Heliophysics Explorers Program (HEP)
2019 Medium-Class Explorer (MIDEX)
Announcement of Opportunity (AO)
Pre-Proposal Conference
Overview of Evaluation, Categorization and Selection

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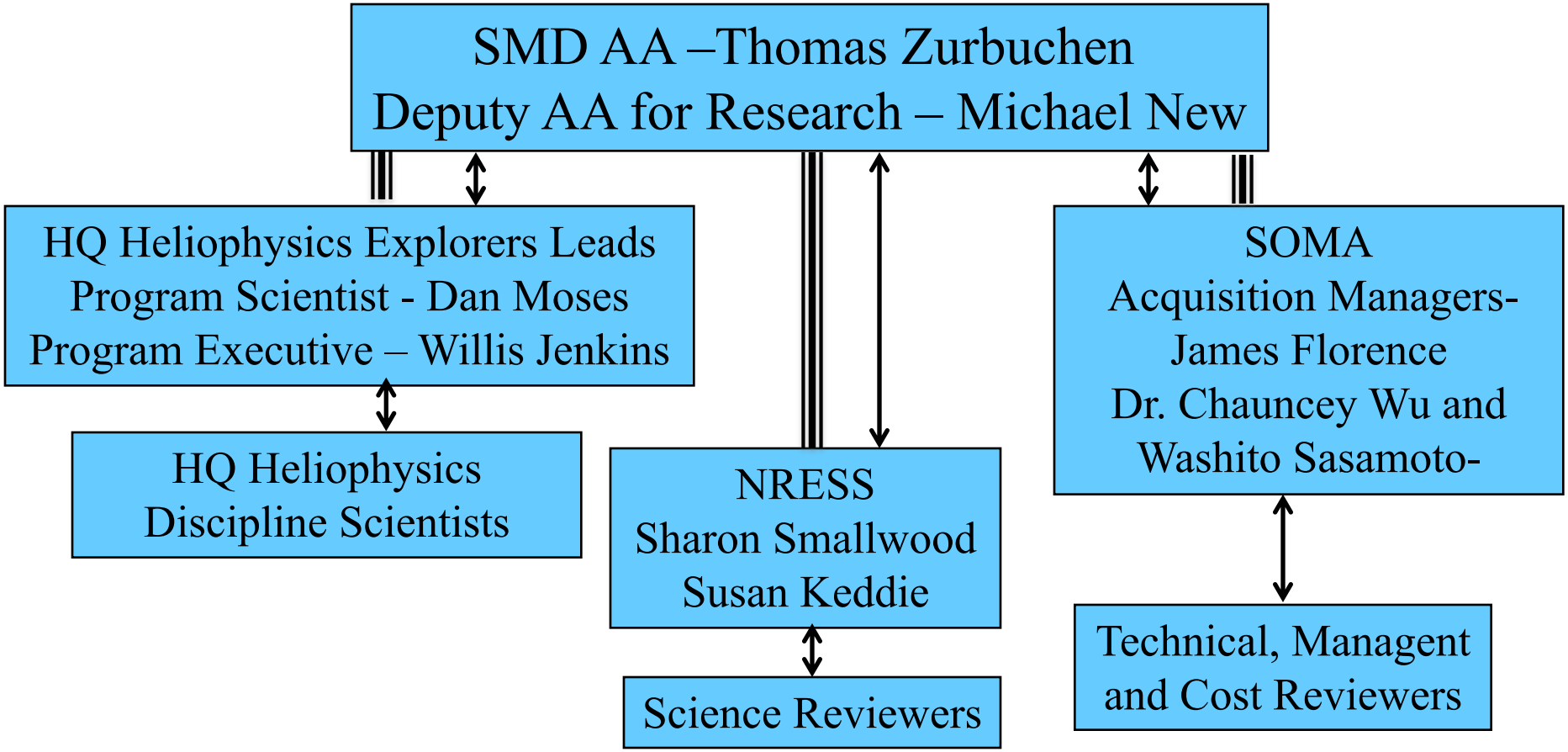


SOMA: Science Office for Mission Assessments
NRESS: NASA Research & Education Support Services

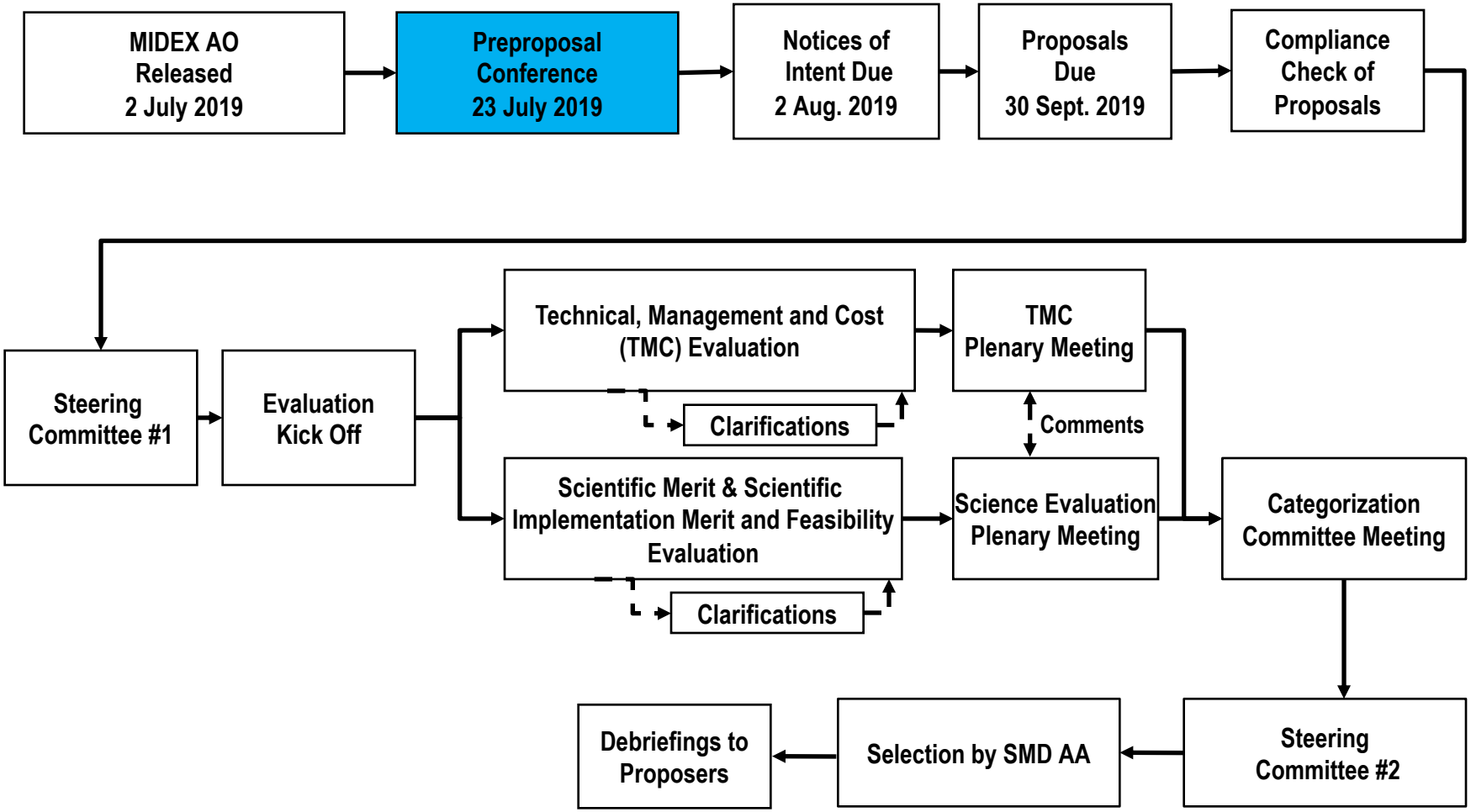
Science Office for Mission Assessments Background

SOMA

•The NASA Science Mission Directorate (SMD) Science Office for Mission Assessments (SOMA) was established in 1996 to support the Discovery and Explorer Programs, the office now supports also the New Frontiers, Earth Venture and other programs.

•The TMC process is a standard process used by SOMA to support SMD AO evaluations. Lessons learned from each evaluation are incorporated into the process for continuous improvement.

Evaluation, Categorization, and Selection Process



HEP MIDEX Requirements

- **2018 Heliophysics MIDEX AO is based on the SMD Standard AO template**.
- **Requirements** are identified, numbered, and specific.
  - There are 99 requirements in the 2019 MIDEX AO main body
  - When Sections do not levy requirements they do not have numbered requirements.
- **Evaluation Factors** are identified, numbered, and specific.
  - 4 for Science Merit
  - 5 for Scientific Implementation Merit and Feasibility
  - 5 for Technical, Management, and Cost (TMC) Feasibility
- Appendix B has numbered requirements on **Proposal Preparation**
  - There are 70 specific requirements for the format and content of Step1 proposals [more altogether as some Appendix B requirements have more than one part]

Evaluation, Categorization, and Selection Process

- The 2019 Heliophysics MIDEX investigations will be evaluated and selected through a two-step competitive process.
- Step 1 is the solicitation, submission, evaluation, and selection of proposals prepared in response to this AO.
- As the outcome of Step 1, NASA intends to fund at least two Step-1 MIDEX proposals to proceed to a Phase A concept study and submit Concept Study Reports to NASA.
- Step 2 is the preparation, submission, evaluation, and continuation decision (downselection) of the Concept Study Reports.
- As the outcome of Step 2, NASA intends to select one MIDEX investigation to proceed into Phase B and subsequent mission phases.

Evaluation, Categorization, and Selection Process

- All proposals will be initially screened to determine their compliance to requirements and constraints of the applicable AO
- Compliant proposals will be evaluated against the criteria specified in Section 7.2 of the MIDEX AO by panels of individuals who are peers of the proposers.
- MIDEX Proposals will be evaluated by more than one panel (e.g., a science panel and a technical/management/cost panel); the panels evaluate proposals against different criteria.
- These panels may be augmented through the solicitation of non-panel (mail in) reviews, which the panels have the right to accept in whole or in part, or to reject.
- During the evaluation and selection process, NASA may request clarification of specific points in a proposal.
- Before finalizing the evaluation of the feasibility of the mission implementation, NASA will request clarification on all potential major weaknesses in the feasibility of mission implementation that have been identified in the proposal.

Evaluation

Evaluation Criteria

1. Science Merit of the Proposed Investigation

   Evaluation criteria are stated in the AO Section 7.2.2

2. Science Implementation Merit and Feasibility of the Proposed Investigation

   Evaluation criteria are stated in the AO Section 7.2.3

3. TMC Feasibility of the Proposed Mission Implementation, Including Cost Risk

   Evaluation criteria are stated in the AO Section 7.2.4

Weighting:

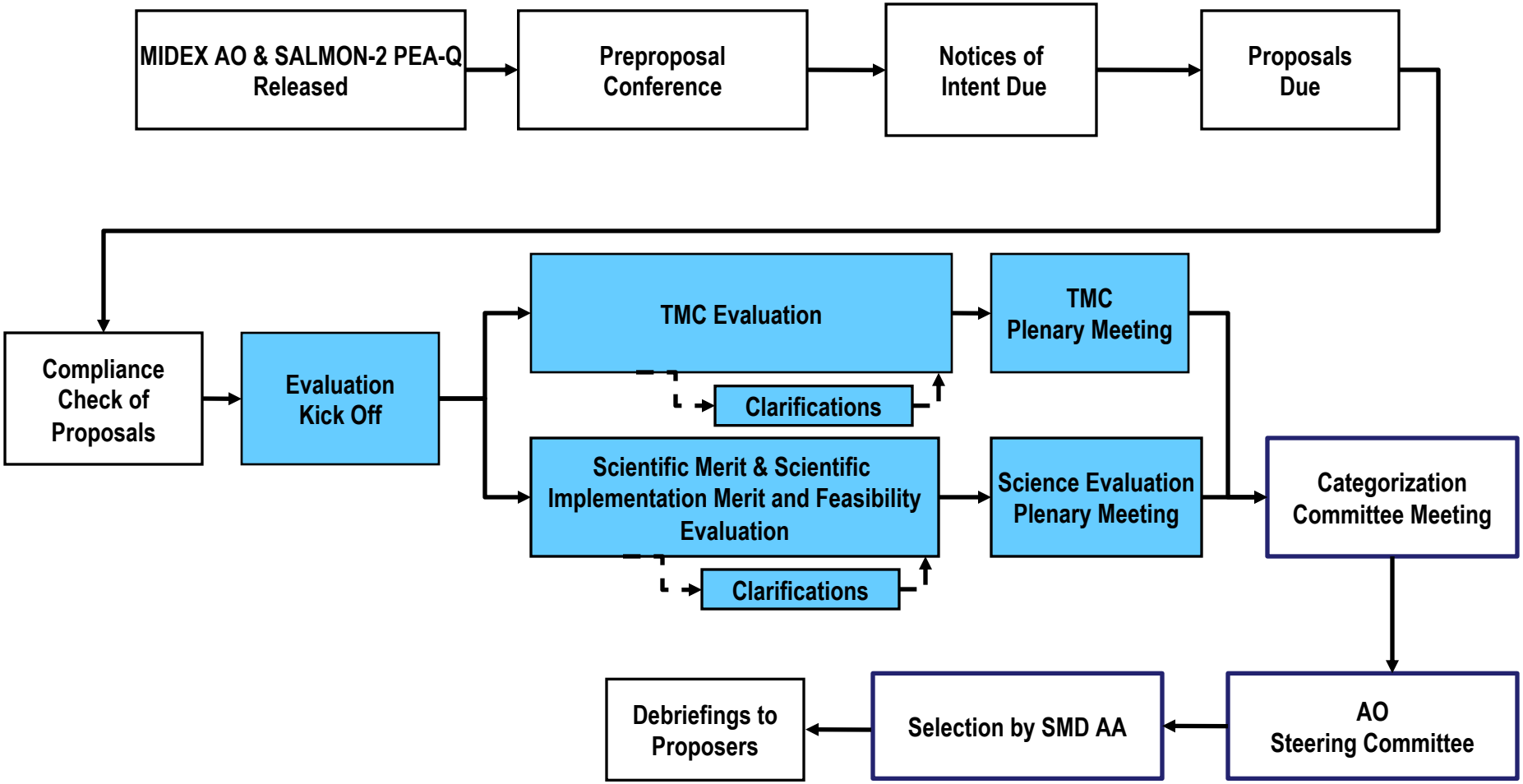
Criterion #1 is weighted ≅ 40%;

Criteria #2 and #3 are weighted ≅ 30% each.

Student Collaboration Deferred to Step 2 Proposal

- Student Collaboration (SC) proposal is optional for Step-1 proposals (HEP MIDEX AO Section 5.5.3)
- While an SC is expected for every mission, no information on an SC is needed in the Step-1 proposal as all requirements associated with this section have been deferred until Step 2.
- Evaluation of SC is deferred to Step-2 (Phase A Concept Study Report).

Proposal Evaluation Flow



Evaluation Clarifications

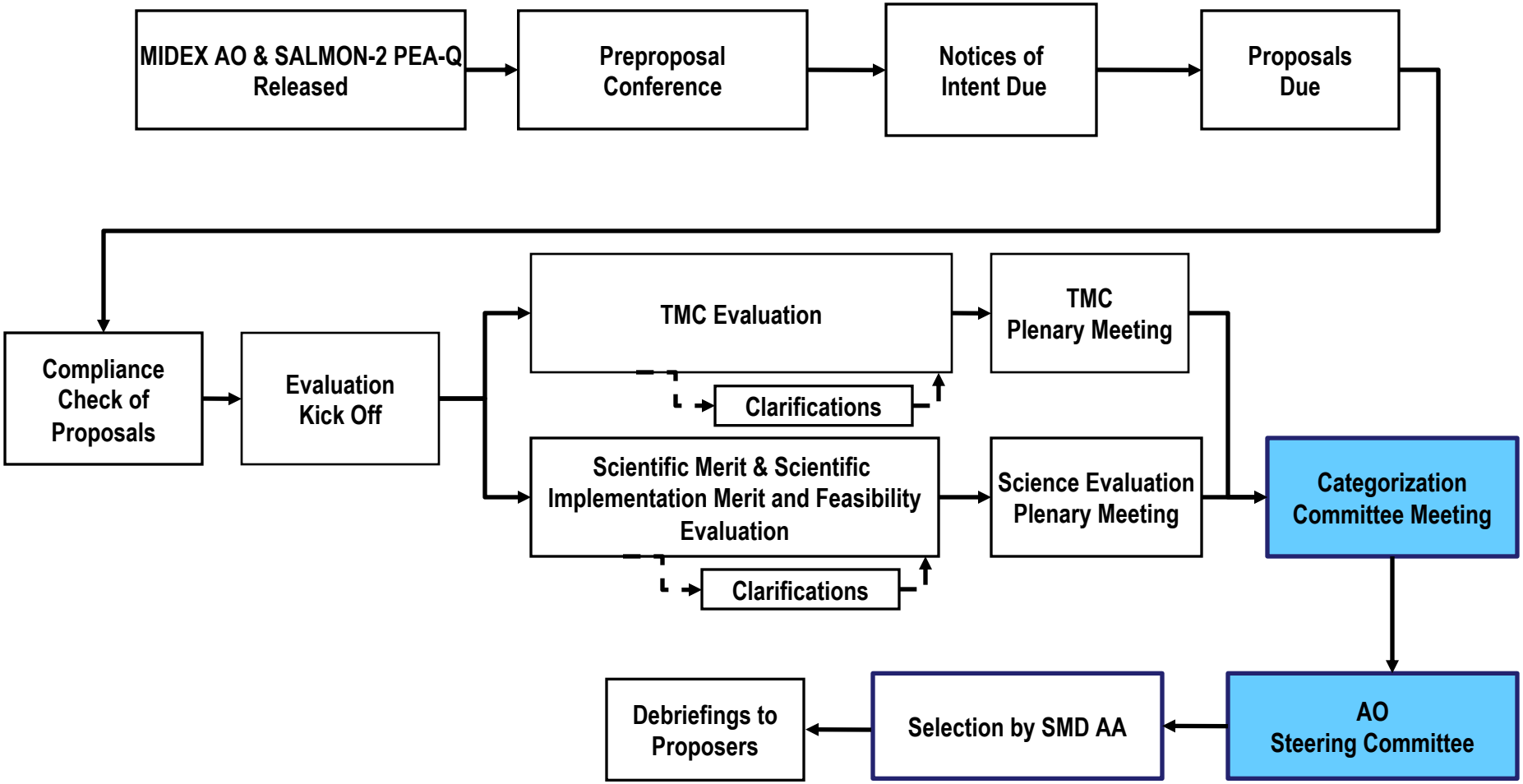
- **NASA will request clarification of Potential Major Weaknesses (PMWs) that have been identified by the evaluation panels**
  1. Science Merit
  2. Scientific Implementation Merit and Investigation Feasibility
  3. TMC Feasibility of the Proposed Mission/Investigation Implementation and

- **The form of the clarifications is strictly limited to a few types of responses:**
  1. Identification of the locations in the proposal (page(s), section(s), line(s)) where the potential major weakness is addressed
  2. Noting that the potential major weakness is not addressed in the proposal.
  3. Stating that the potential major weakness is invalidated by information that is common knowledge and is therefore not included in the proposal.
  4. Stating that the analysis leading to the potential major weakness is incorrect and identifying a place in the proposal where data supporting a correct analysis may be found.
  5. Stating that a typographical error appears in the proposal and that the correct data is available elsewhere inside or outside of the proposal.

The PI will be given at least 24 hours to respond to the request for clarification. Any response that goes beyond a clarification will be deleted and will not be shown to the evaluation panel.

Categorization

Evaluation, Categorization, and Selection Process



Categorization

Upon completion of the evaluations, the results will be presented to the Categorization Committee, an *ad hoc* subcommittee of the SMD AO Steering Committee composed solely of Civil Servants and appointed by the SMD Associate Administrator.

This committee will consider the peer review results and, based on the evaluations, will categorize each proposal according to procedures required by NFS 1872.403-1(e). The categories are defined as:

- Category I. Well-conceived, meritorious, and feasible investigations pertinent to the goals of the program and the AO's objectives and offered by a competent investigator from an institution capable of supplying the necessary support to ensure that any essential flight hardware or other support can be delivered on time and that data can be properly reduced, analyzed, interpreted, and published in a reasonable time. Investigations in Category I are recommended for acceptance and normally will be displaced only by other Category I investigations.

Categorization (2)

- Category II. Well-conceived, meritorious, and feasible investigations that are recommended for acceptance, but at a lower priority than Category I, whatever the reason.
- Category III. Meritorious investigations that require further development. Category III investigations may be funded for further development and may be reconsidered at a later time for the same or other opportunities.
- Category IV. Proposed investigations which are recommended for rejection for the particular opportunity under consideration, whatever the reason.

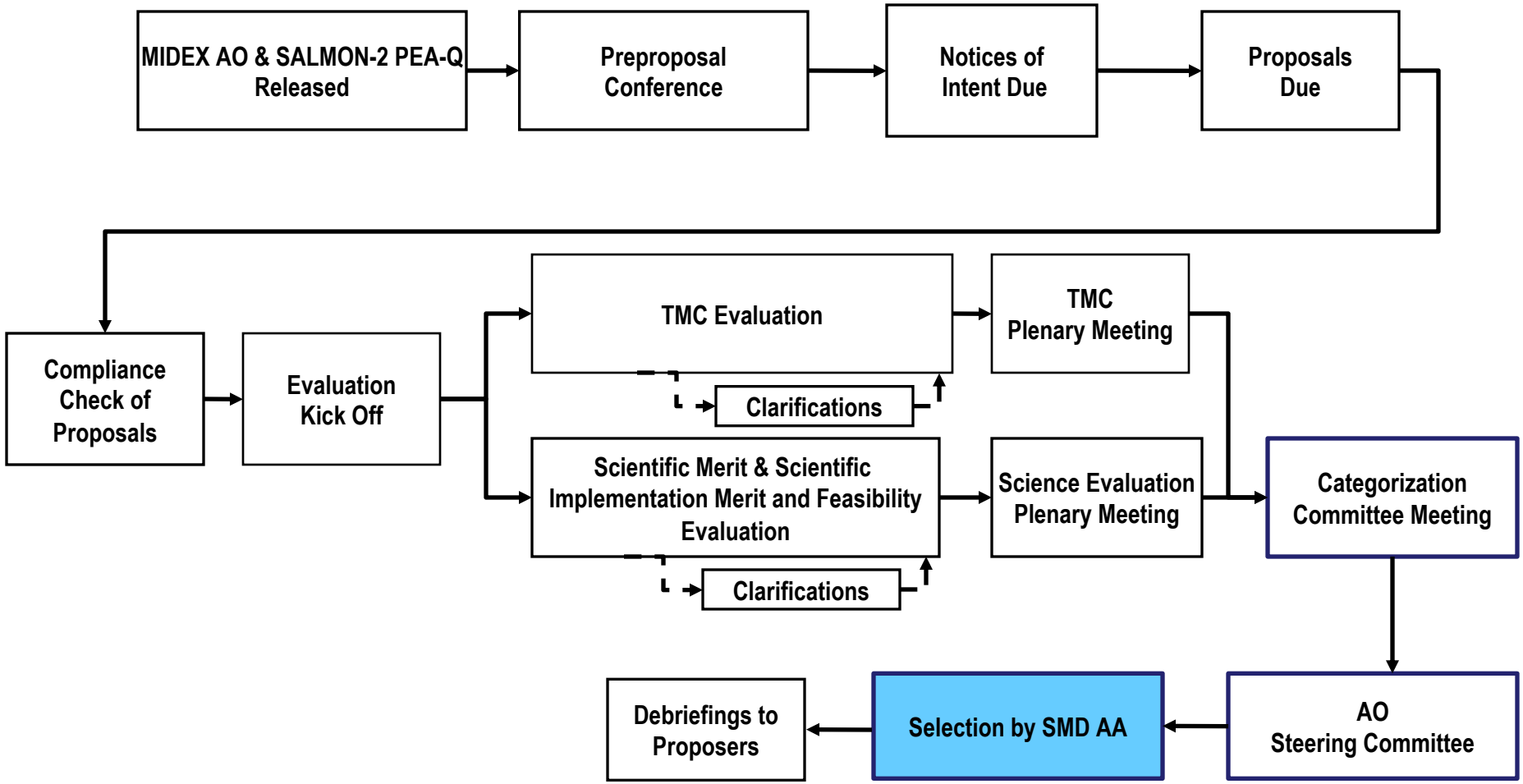
Evaluation Process Conclusion

- Once Categorization has been completed, the Evaluation is considered complete unless questioned by a subsequent Steering Committee review.
- The AO Steering Committee will conduct an independent assessment of the Evaluation and Categorization processes regarding their compliance to established policies and practices, as well as the completeness, self-consistency, and adequacy of all supporting materials.

Selection

Evaluation, Categorization, and Selection Process

Proposal Evaluation Flow



Selection Factors

•As stated in Section 7.3 of the AO, the Selection Official may take into account a wide range of programmatic factors in deciding whether or not to select any proposals and in selecting among selectable proposals, including, but not limited to, planning and policy considerations, available funding, programmatic merit and risk of any proposed partnerships, and maintaining a programmatic balance across the mission directorate(s).

References

MIDEX Reference Material

2019 Heliophysics MIDEX Acquisition Page

The 2019 Heliophysics Explorer MIDEX acquisition home page is available at:
http://explorers.larc.nasa.gov/HPMIDEX/

The contents of the web site include the following:

- Links to MIDEX pages
- 2019 Heliophysics MIDEX major milestones
- Community announcements
- FBO
- Teaming interest
- Pre-proposal conference

MIDEX Reference Material

Program Library

It is incumbent upon the proposer to ensure that the documents used in proposal preparation are of the date and/or revision available in the Program Library (https://explorers.larc.nasa.gov/HPMIDEX/programlibrary.html).

A detailed Change Log has been implemented, and will continually document updates to the Program Library.

Questions?

All further questions pertaining to the MIDEX AO MUST be addressed to:

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