NASA Lessons-Learned Workshop

AO Simplification

Technical Detail
How Much Is Too Much?

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LASP

Technical Detail Adds Real Value

- Final selection for development requires assessment of “risk”, which means the likelihood that a team will succeed in overcoming technical problems
- This assessment has to happen at some point in the process; it’s reasonable to keep assessing as the project matures
- Assessment is currently distributed across Step 1 proposal, Step 2 CSR, and Phase B prior to Confirmation
  - (Projects are not *supposed* to fail for technical reasons in phase B but it happens)

Benefits

- Requiring technical detail in the step 1 proposal is good for the taxpayer
  - Reduces review time for “non-starter” proposals
  - Raises odds of selecting feasible projects for funded Phase A and beyond
  - Provides part of the basis for evaluating project cost at each stage (Step 1, Step 2, Phase B
  - Allows ranking of proposals with similar science goals

Mixed Blessing

- Requiring technical detail in the step 1 proposal is a mixed blessing for the proposer
  - Step 1 proposals are not funded; we pay for them out of our own pocket
    - Particularly tough on low-overhead, no-fee organizations
  - Page-count restrictions help keep the level of detail in proposals under control
  - If proposal-to-selection time is to be reduced, Phase A studies are going to get shorter so it's best to define technical details early
  - Proposers need fairly detailed technical descriptions to create reviewable budgets

Where Details Are Less Valuable

- Recently proposers have been asked to provide a detailed heritage appendix (#11 in SMEX AO)
  - It's debatable whether that detail adds significant value, and it is definitely added work for the proposer
- Real heritage is in the experience people and organizations have in solving problems
- Format of earlier AOs (RBSP, for instance) was better for showing that institutional heritage
  - One page per relevant project with cost & schedule performance data provided good basis for comparison with the proposed project (IMHO)

For Discussion

- Are we setting the bar at the right height for each step?
- Are the page limits for proposals set at the right length?
- Are we excluding investigators and organizations that are new to the process?

Other Topics: Organization of Sections

- Organization of Science, Science Implementation, Technical/Mgmt/Cost sections might benefit from a modest change
  - Science section (usually ‘D’) combines science and science implementation
  - Successful proposers are required to mark changes to this section in Concept Study Reports
  - Some things *always* change in the CSR due to increased maturity (instrument hardware descriptions, for instance); marking those changes has little benefit
- Splitting Science section into two subsections and marking changes only in first subsection in the CSR makes more sense

Other Topics: Consistency

- Consistency of requirements across AOs is very desirable
  - Letters of commitment, resumes, budget formats and other “bookkeeping items
- Example: recent SMEX AO requirements related to letters, resumes and signatures confused many proposers; formal Q&A was needed to straighten things out