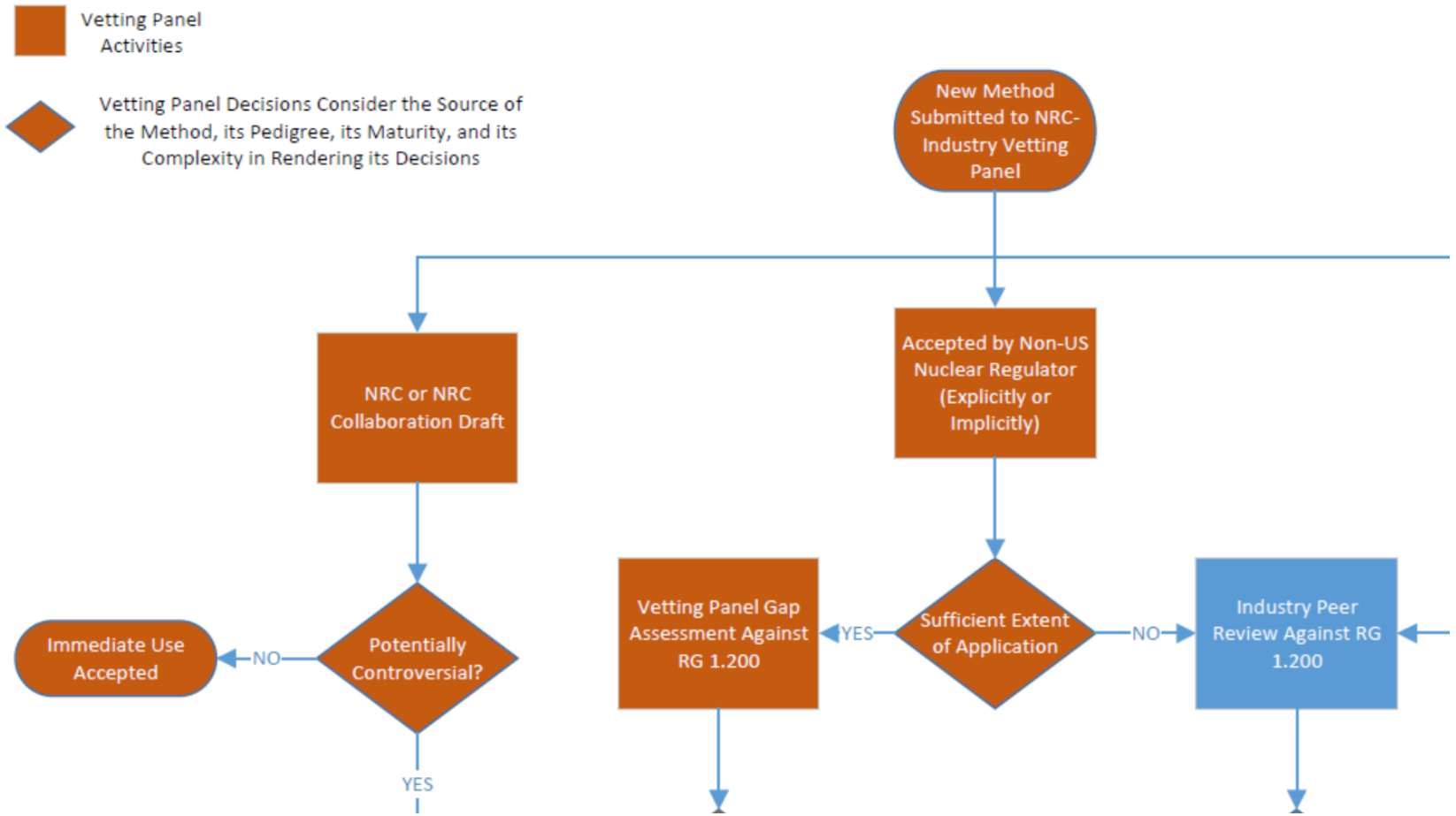
Objective 1: Making PRA Methods Available for Regulatory Application

- Industry led development of white paper outlining several options for making PRA methods available for use in regulatory applications
- Option to be used based on attributes of methods
- Discussed at September public meeting
- Determined need for a joint industry-NRC "vetting panel" to ensure that methods were reviewed using correct process

Vetting Panel

- An Industry/NRC panel of experts who will determine the process for making each new PRA methods available for use.
  - Consists of very experienced, senior experts
    - Broad knowledge of PRA technical areas and existing methods.
    - Well-versed on the ASME/ANS PRA standards
    - Past experience in methods development, with full understanding of how methods development is done.
  - Will not conduct detailed technical reviews, but rather will decide the extent of review required for putting a new method on the street.
  - Will need to be insightful and flexible – fit the solution to the problem.

Illustrated Process (Partial)



Process Options

- Vetting panel will one choose from 8 options (6 primary and two variations) for each method submitted.
  1. Usage acceptable immediately upon issuance of draft method.
  2. Usage acceptable immediately upon conclusion of comment period on draft method.
  3. Usage acceptable immediately upon resolution of industry/NRC comments.
  4. Usage acceptable immediately following gap assessment against requirements of RG 1.200.
     a) For non-nuclear methods, add applicability assessment
  5. Usage acceptable immediately following peer review of method.
     a) For non-nuclear methods, add applicability assessment
  6. Usage acceptable immediately following Industry/NRC methods panel consensus.

Process Option Selection Criteria

- Vetting panel will balance available options using a number of considerations.
  - Source of method: Refers to the "lead" organization in the development of the method.
  - Pedigree of method: Refers to the extent to which the method has been reviewed/accepted.
  - Maturity of method: Refers to the extent to which the method has been applied.
  - Complexity of method: Refers to the extent to which the method is or is not intuitive or obvious, and the extent to which it is multi disciplinary

Process Option Selection Criteria

- Considerations will be looked at holistically to select the appropriate process.
  - Is the method controversial? Whether the method is sufficiently robust and balanced that it is unlikely to result in significant technical comments that result in major changes to the method.
  - Is the extent of application sufficient? Whether the method is proven enough in application to provide a level of comfort that it is robust, stable, and valid; that there are unlikely to be hidden traps or snares.
  - Is the credibility sufficient? The overall rigor of the development of the method (e.g., inclusiveness, quality assurance, checking)

Process Options Vs. Method Source

Group	Description	Available Process Options
A	NRC or NRC-Collaboration.(Note: Including collaborations with industry; e.g., MOU)	1, 2, 3
B	Accepted by Non-US Nuclear Regulator (Explicitly or Implicitly). (NOTE: While not strictly a regulatory agency, methods developed or accepted by the IAEA would fall here.)	4, 5
C	Peer Reviewed and Published *Independent* Research for Nuclear Application.	5
D	Peer Reviewed and Published *Independent* Research for Non-Nuclear Application.	4a, 5a
E	Peer Reviewed and Published Collaborative Industry Research for Nuclear Application.	4, 6
F	Non-Collaborative Industry Research for Nuclear Application.	6

Post-Vetting Process

- Once the panel chooses the process for the method, it is implemented.
- If the process chosen requires technical review or development, a separate panel of technical experts is assembled
  - Panel size from 2 to 6, depending on complexity of the method.
  - Panel completes work in 1 to 6 months, depending on complexity. Can only be extended with concurrence of NRC and NEI RISCs.

Objective 2: Closure of Peer Review Facts and Observations (F&Os)

- NRC developed white paper identifying key issues and proposing several solution options
- Identified pros and cons of each option
- Discussed with industry at September public meeting
- Preferred option to be identified in draft white paper and presented for RISC consideration

Objective 2: Identified Issues

- Many risk-informed applications only include summaries of F&Os and close outs
- Differing regulatory expectations for various risk-informed applications
- Relevance of F&Os and their dispositions given multiple peer reviews
- Variable quality of peer reviews
- Availability of reviewers
- Inappropriate disposition of F&Os as “documentation only”

Objective 2: Solution Options

- Original peer review team close out
- New peer review team close out
- NRC close out
- *Independent utility close out*
- Hybrid approach of the above

Objective 3: Additional Gaps in Peer Review Guidance

- One issue identified for evaluation
  - Process for verification of peer reviewer qualifications
- Likely to be resolved via minor editions to NEI peer review guidance
- Later endorsed by NRC in RG 1.200 via routine processes