Enhancing Peer Review at NIH

Update on

Enhancing Peer Review

At NIH

"Fund the best science, by the best scientists, with the least administrative burden…"

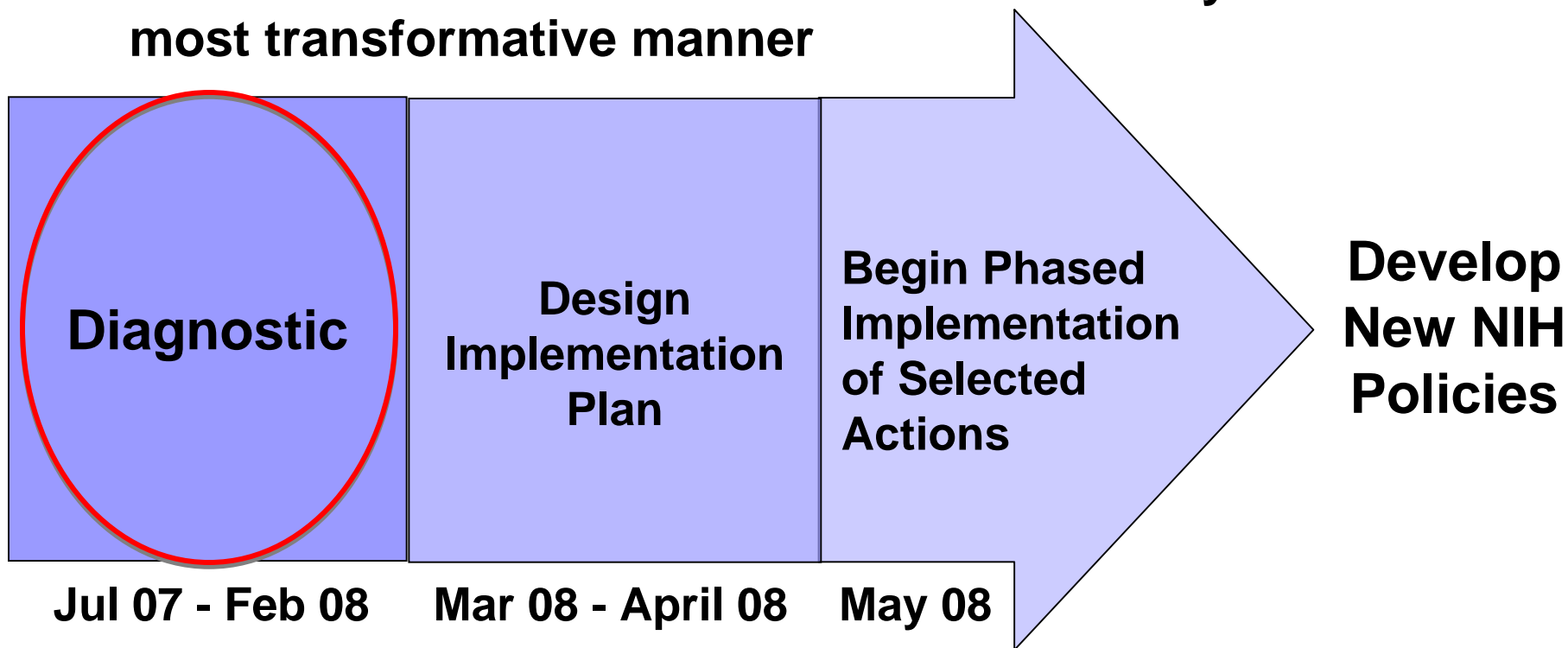**http://enhancing-peer-review.nih.gov/**

Overall Approach

- **The Goal: To identify the most significant challenges to the system used by NIH to support science and propose recommendations that would enhance this system in the most transformative manner**

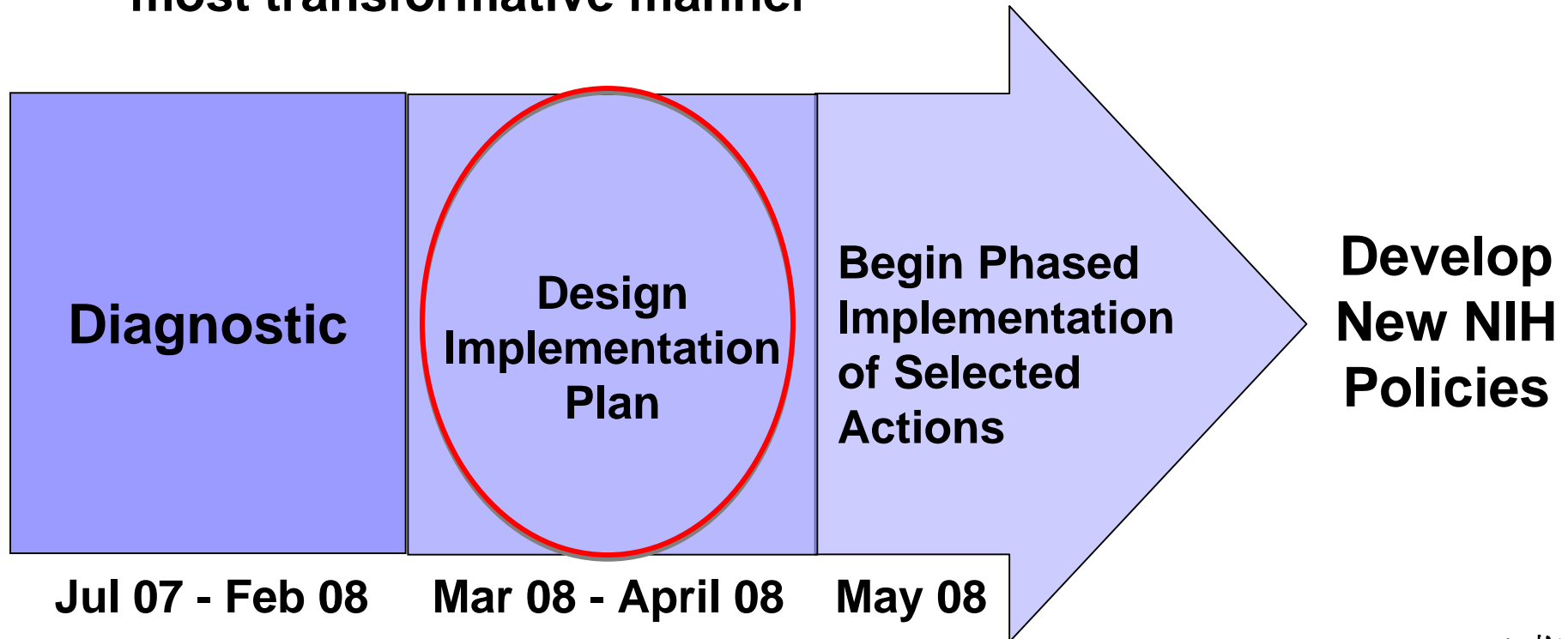| Diagnostic	Design Implementation Plan	Begin Phased Implementation of Selected Actions	Develop New NIH Policies
Jul 07 - Feb 08	Mar 08 - April 08	May 08	

Challenges & Recommended Actions

1. **Reducing Administrative Burden of Applicants, Reviewers and NIH Staff**

2. **Enhancing the Rating System**

3. **Enhancing Review & Reviewer Quality**

4. **Optimizing Support at Different Career Stages**

5. **Optimizing Support for Different Types and Approaches of Science**

6. **Reducing Stress on the Support System of Science**

7. **Meeting the Need for Continuous Review of Peer Review**

NIGMS

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1. Reducing Administrative Burden of Applicants, Reviewers, Institutional Grants Administrators and NIH Staff

Challenges	Goals	Recommended Actions
Too many applications in the system	Help applicants make faster, more informed decisions whether to refine an existing application or develop a new idea	Establish a "not recommended for resubmission" (NRR) option Provide ratings for all applications Pilot use of short, bi-directional "pre-buttals"
Too many submission rounds necessary before an application is funded	Focus on the merit of the science presented in the application and not the potential improvements	Eliminate the "special status" of amended applications: consider all applications NEW

2. Enhancing the Rating System

Challenges	Goals	Recommended Actions
Improve the usefulness of the rating system to inform decision making for both applicants and NIH	Enhance the level of discourse at study section meetings	Explicitly rate multiple, individual criteria: 1. Impact 2. Investigator(s) 3. Innovation/Uniqueness 4. Approach 5. Environment Shorten and restructure applications to reflect rating criteria Shorten and restructure reviews to reflect rating criteria
Improve the consistency of ratings	Enhance consistency of rating and engage all charter members in the review of all applications	Have charter members rank applications considered by the study section

3. Enhancing Review and Reviewer Quality

Challenges	Goals	Recommended Actions
Provide reviews that are discussed by multiple experts, follow standard criteria and procedures, and are as unbiased as possible	Enhance review quality	Add "impact" reviewers Continue to pilot editorial board models Pilot anonymous review in this context Increase electronic reviews Enhance reviewer, study section chair and SRO training
Attract the most qualified ("best") reviewers	Enhance reviewer quality	More flexible service Flexible application deadlines for reviewers Link potential service to most prestigious NIH awards

4. Support for Different Career Stages

Challenges	Goals	Recommended Actions
Support for early career investigators	Application success rates for early career investigators that are on par with established Investigators	Continue to fund more R01's Pilot separate review by generalists Pilot ranking separately Consider institutional support
Support for established investigators	Enable greater productivity of highly accomplished NIH investigators with less administrative burden for applicants and reviewers	Refine NIH R37 Awards ■ Permit investigator to apply ■ Minimum of 51% effort ■ Emphasis on past accomplishment ■ Award for 7-10 yrs ■ Commitment to serve on study section if asked Refine Pioneer Award ■ Commitment to serve on study section if asked

5. Support for Different Types and Approaches of Science

Challenges	Goals	Recommended Actions
Support for transformative Research	Provide clear opportunities for transformative research	Develop a path for transformative research (1% of R01-like awards)
Support for clinical research	Ensure optimal review of clinical research	Investigate submission / success patterns Flexible service for clinical scientists Pilot patients and/or their advocates in review
Support for interdisciplinary research	Ensure optimal review and support of interdisciplinary research	Investigate submission / success patterns Pilot editorial board model reviews Enhance trans-NIH approaches

6. Reducing Stress on the Support System of Science

Challenges	Goals	Recommended Actions
The NIH funding system has finite resources	Ensure optimal use of NIH resources	Require minimum % effort on RPGs (20% for PIs, 5% for all others)
Universities continue to build research facilities with "soft money", non-tenure track positions	Optimize the system used by NIH to support PIs and other research personnel	Analyze incentives in the funding system that drive expansion Determine, with stakeholders, if these incentives should be reduced / eliminated
The number of tenure track positions is straining to meet the number of postdocs trained	Optimize the system used by NIH to support the biomedical workforce	Analyze NIH contribution to workforce needs ■ Grad students / postdocs ■ Staff scientists

7. **Meeting the Need for Continuous Review of Peer Review**

Challenge
Biomedical and behavioral research is highly dynamic and peer review must evolve to keep pace

Goal
Ensure the core values of peer review

Recommended Actions
Mandate a periodic, data-driven, NIH-wide assessment of the peer review process

Capture appropriate current baseline data and develop new metrics to track key elements of the peer review system

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