

AO recommendations OPAG, 16 July 2013

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Return to the “First Principles” of Discovery and Other Competed Programs

Discovery was conceived as a means to broaden participation and allow for greater risk/reward in a budget-conscious program

- TMC0 and source selection [process] has grown so risk-averse that innovative missions are penalized rather than encouraged – we must reverse this trend
- Technology incentives do not work as planned and must be reconsidered
 - Incentives must be sufficient to offset increased system costs and perceived increased risk
 - Technology offerings must be at the requisite TRLs before being offered
 - Instructions to TMC0 panel should be clarified and stated in AO
- Level Discovery “playing field” for more challenging mission concepts
 - Consider cost allowance for longer phase E, e.g., low-activity cruise periods to outer solar system
 - Improve tech incentives (above) and allow broader exploration of LV trade space (next slide)
- Science team size limits counter-productive to growing number of experienced PIs & Co-Is
 - If necessary to restrict team size, then NASA-sponsored participating scientist programs (not SEO) should be assured during mission development (i.e., not just phase E).
- Consider means to reduce the overall number of proposals to ensure consistent and accurate reviews and reduce community burden, e.g.:
 - Preliminary science-based screening before requesting full proposals
 - Limit number of proposals from a given mission management institution

The Proposal Process Should Ensure an Outcome of Great Mission Selection

The AO process should ensure that NASA has the relevant information necessary to select the most compelling missions within the cost constraints

- Response opportunity to Preliminary Major Weaknesses is overly constraining
 - Allow real answers, not just page references (ESA review process is reasonable, productive, and fair)
 - AO page constraint is not commensurate with breadth and depth of information required in review process
- Allow proposers to articulate a launch-vehicle trade space if desired, rather than only a point design – NASA can select preferred approach
 - Cost penalty for larger LV discourages innovative and challenging missions
 - Review process should assess cost/risk/benefit of all available options
- Current policy on international contributions needs to be crystal clear in AO to ensure consistency
 - Encumbering reserves to account for international contributions effectively discourages meaningful and mission-enabling collaboration (cf., handling of international collaboration on JUICE proposals)
- Establish/clarify policies on use of spare NASA hardware to ensure full-cost accounting and a level playing field

Reduce Burden and Improve Guidance for Proposing Teams – Consistency is critical

The Community's cost of proposing and Agency's cost of evaluating have grown to an unprecedented level. NASA should ensure that every required proposal element is value-added and appropriate for the proposal phase (Step 1 or 2)

- Reaffirm Step 1 focus on science and Step 2 focus on implementation
- Reduce requirements for “boilerplate” and appendices – require only those items that affect assessment and selection
- Clarify the metric on the assessment of Level 1 Requirements for Phase A – the language of the past is not readily accepted by today's TMCO
- Clarify the metric on the assessment of qualifications of key personnel – must be a path to field new talent amongst an aging workforce. Organizations are accountable for their selection and performance of key personnel. Let it be so.
- Proposers' cost assessments appear to be routinely ignored and/or a point of contention
 - Consider a new process for Step 1, e.g., a data sheet to inform TMCO cost assessment and/or an opportunity for dialog prior to final review
- Clarify and re-purpose the heritage appendix and TRL assessment technique
- Charter a community-led zero-base review of *all* AO requirements to ensure they are clear and relevant
- Improve consistency across programs. Risk acceptance on competed programs is not commensurate to directed strategic programs. This equity issue needs to be resolved