and a budget justification. These are discussed in more detail in the following paragraphs:

Title

Titles should be concise, clear and precise. Excessive length (of more than 81 letters/spaces) may cause parts of the title to be truncated during processing at the agency. In addition, libraries and news agencies often rely on the title to reference research, and precision will help to avoid misinterpretation of a study.

Abstract

The abstract describes the major objectives of the proposed research and the research strategy to meet these objectives. The abstract should be about 200 words. It serves a variety of purposes and should be prepared with great care. The Abstract is often used by Agency staff in assigning the proposal to the appropriate study section for review. Reviewers use the abstract to gain an initial perspective of the key concept of the study and its significance and again later as a reminder when the proposal comes up for discussion.

If a proposal is not in a reviewer's area of specialization, the abstract may be the only part the reviewer will read as he/she prepares for the panel discussion. After funding is secured, the abstract may be used for entry in national data banks and its key works are picked up for quotation indexes. It is advisable to write the abstract at the end, when all other sections of the proposal have been finalized. This does not imply that the abstract can be written hurriedly. A good abstract will strike a careful balance between simple and technical language and highlight key concepts for which the reviewers should look in the main body for the proposal.

Description of Project

The investigator is expected to present a description of the proposed project and to explain the general goal and its various specific objectives. At the same time, the need for the project must be justified and its significance should emerge clearly and convincingly. Studies in which the significance lies in pioneering a new approach to the field by use of sophisticated techniques of inquiry may be considered the most promising. Agencies expect to have objectives stated clearly and specifically, and experienced proposal writers often use brief statements in numerical ranking of priority. Investigators are reminded of the difference between the overall goal, which may be stated in general terms, and specific intermediate or enabling objectives that must be stated in concrete terms.

Funding priorities in most federal agencies favor emphasis on investigations that provide solutions rather than broader-based studies that seek to re-define and characterize the problems.

Related Studies/Review of the Field

The discussion of previous work in the field demonstrates the investigators' knowledge and evaluation of the state of the art in their specialization, the extent of their preparation for the proposed study and the novelty and individuality of their approach. For these reasons, this section has to be much more than an annotated bibliography. It is important to demonstrate clearly that the investigator is aware of other work in the area. Careful selection of sources must be made, discussing only those in detail that are significant to the proposed research. Established investigators, particularly, are expected to demonstrate their command of the field in this section

Methodology and Time Frame

In this section, the investigator describes the proposed research methodology, organizing the material logically according to progressive steps of inquiry. Investigators must make a careful decision about how much detail will be needed to assure clear understanding by the reviewers without going to excessive lengths. It is equally important to describe how potential problems will be dealt with. The overall length of time required to conduct the research project must be projected with care to allow for data collection, analysis, and interpretation. Unrealistic projection may lead to criticism, along with omission of a key time-line. Investigators need to remember to allow up to nine months after the application submission date for processing, review, and evaluation of the proposal at a federal agency.

Evaluation Design/Statistical Analysis

Many projects require an evaluation of results, especially studies in education and social science fields. Evaluation may be planned both at critical points during the project period and/or after its conclusion. It may be designed to be carried out by participant staff or by outside consultants. The description of the evaluation design should be detailed and the applicant should make it clear how it is to be administered and how the resulting data will be analyzed. It is also important to indicate how the evaluation results will be used and/ or how they will be disseminated. In biological, behavioral, chemical and physical sciences, the proposer should state the test evaluation and statistical methods to be used.

Personnel

If possible, all professional and technical, as well as academic personnel who will participate in the research should be identified by name and by title/category of employment. The following categories are often needed:

Principal Investigator (Co-Investigator/Project Director/Co- Directors/Program Director).

Faculty Members (generally members of the faculty holding academic rank of Assistant Professor and above).

Postdoctoral Associate.

Research Assistants (graduate students engaged in research or research training under the proposed award).

Professional Assistants (computer programmers, design engineers, laboratory assistants, technicians, etc.)

Other (clerical, secretarial under certain circumstances, undergraduate students, etc.)

Curriculum Vitae (C.V. or Biosketch) are needed only for the major researchers. However, it is advisable to highlight specific research experience, related publications and other important biographical information with regard to the professional personnel. This information should be presented in the text of the proposal or as part of the budget explanation. Reviewers have indicated that it is helpful to have specific research capabilities of the major researchers stated in the text, although these qualifications may also be listed on the curriculum vitae. There may be a page limitation to the length of the C.V.

Facilities/Special Resources

Applicants should take care to describe facilities that will be used in the proposed research. The application may call for statistics about the size of the university and a profile of faculty/students or university-wide facilities such as the library, computer centers, specialized centers. If unique facilities exist with regard to the proposed research, it is important to emphasize this in the proposal.

Dissemination of Results

In order to assure wide impact of funds invested in research, demonstration or development projects, many agencies emphasize the need for well-planned dissemination of results. Most investigators hope to publish research findings in refereed national journals. If other strategies seem useful, they should be listed in the dissemination section of the proposal. Examples are conferences, training workshops, special newsletters, manuals, production of audio-visual material, or any other means of sharing research data with the scientific, technological community.

Investigators are responsible for making public acknowledgment of sponsors of funds that supported the research or project being described in papers, abstracts, presentations, and other publications.

According to the U.S. Office of Management and Budget Circular No. A-21 "Cost Principles for Educational Institutions," permanent equipment is defined as "*an article of nonexpendable tangible personal property having a useful life of one year or more and an acquisition cost of $1000 or more per unit."* Items of permanent equipment must be listed in the budget with details of specific acquisition cost, a description, and a justification of need. This item may also include all necessary peripherals needed. In addition, investigators are reminded to allow for running costs (supplies) as well as maintenance contract costs in the appropriate budget category. For large items, it may be advisable to obtain a written quotation from a vendor to justify the requested item's cost.

Federal agencies will normally not approve purchase of general purpose equipment. This is defined as *"equipment, the use of which is not limited only to research, medical, scientific or other technical activities."* Examples of general purpose equipment are: office computers, printers, calculators, typewriters, desks, chairs, copy machines, air conditioners.

5) **Expendable Equipment and Supplies**

Even though expendable equipment and supplies are estimations, it is advisable to have on hand a breakdown of these items by general classification, as substantial amounts are usually challenged by agency reviewers. (For example, instead of "Chemicals, $10,000" break it down to "Reagents, $1,200; Isotopes, $8,000" etc.)

6) **Travel**

In the budget justification section, the purpose, destination, and time span for domestic travel must be explained carefully, as well as the relationship of the trip to the progress of the project. Air travel will normally cover only economy class round trip. For State of Florida travel procedures, see the FAU Controller's Office Procedure Manual.

Foreign travel requests must specify the destination, and the Department of State's foreign per diem should be used. The Controller's Office receives monthly updates of this rate. The rates are also available directly from the State Department's website at http://state.gov. Faculty should consult the University travel office for air fares. Only American flag carriers may be used. Foreign travel may require prior authorization from the funding agency, if allowed at all.

7) **Subcontracts**

When subcontracts are planned, the total required dollar amount must include **the direct as well as the indirect costs of the subcontracting party.** The totals will appear as a direct cost in the FAU budget. All individual line items of the subcontract must be detailed on a separate budget page. The need for contracting part of the proposed research must be justified in the narrative. In addition, the subcontractor should indicate in writing the intent, capability, and willingness to provide services. The subcontractor should provide a proposed budget along with this letter of intent. Only an official authorized to obligate the subcontracting party should endorse the letter of intent. When an award is made, OSR will develop and execute the subcontract on behalf of the University. **Faculty are reminded that they may not, as individuals, enter into written agreements, such as subcontracts.**

8) **Training Costs**

This category may include fees, tuition, trainee travel cost, and student support. While the budget cost category reflects the total required cost, faculty should still provide individualized breakdown of costs for each trainee on a separate page to allow agency reviewers to make an independent assessment of the level, scope, and need for the training activity.

9) **Other Direct Costs**

Items in this category may include charges for long distance telephone calls, copying, reference books and materials, postage, publications, page costs, etc. related to the project.

The above costs should normally be treated as indirect costs and are usually not be allowed to be charged directly to federal sponsored agreements unless they are specifically budgeted, clearly justified in the budget narrative, and approved by the sponsor.

10) **FAU Cost Sharing/Institutional Contribution Form**

The University may be required to share the cost of sponsored programs where agencies are precluded from covering the full cost. The amount and type of cost sharing depends on the particular project and sponsor requirements. Cost sharing in excess of stated agency requirements should definitely be avoided. Agency reviewers and program personnel consistently indicate that the strength of the proposal idea and the cost effectiveness of the budget are the most important qualifications for success. To obtain the FAU request form for Cost Sharing/Matching funds, go to the SR website at *http://wise.fau.edu/research/osr/* and click on "Electronic Forms."

Unnecessary voluntary cost sharing usually does not enhance the project and leads to a lowering of the negotiated indirect cost rate, which means that the University not only subsidizes the project itself, but is unable to recover all of its operational expenses. Faculty members are encouraged to discuss with OSR requirements for cost sharing in the early stages of proposal preparation.

Facilities and Administrative Costs *(also known as Indirect Costs)*

1. **Federal Agencies**

Indirect Costs are negotiated according to the principles of the U.S. Office of Management and Budget Circular A-21. Indirect cost rates, effective between July 1 and June 30 annually, are negotiated between Florida Atlantic University and the Department of Health and Human Services (DHHS), acting on behalf of the federal government and its agencies.

As of March 30, 2005, the Dept. of Health and Human Services and FAU agreed that the current negotiated indirect cost rates would be 41.5% of Modified Total Direct Costs for on-site projects during the period July 1, 2005 to June 30, 2006 and 42.5% for the period July 1, 2006 to June 30, 2007. The rate for off-site projects during both these time periods is 26%.

Attachment A

SUGGESTED CHECKLIST FOR PROPOSAL PREPARATION

1. Does the project fall within the agency's scope?

2. Have agency regulations and guidelines been followed?

3. Have objectives been clearly stated?

4. Is the significance/need for the project well argued, based on a current assessment of the problem?

5. Is the budget request reasonable in view of the complexity and scope of the project?

6. Has the evaluation mechanism of the agency been taken into consideration?

7. Is the proposal well organized and does it flow logically from one section to the next?

8. Is the information clearly laid out, so that the reviewers can immediately identify the most relevant sections?

9. Does the proposal establish the investigator's scholarly competence, without hyperbole or understatement?

10. Is the material presented in the required format?

11. Has enough time been allowed for administrative review?

12. Is the budget correct and well justified? Does it correlate to the project narrative?

13. Are there compliance issues that require approval?

Attachment B

CHECKLIST FOR DIRECT COSTS ITEMS

This checklist provides guidance to listing project costs according to accepted federal cost categories. Faculty are encouraged to group costs accordingly to facilitate review. State of Florida definitions of cost categories may differ from sponsoring agencies.

Salaries and Wages
- Academic Personnel
- Technicians
- Research Assistants
- Students
- Temporaries

Fringe Benefits
- On all Salaries and Wages, including temporary labor

Consultants
- Consultant Fee
- Travel for Consultant
  - Airfare
  - Mileage
  - Lodging
  - Per Diem

Equipment (OCO)
- Scientific
- General purpose

Supplies
- Chemicals, Supplies
- Glassware
- Animals
- Animal Maintenance and Supplies
- Printing, Duplication, Copying
- Books, Reprints, Scientific Journals
- Photo Duplication, Xerox
- Specialized Software

Travel
- Domestic
- Foreign

Subcontracts

Training Costs
- Tuition
- Fees
- Trainee travel
- Student Support (Paid as Temporaries and not as a stipend)

Other Direct Costs
- Telephone (long distance only)
- Equipment maintenance/contracts
- Computer Services
- Publications