

How to write a Winning Proposal

ME406 Sp2012 13/1

- Break class into 5 groups: Assign each group a white paper & 5th group is for judging/selection
- In 5 minutes ~~each~~ each of the groups will have 30 seconds to argue ~~the~~ that their proposal should be funded, the fifth group gets to decide which one is funded.
- Analyze ~~results~~ attributes



- Basic funding for R&D is increasingly being awarded on a competitive basis. Whether you are seeking money from your boss, another company, or state or federal funds, your ability to write a convincing proposal will be key to your career.
- ⇒ Typical proposals range from 10 → 30 pages SS, however we are going to restrict this discussion to "white papers"
- A white paper is a short ~2 pages (4 → 5 paragraphs) proposal usually solicited before submission of a full proposal.
- These are how you get your foot in the door.

A Leading White Paper Format:

1st Paragraph: The opener

1st Sentence: Be arresting. A real grabber. Gives us pause. Immediately highlights the programmatic relevance and fundamental importance of this topic.

2nd Sentence: Establish what is currently known.

3rd Sentence: Define the subject of your proposal through the need it addresses.

4th Sentence: Describe how the gap/need remains an important problem. Establish how the status quo is an issue, and will remain an issue.

2nd Paragraph: “What-Why-Who” paragraph

1st Sentence: Longterm goal: Establishes the continuum research you are pursuing and how the gap/unmet need fits within this goal.

2nd Sentence: Objective of this application: Define what will be accomplished and how it links to the gap/unmet need and how this is the next logical step.

3rd Sentence: Central Hypothesis and how it was formulated. Should focus and give direction to the proposed research.

4th Sentence: Rationale: why you want to do the research.

5th Sentence: Well prepared: Why you have an advantage over others.

3rd Paragraph: Specific aims paragraph

List your specific primary and secondary objectives here. Essentially these set the stage to judge whether or not you were successful, in other words, you set the stage for how you will be evaluated.

4th Paragraph: Payoff/Payback/Return

1st Sentence: How the research is creative, original, and/or transformative

2nd Sentence: The outcomes of this research

3rd Sentence: The general positive impact of this research

5th Paragraph: Summary and Closure

Seal the deal.

"The Lead" Paragraph Rubric

Example

"The Lead" = First Paragraph of your Specific Aims (NIH), Overview & Objectives (NSF), or Introduction Rationale & Significance (USDA)

OBJECTIVE	1	2	3	4
Opener				
Paper opens with a "grabber" - writer has identified what their agency's mission is and "sets the hook."	I'm sleeping after this first sentence! How does this idea fit into our agency's mission?	I like the idea, but how does it fit in with the mission of our agency?	This idea fits in with the mission of our agency and our funding desires.	I am fascinated by this ideal. And, better yet, it states clearly that this idea fits in with our funding mission!
Next 2-3 sentences				
There are 2-3 sentences summarizing what is already known in the field	More than 2-3 sentences; complex words & jargon; sentences are long and drawn out.	More than 2-3 sentences; complex words; a bit of jargon, but not a quick enough summarization.	2-3 sentences; complex words; no jargon; summarization is evident.	2-3 sentences; simple words; no jargon; quick and precise - gets to the point!
The 2-3 sentences above begins with least current and ends with most current knowledge	Rambles - no organization as to the presentation of the data.	Clear organization, but does not go from oldest to current information.	Goes from oldest to current information, but summarization rambles a bit.	Concise and clear summarization; goes from oldest to current information.
Add points for the following statements in the above 2-3 sentences:		"What is well known is..." and/or "What is appreciated in this field is..."		
Problem Statement				
Problem Statement: The next sentences specifically state the scientific gap in the knowledge base.	Jargon used; not reader friendly (too many long sentences); scientific gap is not specific.	Jargon used, but it is a bit more reader friendly (needs more short sentences); scientific gap is identified.	Minor amount of jargon used; mostly reader friendly (medium to short sentences); scientific gap is identified.	No jargon; reader friendly (short sentences); scientific gap is specific and to the point.
Add points for the following statements in the above problem statement:		"Lack of such knowledge is an important problem because..." (or something similar)		
Do these sentences (or two) above tell the reviewer that it IS an important problem which needs to be solved? There is an unmet need!	Not specific: does not tell the reader of the unmet need and/or why it is a problem which needs to be solved.	Tells the reader it is a problem, but needs to go one step more: why is it an important problem? Unmet need is not mentioned.	States the problem and unmet need is identified.	States that it is an important problem - clearly and specifically; unmet need is stated precisely. I understand the need!
Is there an explanation as to WHY this is an important problem?	The explanation rambles and is unclear; jargon used; long sentences used. Not reader friendly!	The explanation is clear, but jargon is still used; medium sentence length. A bit more reader friendly.	Explanation is clear; no jargon; short - medium sentences; reader friendly.	Explanation is crystal clear; no jargon; short sentences. We had better fund this or our society will cease to exist.
Final Sentence				
Does the last sentence state that without the solution, there will not be any verticle advancement?	No mention of gap in the field or verticle advancement.	The gap in the field is mentioned, but no mention of how it affects the vertical step in the field.	The gap in the field is mentioned; the verticle advancement is discussed.	Expresses an urgent need: we had better fund this! Why hasn't anyone thought of this before?
General				
Paragraph is no more than one-half page long.	May too long/too short!			One-half page
No citations - add 2 points				

TOTAL =

Team: _____ Score: _____/100

	5	4	3	2	1	0
Intro. (x4)	Attention grabbing/immediately arresting with important statistic that quantifies motivation/need. Establishes the relevance & credibility of the team to address need. Identifies the goal/objective for the project. Free of spelling and grammatical errors.					
Lit. Review (x4)	Efficiently establishes current state of the art and shows specifically the information gap that this project needs to fill. Key credible sources have been identified and are strategically referenced. Ideally the references show a progression of research in the area culminating in the need for the current study. Free of spelling and grammatical errors.					
Theory (x4)	Efficiently uses theory to show potential for study and to connect the key figure of merit to variables. Establishes how theory will aid the experiment. Free of spelling and grammatical errors.					
Experiment (x4)	Establishes ability to fill above need with experiment. Briefly describes key equipment available. Outlines key variables to be changed during course of experiment. Sets measureable experimental outcomes/objectives and establishes a procedure for completion. Sets the tone for how the results of the experiment will be assessed.					
Summary (x4)	Reminds us what is at stake, the need, the capabilities, and what the major takeaways will be. Ends with strong momentum. They can make this happen.					

Overall Strengths:

Overall Improvements:

Overall Insights: