Tips for Developing Successful Technical Proposals—The Statement of Work and Management Plan

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Presentation is designed to provide you with tips for developing the statement of work and the management plan—integral parts of any successful research proposal.
Goals for this session

Learn how to develop a statement of work for your project

Learn how to develop a management plan and how it differs from the statement of work

Examine the components of typical statements of work and management plans

Learn why it is important to include a formal management plan in a proposal

Goals:
1. Learn how to develop a statement of work for your project
2. Learn how to develop a management plan and how it differs from the statement of work
3. Examine the components of typical statements of work and management plans
4. Learn why it is important to include a formal management plan in a proposal
The “statement of work” describes, in detail, the scientific activities that will be carried out in the project.

The project’s goals and objectives form the basis of the statement of work.

The statement of work extends the discussion of the “methods” section by describing the exact series of experiments that will be carried out.

What is the “Statement of Work”?

Ans: The “statement of work” describes, in detail, the scientific activities that will be carried out in the project.

1. The project’s goals and objectives form the basis of the statement of work.
2. The statement of work extends the discussion of the “methods” section by describing the exact series of experiments that will be carried out.
Develop your statement of work hierarchically

- Start with the project’s objectives
- Break each objective down into specific, detailed activities
- Divide these activities into distinct tasks
- Assign each activity and task to specific individuals or groups
- Allot a specific amount of time to accomplish each activity or task

Develop your statement of work hierarchically (logically!):

1. Start with the project’s objectives
2. Break each objective down into specific, detailed activities
3. Divide these activities into distinct tasks
4. Assign each activity and task to specific individuals or groups
5. Allot a specific amount of time to accomplish each activity or task
How much detail is enough?

To decide whether a particular part of the statement of work is detailed enough, ask yourself three questions:

Could a reviewer, based on the information given, accurately estimate the resources (people, materials, equipment) required for this task?

Would a reviewer agree that the time required to do this task has been accurately predicted?

Would a reviewer understand precisely what is to be accomplished in this task and how it is to be done?

Frequent Q: How much detail is enough?

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3. Would a reviewer understand precisely what is to be accomplished in this task and how it is to be done?
Develop a project schedule as part of the statement of work

Make realistic estimates of how long it will take to perform each activity

Specify the order in which tasks are to be performed

Include the following three elements:

1. **Activities**—work to be undertaken (EX: calculate flux polarization spectra)
2. **Duration**—time necessary to complete an activity (two months)
3. **Milestones**—specific events marking the culmination of the activities (MHD code debugged and documented)

Develop a project schedule as PART of the Statement of Work:

- Make realistic estimates of how long it will take to perform each activity
- Specify the order in which tasks are to be performed
- Include the following three elements:
  1. **Activities**—work to be undertaken (EX: calculate flux polarization spectra)
  2. **Duration**—time necessary to complete an activity (EX: two months)
  3. **Milestones**—specific events marking the culmination of the activities (EX: MHD code debugged and documented)
Project schedules may be organized and presented in several ways

- **Key events schedule**: a table showing activities and milestones
- **Activities plan**: a table showing activities and their planned start and end dates
- **Gantt chart**: a graph in timeline format showing planned start, duration, and end dates for activities
- **Combined milestone and Gantt chart**: a graph in timeline format showing start, duration, and end dates for planned activities and milestones

Project Schedules can be organized in several different ways:

1. **Key events schedule**: a table showing activities and milestones
2. **Activities plan**: a table showing activities and their planned start and end dates
3. **Gantt chart**: a graph in timeline format showing planned **start**, **duration**, and **end dates** for activities
4. **Combined milestone and Gantt chart**: a graph in timeline format showing start, duration, and end dates for planned activities and milestones
### Example of a key events schedule

<table>
<thead>
<tr>
<th>Key Event (Task)*</th>
<th>Description</th>
<th>Person Responsible</th>
<th>Date Due</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.1.1</td>
<td>Survey literature on thermonuclear (type la) supernovae</td>
<td>T. Brahe</td>
<td>October 2007</td>
<td></td>
</tr>
<tr>
<td>C.1.2</td>
<td>Identify SN1a candidates</td>
<td>T. Brahe</td>
<td>December 2007</td>
<td></td>
</tr>
<tr>
<td>C.2.1</td>
<td>Study directional luminosity asymmetries (DLAs)</td>
<td>E. Halley</td>
<td>March 2008</td>
<td></td>
</tr>
<tr>
<td>C.2.1</td>
<td>Determine how to correct for DLAs</td>
<td>E. Halley</td>
<td>May 2008</td>
<td></td>
</tr>
<tr>
<td>C.2.2</td>
<td>Study ejection structure</td>
<td>S. Chandrasekhar</td>
<td>April 2008</td>
<td></td>
</tr>
<tr>
<td>C.2.2</td>
<td>Develop hydrodynamical model of companion star</td>
<td>F. Bessel</td>
<td>June 2008</td>
<td></td>
</tr>
<tr>
<td>C.3.1</td>
<td>Calculate flux and polarization spectra</td>
<td>E.C. Pickering</td>
<td>March 2008</td>
<td></td>
</tr>
<tr>
<td>C.4.1</td>
<td>Compare calculated aspherical light curves with observational data</td>
<td>R.W. Wilson</td>
<td>July 2008</td>
<td></td>
</tr>
</tbody>
</table>

*Tasks numbers correspond to the section numbers of the proposal where the tasks are described.

(Refer to Slide—Key Events Schedule)
The management plan is different and distinct from the statement of work

The statement of work describes what activities will be undertaken

The management plan specifies how the work will be organized and controlled

The management plan is different and distinct from the statement of work!

1. The statement of work describes what activities will be undertaken

2. The management plan specifies how the work will be organized and controlled, including what people are responsible for the success of specific tasks and the overall outcome of the project
The purpose of the management plan is to show that you will be able to

- Monitor your progress
- Avoid wasted time and effort
- Coordinate the work of separate research groups and subcontractors
- Recognize and respond quickly to any deviations from the work plan

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3. Coordinate the work of separate research groups and subcontractors
4. Recognize and respond quickly to any deviations from the work plan
Begin your management plan with an analysis of your statement of work

Assign the responsibility for the performance of each task to a specific person or group

Specify outcome measures; how will you know when a task has been accomplished satisfactorily?

Develop a plan for reporting and supervisory relationships

Create mechanisms to monitor and evaluate progress

Begin your management plan with an analysis of your statement of work.

1. Assign the responsibility for the performance of each task to a specific person or group
2. Specify outcome measures; how will you know when a task has been accomplished satisfactorily?
3. Develop a plan for reporting and supervisory relationships
4. Create mechanisms to monitor and evaluate progress
Tie evaluation to milestones

When a milestone is reached, the overall work progress should be evaluated
Adjustments in the work plan should occur at milestones
The management plan should incorporate a mechanism to communicate changes in the work plan to affected groups
The management plan should ensure two-way communication

Tie evaluation to milestones:

1. When a milestone is reached, the overall work progress should be evaluated
2. Adjustments in the work plan should occur at milestones
3. The management plan should incorporate a mechanism to communicate changes in the work plan to affected groups
4. The management plan should ensure two-way communication
Pay particular attention to collaborative relationships—develop clear monitoring and reporting mechanisms:

1. If the work is shared among different research groups, how will the work be coordinated?
2. How will you ensure timely and accurate communication?
3. How will you assess performance?
4. Who is ultimately responsible for the success each task? of the project?
If your project involves subcontracts, describe how you will monitor and evaluate their progress:

1. Identify clear activities, durations, and milestones for subcontracts
2. Identify who is responsible for supervising the subcontractor(s)
3. Describe how you will communicate with the subcontractor(s) and evaluate their work
4. If a subcontractor fails to perform, what will you do?
The probability of a proposal’s success is directly proportional to the thought that has gone into it.

The process of creating a statement of work and management plan forces you to plan your project carefully.

Developing the statement of work allows you to estimate more accurately the resources required for the project.

Developing the management plan helps you to anticipate and thus avoid potential problems in organizing and controlling the work.

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1. The process of creating a statement of work and management plan forces you to plan your project carefully.
2. Developing the statement of work allows you to estimate more accurately the resources required for the project.
3. Developing the management plan helps you to anticipate and thus avoid potential problems in organizing and controlling the work.
A formal management plan reassures reviewers!

It shows them that
• that you are competent,
• that you have anticipated potential problems,
• and that you are likely to be successful in carrying out the work you propose
Let’s review what we’ve learned…

✓ How to develop a statement of work for a proposal
✓ How to develop a management plan
✓ How a management plan differs from a statement of work
✓ The importance of including a clear statement of work and management plan in a proposal
✓ The components of a statement of work and a management plan

Review:

1. How to develop a statement of work for a proposal
2. How to develop a management plan
3. How a management plan differs from a statement of work
4. The importance of including a clear statement of work and management plan in a proposal
5. The components of a statement of work and a management plan

Qs related to any of the above points?