Proposals & Prospectus Writing

Proposal (Prospectus) Sections

- Title
- Project Overview
- Background Information / Statement of problem / Statement of need
- Project detail
- Available resources
- Needed resources
- Evaluation plan
- Appendices

Title

- Check to see if there is a required format for the title page.
- The title should be clear and unambiguous (do not make it cute!)
- Think of your title as a mini abstract
- The words you use in your title should clearly reflect the focus of your proposal
- Try to use only a single sentence for your title

Project overview

- Think of it as an executive summary
- It should paint a picture of your proposal in the reader's mind
- The best time to prepare it, is when you have completed the entire proposal

Components of project overview

- **Problem**
  A brief statement of the problem or need your agency has recognized and is prepared to address (one or two paragraphs).

- **Solution**
  A short description of the project, including what will take place and how many people will benefit from the program, how and where it will operate, for how long, and who will staff it (one or two paragraphs).

- **Funding requirements**
  An explanation of the amount of grant money required for the project and what your plans are for funding it in the future (one paragraph).

- **Organization and its expertise**
  A brief statement of the history, purpose, and activities of your agency, emphasizing its capacity to carry out this proposal (one paragraph).

  → NSF requires "Results from Prior Support", and this can be a good place to show the impact of earlier work.

Background information / Statement of the problem / Statement of need / Specific Aims IMPORTANT!!!

- Includes the review of relevant literature
- Be careful (precise) with your language
- Problem statement should show that your proposed project is definitely needed AND to clearly explain what it is you intend to do

Specific Aims (1)

- 1 sentence: Name a big picture, central challenge of your field that lots of people are interested in solving.

- 2-3 sentences: elaborate on the problem and what is going on in your field towards solving it

- 1 sentence: Concisely name a single, critical gap or hurdle [or bottleneck] that is slowing or stopping progress towards solving the big picture named in the first sentence. **This is the most critical part of your aims! You must have a single, clear hurdle that needs solving [clearing],** in order to have a good proposal.

- (optional)1-2 sentences: elaborate on the hurdle/roadblock

- 1-2 sentences: Propose an approach to solving the roadblock

Specific Aims (2)

- (optional)1-2 sentences: Explain why the approach hasn't been implemented yet

- 1-2 sentences: Explain why you and your team are the right people to implement this solution/ approach. **This is another critical section. You need to point out why not just anyone can do** this, and why you are qualified and ready to jump in and solve it. The best thing is to cite one or more previous papers of yours on the subject, or point to unpublished work: "It will be shown in the Preliminary Studies that we are uniquely able …that we have begun to solve this ….".

- 1 sentence: Recapitulate the hurdle and how the field advances by clearing it.

Project detail

- Goals and objectives
  (min 50% of full proposal)
- Methodology
- Administration

Outlining project goals

The project goal must be:

- Clearly identified
- Clearly written
- Referred to throughout the proposal
- Achievable within a specific time frame
- Working towards furthering organization/community and funding agency's goals
- Measurable in terms of impact and outcome

- You could also formulate this as
  - Hypotheses to be tested

- Be very clear about **stating** the hypotheses or goals
  - They need to be motivated, but don't get lost in explaining everything and forget to clearly point out the theme of your proposal
  - Remember your proposal is being reviewed by experts AND non-experts.

Methodology

- Include enough detail to show you have thought the project out
  - Computer time per run; how many samples do you need to collect and analyze; show table or matrix of planned studies, explaining reason for each; …

Needed resources (tied to Budget)

- Personnel
- Facilities
- Equipment/Supplies/Communication
- Indirect and direct costs

Available resources

- Sometimes local resources go unnoticed or are difficult to see. Look carefully. Talk to the people in your and other departments
- Contact the local resources; get letter of support if appropriate.

Evaluation plan

- It is important to describe how you will decide whether or not your project has been successful.
- It does not have to be elaborate.
- Make direct references to your objectives in your evaluation plan.

Appendices

- Examples:
  - Dissemination plan (e.g., where material might be submitted for publication)
  - Time line
  - Letters of support
  - CVs
  - Cooperating agency descriptions
  - Evaluation instrument

Applying this information to the Research Prospectus: tips from the faculty

Common shortcomings of the prospectus

- Selected topic is too broad; the reader does not get a sense of what particular problem is being proposed for study
  - don't worry SO much about how "glamorous" the problem statement sounds ... Your idea should be novel, but does not have to solve a huge unresolved question
  - pick a more focused topic and move forward, do a more thorough job on this one idea
- Hypotheses (or goals) are seldom stated, especially: often not stated up front – early in the reading
  - put (at least a general) statement at the beginning of the proposal, develop idea, then RESTATE the hypotheses or goals explicitly
  - Reviewer must understand what question you are aiming at!
  - "chasing an expected answer": the prospectus is geared completely at demonstrating some statement to be true without much regard for what happens if it is not true. (This is probably related to a poor hypothesis.)

Common shortcomings of the prospectus

- Literature surveys are often far too shallow
  - Must state the hypotheses / goals in context of current literature
  - Expect to spend quite some time on this aspect; this is how you find out whether your idea is novel, and sometimes whether the techniques you propose are likely to work
  - Very disappointing for advisor to see the paper or two s/he passed to you, as the main ones cited repeatedly – little evidence here that you have "run with the idea", or that you have curiosity about how things work and the patience to dig
  - Sometimes many references are included, but many of them are essentially throw-away references that provide no insight into what was actually discussed in the papers (i.e. sentence citing them does not really discuss what was in the paper)
  - Don't cite a paper you have NOT READ (thoroughly)

Common shortcomings of the prospectus

- DETAILS lacking in description of approach
  - E.g., for a modeling proposal, spell out the runs to be done (maybe a table with conditions, expected outcome / finding from each run?) Did you estimate how long they would take and how much data would be saved, and how to deal with it?
  - E.g., for experimental proposal, state the observational strategy and payload, or the number and type of samples and analyses, explicitly. What if nature doesn't cooperate during the fieldwork? What if your samples are below the LOD? Etc.
  - Mismatch between the tools being proposed and the hypotheses presented.

Three deadly sins of grant writing

- Write highly dense, technical prose that is designed only for a specialist in your field to read.

- Don't bother to thoroughly develop your Specific Aims page before launching into writing the text of your proposal.

- Make sure to dive right into the technical details of your elegant experiments, without giving any background about why the project is important in the first place.

The bottom line is that you need to make it easy on your reviewer!!

http://blog.f1000.com/2011/01/04/three-deadly-sins-of-grant-writing-2/

Proposal development strategies and writing tips (1)

1. Use outline formats and listings whenever possible to break up narrative texts.

2. Use visuals to enhance and explain abstract concepts and relationships. (Do not overuse.)

3. Don't overkill a point. State it, support it, and move on to the next point.

4. Use forecasting and internal summaries to help the reader know where they are and where they are going.

5. Be generous with transitions as they will help the reader to know where they have been and where they are going.

6. Avoid equivocal language, such as: "might, could, ought, may, should, hope, will consider, it appears".

Modified from: http://facstaff.gpc.edu/~ebrown/infobr3.htm#stages

Proposal development strategies and writing tips (2)

7. Don't avoid significant issues which apply to the project or potential problems which may be relevant to the project. It is better to take a stand and discuss a process for dealing with anticipated problems than to avoid these questions.

8. Avoid inflated rhetoric or impossible promises.

9. Do not assume that the reader will be intimately familiar with the subject.

10. Sequence the components of the proposal in a logical manner.

11. Carefully review, edit, and proofread -- again and again . Get others to help.