

Questions for PIs (Whose Proposals Were Selected)

Background: At the request of NASA's Science Mission Directorate, the National Academies has convened an ad hoc committee to examine various issues and lessons learned in the implementation of the Instrument and Mission elements of the Earth Science Division's Earth Ventures (EVs). The study will review parameters such as measures of success, experiences of principal investigators and key managers, and the principles governing the execution of EVs, including cost, cadence, and implementation risks. Specifically, the committee is considering:

- Measures of success for EV-I and EV-M endeavors;
- The experiences of Principal Investigators, Project Managers, and Institutions in the proposing, implementation, and operation of EV investigations;
- EV foundational principles, including the means by which they are implemented and enforced, as well as the implications of non-conformity;
- Potential trades among cadence, cost (including cost caps), and risk in implementing future EVs;
- An assessment of the implications of the changing launch vehicle and hosted payload markets for future EVs; and
- Lessons-learned for consideration in future implementations of EV-I and EV-M program elements.

Questions for PIs successful in their EV proposal:

1. How many times did you apply to the EV- program? If more than once, was an initial debrief useful in terms of modifying your proposal?
2. Generally speaking, what did you find to be the principal challenges in:
 - a. Preparing a proposal to NASA?
 - b. Communicating with NASA? Does the current review process adequately allow for PI/PM responses to reviewer concerns?
3. What does success, beyond the defined Minimum Success Criteria, look like to you for your EV mission? (e.g. no. of publications, science breakthroughs, new remote sensing capabilities, innovative and practical applications realized)
4. Do you believe that NASA paid appropriate attention to the experience of the PI and the Advisory Committee in coming up with an appropriate oversight strategy?
5. If you partnered with an institution that has more experience with space missions than your own, what parts of the collaboration were most useful and least useful?

- a. If the partner was a NASA Center, were there benefits/challenges you believe to be unique to that partnership.
 - b. If more basic services to help with the “mission” preparation had been offered by NASA, would you have likely made use of them?
 - c. Do you believe that a marketplace where PIs could “shop” for mission partners would have been useful in your case? – or other cases that you are aware of?
6. Note: this question would go to both EVM and EVI PIs: Please provide your thoughts on the current single-step selection process versus an alternative two-step selection process where the first step is a shorter, science-focused ‘proposal of intent’ which includes a synopsis of the measurement needs and design plan with NASA rating the top 2-3 submitted missions/instruments, followed by recommendations for a more complete proposal where mission readiness assessment is also considered for the final selection.
7. Questions About Programmatic “Risk”
 - a. Do you feel that the proposal review process correctly identified the main risks?
 - b. Do you feel that the risk management plan was appropriately developed?
 - c. Do you feel the risks were managed effectively?
8. Questions about Programmatic Return
 - a. One of the “Returns” of the EV program is “engaging the community.” Do you feel that this assessed and evaluated within the proposal review process?
 - b. Do you feel that the program is encouraging and supportive of innovation, even when this may result in higher risk?
 - c. Do you feel comfortable working with partners who may have little experience with NASA but may bring unique technical and scientific skills?
9. Are the specified proposal requirements easily understandable and appropriate? Are there any that you believe are unnecessary or too burdensome? Can you suggest any changes?
10. EV guidelines are rigid with respect to cost and schedule, with cancellation an option should either be exceeded. Please provide your thoughts on the utility of these guidelines and the potential impacts should the guidelines be modified or made more flexible.
11. Please feel free to comment here on any aspect of the committee’s tasks.