

Proposal Writing Essentials

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Managing 5 Expectations

What **will not** happen:

1. You **will not** write a great piece of literature
2. You **will not** definitively answer the grand question plaguing the community
3. Your audience **will not** review your proposal in a quiet, uninterrupted setting
4. Your audience **will not** be world experts on your topic
5. Your audience **will not** accept your approach without question

What **will** happen:

1. You **will** write a focused, no frills document
2. You **will** answer a focused, well-posed question of limited scope
3. Your audience **will** quickly review your proposal amid the chaos of their own life
4. Your audience **will** be colleagues from similar fields
5. Your audience **will** be skeptical and critical

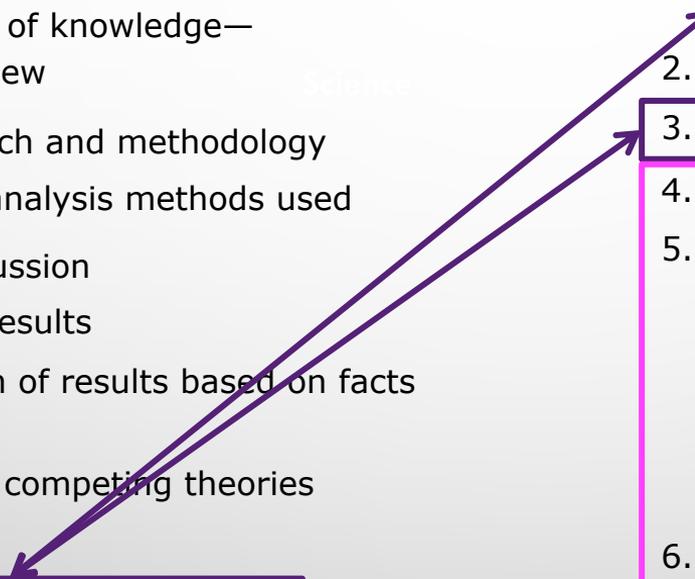
Managing Expectations

Typical technical report body

1. Introduction
 - Background—what led to research
 - Current state of knowledge—literature review
2. Technical approach and methodology
 - Research or analysis methods used
3. Results and discussion
 - Narrative of results
 - Interpretation of results based on facts and theory
 - Discussion of competing theories
4. Conclusion
 - Impact to state of knowledge
 - Expected significance

Typical proposal body

1. Objectives, expected significance
 - Objectives
 - Expected significance
2. Technical approach and methodology
3. Impact to state of knowledge
4. Relevance to objectives in call
5. Work plan
 - Key milestones
 - Management structure
 - Contributions of PI, other personnel
 - Facilities
 - Risk management (if applicable)
6. Foreign participation (if applicable)
7. Data sharing (if applicable)



Know What You're Getting Into...

- Have a vision of work you would like to do
 - Target your work/proposal to the appropriate call—**be responsive**
 - Don't find a call and figure out what to propose—just to get funding
- Proposal writing is a long-term process
 - Your reputation is made by how well you deliver on every proposal you write
- Proposal writing involves more than **writing**
 - **Serve** on committees (be a reviewer!)
 - **Chair** special sessions at meetings
 - **Publish** papers
 - **Work** with program managers
 - **Participate** in and/or convene relevant workshops (and then follow up with a report that can be cited)

Problem Statement And Objective

Clearly define the problem and continuously reference back to it, and **box this in!**

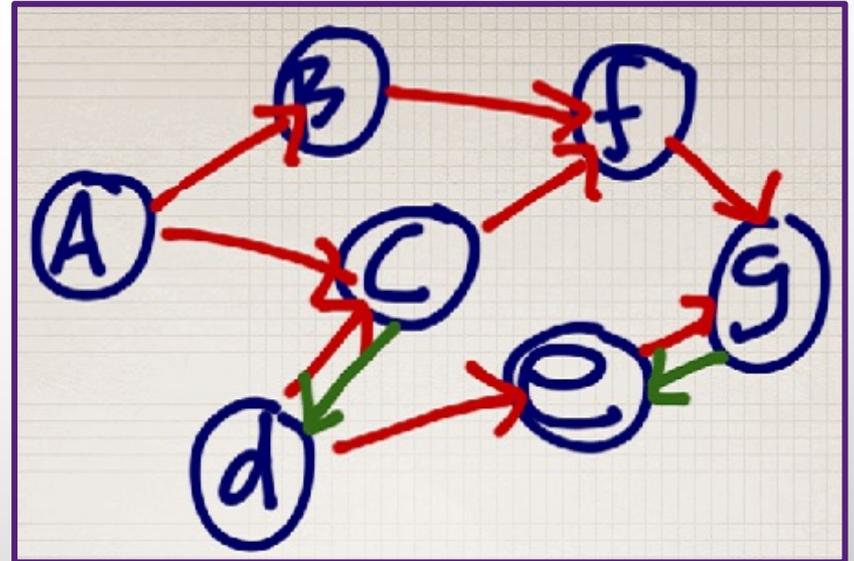
Goal: The broad interest/theme that your proposal will focus on

Objective: The actual question you can answer with the data at hand, which will bring you closer to the goal

Task: The work required to get the data in hand to answer your key objective(s)

Every proposed action should be **TRACEABLE** to the stated objective!

Acquiring more data is never an objective, nor is it a goal.



General Guidance

- Emphasize clarity, readability, absence of jargon
 - Define acronyms and unfamiliar technical terms on first use
- Demonstrate your grasp of the field
 - Offer a short, well-researched overview of relevant science and technology, as well as current practice...**state of the art**
 - Thoroughly review and cite the relevant literature
- Include 1–2 figures showing state of the art and **how you will advance it**
 - When reviewer is arguing on your behalf, they can jump to a compelling figure

General Guidance

- Avoid full pages of text
- Accentuate the positive
 - Avoid creating the rabbit hole for reviewers to fall down
 - Highlight your strengths and explain how you intend to mitigate your weaknesses
- **Run spell-check**
 - Proof-read to avoid irritating your reviewer
- Know your audience(s)...



Captions are read before detailed text. Use graphics and figures effectively for impact.

Every Proposal Has Two Audiences

1. Program Officer, Manager, Point of Contact

- Ensures that the work will further the Program's objectives and verifying that funds/time/etc. will be used properly
- Relies on you writing a **COMPLIANT** proposal

2. Review Panel

- Ensures that the work is of high scientific quality



Your job is to make it as easy as possible for these two audiences to select your proposal

The Review Panel

Crying Baby on an Airplane Rule: Assume your reviewer is highly distracted when reading your document

Things that upset reviewers

- Typos
- Full pages of dense text
- Lack of clarity and specificity
- Lack of organization
- Lack of relevance to the call
- Your abstract/summary is old and not on the actual topic of the proposal

Overall Proposal Development Advice

- Read the Call: Are you responsive?
- Demonstrate excellence; don't claim it
- You need a reviewer to champion your proposal
 - Make it easier for them by providing concise material up front
- Read the call you're proposing to again
- Examine the selection criteria and directly address them up front
 - A reviewer should be able to lift sentences from your introduction that could go into their review
- **Go back and really read the Call**
- Proposals lose because of single sentences or paragraphs
 - <https://www.lohfeldconsulting.com/news-knowledge/100-words-to-avoid-in-proposals/>

Proposal Writing: Mistakes

Ways you can avoid making common proposal mistakes*

- Make sure you have someone edit your work
- Have others review your work, scientifically
- Start as a co-I or student member and learn from others!

These are two different people, with different agendas!

Serve on panels for experience

- **NASA ROSES:** <http://science.nasa.gov/researchers/volunteer-review-panels/>
 - Please respond as soon as possible
 - If you can't travel, let them know that you would be willing to be a virtual panelist
 - Offer to serve as an external if needed