

Workshop on Writing NSF OCE Instrumentation Proposals
Dan Fornari – WHOI
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Key Elements of a Successful Proposal

1. Project Summary w/3 NSF criteria: Overview, Intellectual Merit, Broader Impacts

2. Statement of Purpose/Executive Summary

Outlines the key aspects of the scientific need for the instrumentation (based on user surveys/input, both internal and external), the technical plan to implement it, and the collaboration and/or management of the equipment

3. Scientific Requirements and Benefits of the Proposed Equipment

This section establishes the need for a type of equipment or improvement or enhancement to existing equipment. It is focused on the science that the proposed equipment will enable/enhance. It requires input from both the outside (outside of the proposer's institution) user community as well as guidance and scientific rationale that could be provided by the institution's Marine Ops. Committee. Both perspectives are important to justify the need for the equipment and the methods being proposed to implement the work.

4. Technical Description of Equipment and Information on Testing to Validate the Selection, Methods or Integration of the Equipment

A detailed description of the equipment including any test results from prototypes as well as how it will be used and what existing infrastructure is needed and how widespread that infrastructure is within the UNOLS fleet.

5. Proposed Work to Develop or Purchase the Equipment and Integration to Existing Systems

The description of the equipment to be developed or integrated needs to be substantive and specific to the point where reviewers can fully understand what OTS components are needed, which items need to be specially developed, the depth of experience in the group(s) for accomplishing this type of work, and how it will rely (or not) on existing UNOLS vessel infrastructure to function properly.

6. Proposed Testing, Implementation and Management Plan for the Equipment – Including Proposed Collaborative Utilization Plan (if Applicable)

This section would outline how the equipment would be tested and implemented to verify functionality and provide at-sea verification that the system is ready to be used to collect good scientific data. If the equipment requires ship time, that should be specified and whether a short test cruise is needed, how it can be accomplished (perhaps partnering with a science user who has a proposal funded or proposed that could use the equipment, etc.), and what the testing protocol would be. Collaborative submissions from multiple institutions would be encouraged to both take advantage of expertise in the various groups and make the case of the proposed system's utilization by a broad cross section of users/operators. How the system would be managed and the coordination of its use by multiple operators would need to be detailed in this section.

7. Potential to Impact Broader Outreach.

Depending on the type of instrumentation being proposed the potential for outreach impact should be discussed. Science input to this would be beneficial especially if the proposed equipment had dual/multiple uses and broad applicability to a variety of science disciplines

8. Budget Justification

Self-explanatory – but it is important to justify all the aspects of the work and the collaborative elements, if they are part of the intended project. Also, collaborations with industry/commercial partners and whether they are contributing in-kind expertise or material for the project are important to explore and identify.

9. Supplemental Material – Quotes for Proposed Equipment & Integration/Implementation

Self-explanatory.