



Draft Earth Venture Instrument – 1 Workshop

Technical, Management, and Cost Evaluation Overview

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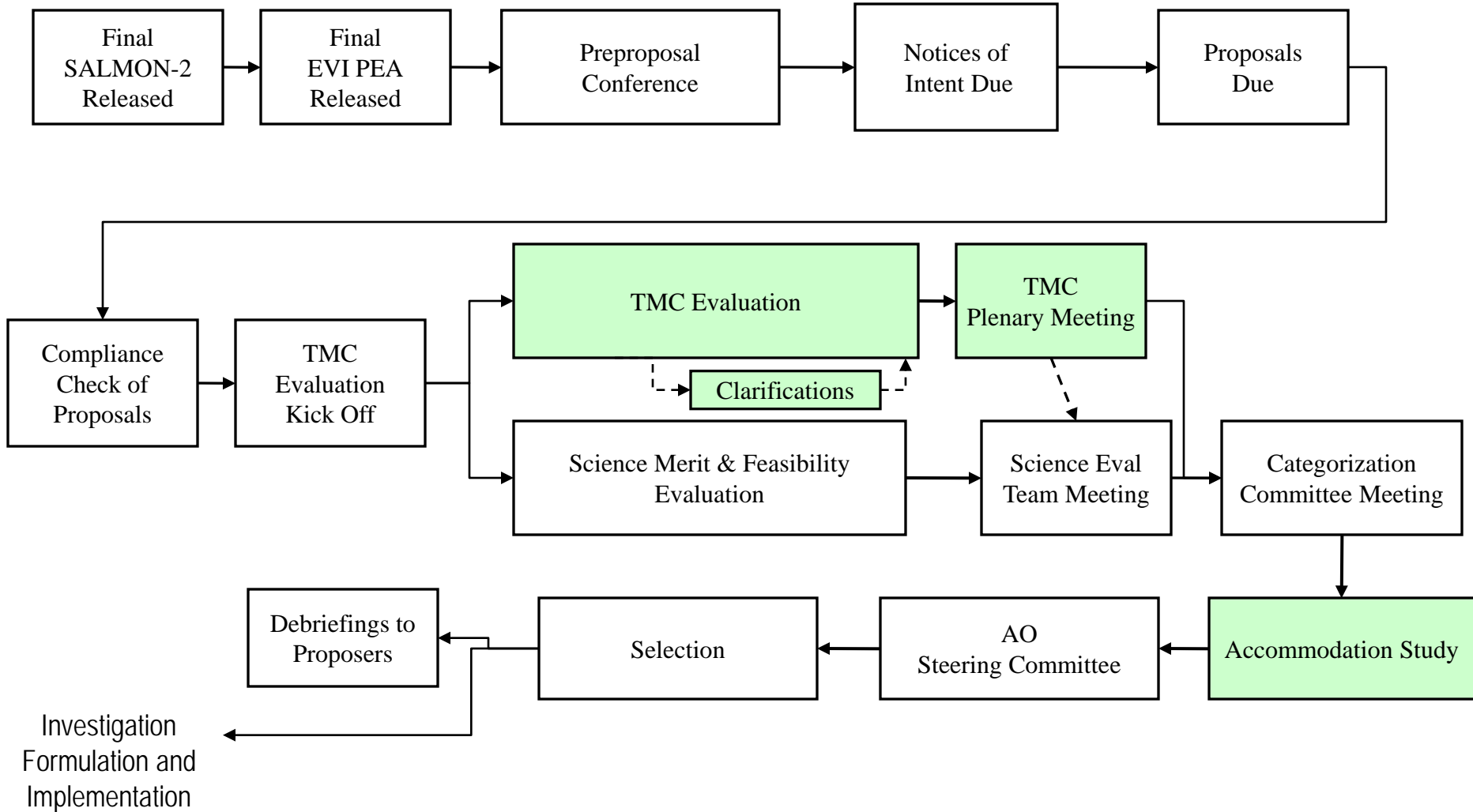
Introduction

Purpose of this presentation

- Present to the community the Draft Earth Venture Instrument-1 (EVI-1) PEA overview of the “TMC Feasibility of the Investigation Implementation, including Cost Risk” criteria that are assessed by the Technical, Management and Cost (TMC) panel.
- Instrument considerations for Pre-Phase A proposals.
- To collect comments and answer questions.
- Important Note: This PEA is to the draft SALMON-2 AO which is based on SMD’s Standard PI-Led Mission AO. **All proposers must read this PEA & the SALMON-2 AO carefully, and all proposals must comply with the requirements and constraints**
- **This will be abbreviated, a full presentation will be given at the workshop after final PEA is released. Refer to EV-2 presentations for reference for now. http://essp.larc.nasa.gov/EV-2/ev2_AOppconf.html**



Proposal Evaluation Flow





EVI-1 Document Structure Overview

- A second Stand Alone Missions of Opportunity Notice (SALMON-2) is being developed.
- The EVI solicitation will be a Program Element Appendix (PEA) to the SALMON-2 AO.
- The EVI PEA will state EVI-unique requirements and define which SALMON-2 policies are not applicable to EVI. (Draft EVI PEA 4.7)
- Proposals will be evaluated according to the evaluation criteria set forth in Section 7.2 of the SALMON-2 AO. (Draft EVI PEA 6.1)
- Additional Evaluation Factors are identified in Draft EVI PEA 6.1



EVI Evaluation Criteria

Technical Management and Cost

- 7.2.4 TMC Feasibility of the Investigation Implementation, including Cost Risk

The technical and management approaches of all submitted investigations will be evaluated to assess the likelihood that they can be successfully implemented as proposed, including an assessment of the likelihood of their completion within the proposed cost and schedule. The factors for feasibility of investigation implementation include the following, as applicable for the investigation being proposed:

- Factor C-1. Adequacy and robustness of the instrument implementation plan.
- Factor C-2. Adequacy and robustness of the mission design and plan for mission operations.
- Factor C-3. Adequacy and robustness of the flight systems.
- Factor C-4. Adequacy and robustness of the management approach and schedule, including the capability of the management team.
- Factor C-5. Adequacy and robustness of the cost plan, including cost feasibility and cost risk.



Clarifications

- Proposers should be aware that, during the evaluation and selection process, NASA may request clarification of specific points in a proposal; if so, such a request from NASA and the proposer's response must be in writing.
- In particular, before finalizing the evaluation of the feasibility of the mission implementation (see Section 7.2.4), NASA will request clarification on specific, potential major weaknesses in the feasibility of mission implementation that have been identified in the proposal.
- NASA will request clarification in a uniform manner from all proposers.
- The ability of proposers to provide clarification to NASA is extremely limited, as NASA does not intend to enter into discussions with proposers. A typical limited response is to direct NASA's attention to pertinent parts of the proposal without providing further elaboration. (7.1.1 Draft SALMON-2)
- No clarifications will be requested concerning findings from evaluation of the classified appendix regarding heritage. (Draft SALMON-2 5.10.3)



TMC Evaluation Ratings

- The third criterion, TMC feasibility of the proposed investigation, including cost risk, will be reported as Low Risk, Medium Risk, or High Risk.
- **Low Risk** There are no problems evident in the proposal that cannot be normally solved within the time and cost proposed. Problems are not of sufficient magnitude to doubt the Proposer's capability to accomplish the investigation well within the available resources.
- **Medium Risk** Problems have been identified, but are considered within the proposal team's capabilities to correct within available resources with good management and application of effective engineering resources. Mission design may be complex and resources tight.
- **High Risk** One or more problems are of sufficient magnitude and complexity as to be deemed unsolvable within the available resources.



Accommodation Study

- The review panel evaluating the third evaluation criterion, technical, management, and cost (TMC) feasibility of the proposed investigation, including cost risk, will also assess the following factor:
 - The extent to which the proposed instrument is compatible with potential satellite platform interfaces and operations.
- This assessment will not contribute to the TMC feasibility risk rating, but will be provided as comments to NASA.
- After the review, NASA will perform an accommodation study of selectable proposals to assess the extent to which the proposed instrument is compatible with potential satellite platform interfaces and operations. (*Draft EVI PEA 6.1*)



Cost Requirements and Constraints

- Draft EVI PEA 4.4.1
- Requirement J-7. Proposals shall be for complete investigations including Phases A-E.
- Requirement J-8. The proposed PI-Managed Mission Cost shall be no more than \$90M in FY2014 dollars. The PI-Managed Mission Cost excludes the integration of the instrument to the selected platform, but includes proposed science activity in Phase D.
- Requirement J-9. Proposals shall include detailed plans and budgets for Phases A-E for costs that are within the PI-Managed Mission Cost.
- Requirement J-10. Proposals shall include integration plans and planning budgets that occur during Phase D, with the assumption that this phase will take 2 years. These costs are outside the PI-Managed Cost.
- Requirement J-11. Proposals shall include plans and planning budgets for the required costs to minimally support the project and science during a potential gap between instrument delivery (end of Phase C) and the start of integration with the spacecraft (start of Phase D). These budgets should be on a per year basis for up to four years. These costs are outside the PI-Managed Mission cost.



Schedule Requirements and Constraints

- Draft EVI PEA 4.4.2
- Each selected investigation under the EVI solicitation will be expected to deliver an instrument that can be integrated onto a selected platform within 5 years of initiation of the project. Nominally, this will span the years of FY 2013-FY 2017. This is expected to cover development phases A through C. Proposals that include a more rapid instrument development timeline may be selected, provided the required budget phasing is reasonable and can be accommodated by NASA.
- It is expected that once an appropriate platform is determined, preferably before the Preliminary Design Review, minor changes to the selected instrument will be required. Appropriate schedule margin should be planned to account for such changes.
- Requirement J-12. Proposals shall include a development schedule that delivers an instrument for integration onto the selected platform no later than September 30, 2017.



Classified Proposal Appendix regarding Heritage

- The use of a classified appendix regarding heritage is being permitted by SMD for this AO as a trial.
- NASA will endeavor to use the information in the classified appendix regarding heritage to better understand the proposed investigation.
- However, NASA cannot guarantee that this process will be fully successful in informing the review panel of the impact of a classified appendix regarding heritage which they have not read. (Draft SALMON-2 5.10.3)



Reference Documents

- The SOMA office develops white paper and lessons learned documents related to TMC evaluations of SMD missions and instrument proposals.
- These documents are available at <http://soma.larc.nasa.gov/>
 - ***Instrument Considerations for Pre-Phase A Proposals***
 - Based on a review of past SMD instrument evaluations
 - Looked at what information was missing from instrument proposals that led to weaknesses
 - Provides guidelines on what information is needed for instrument proposals.
 - This is not specific to the EVI PEA but may be helpful to proposers to consider.



Questions

- Questions or comments must be sent to Ken Jucks
- kenneth.w.jucks@nasa.gov (subject line to read "EVI-1 PEA")