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Preparing Your First NIH Proposal

November 18, 2020

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Agenda



- Preparing for a successful submission
- Submission process
- Components of a proposal and RDS resources
- Developing a proposal outline



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Preparing your submission

When is the right time to submit?

Balance between:

- Getting your lab started/keeping the work going
- Submitting at the most optimal time
 - Submit when you think the application will be the most competitive

Consider:

- Your publication record
 - Papers must be published/in press (not submitted)
 - Do these papers pertain directly to the aims?
- Your preliminary data
- Feasibility (Scope vs. Budget vs. Timeline)
- Collaborators



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Preparing your submission:

Do's

- Dig into the guidelines
- Contact your program officer
- Organize your narrative and yourself
- Write persuasively
- Start early with UO internal processes
- Read examples of funded grants (but don't be limited by them)



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Preparing your submission: Don'ts

- Write as you would for a scholarly article
- Presume the reviewers have the same knowledge as you
- Turn in a proposal without another pair of eyes on it
- Wait until the last minute to work on administrative elements of the proposal



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Most common reasons behind unfunded proposals

- Lack of new or original ideas
- Diffuse, superficial or unfocused research plan
- Lack of knowledge of published relevant work
- Lack of experience in the essential methodology
- Uncertainty concerning the future directions



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Most common reasons behind unfunded proposals

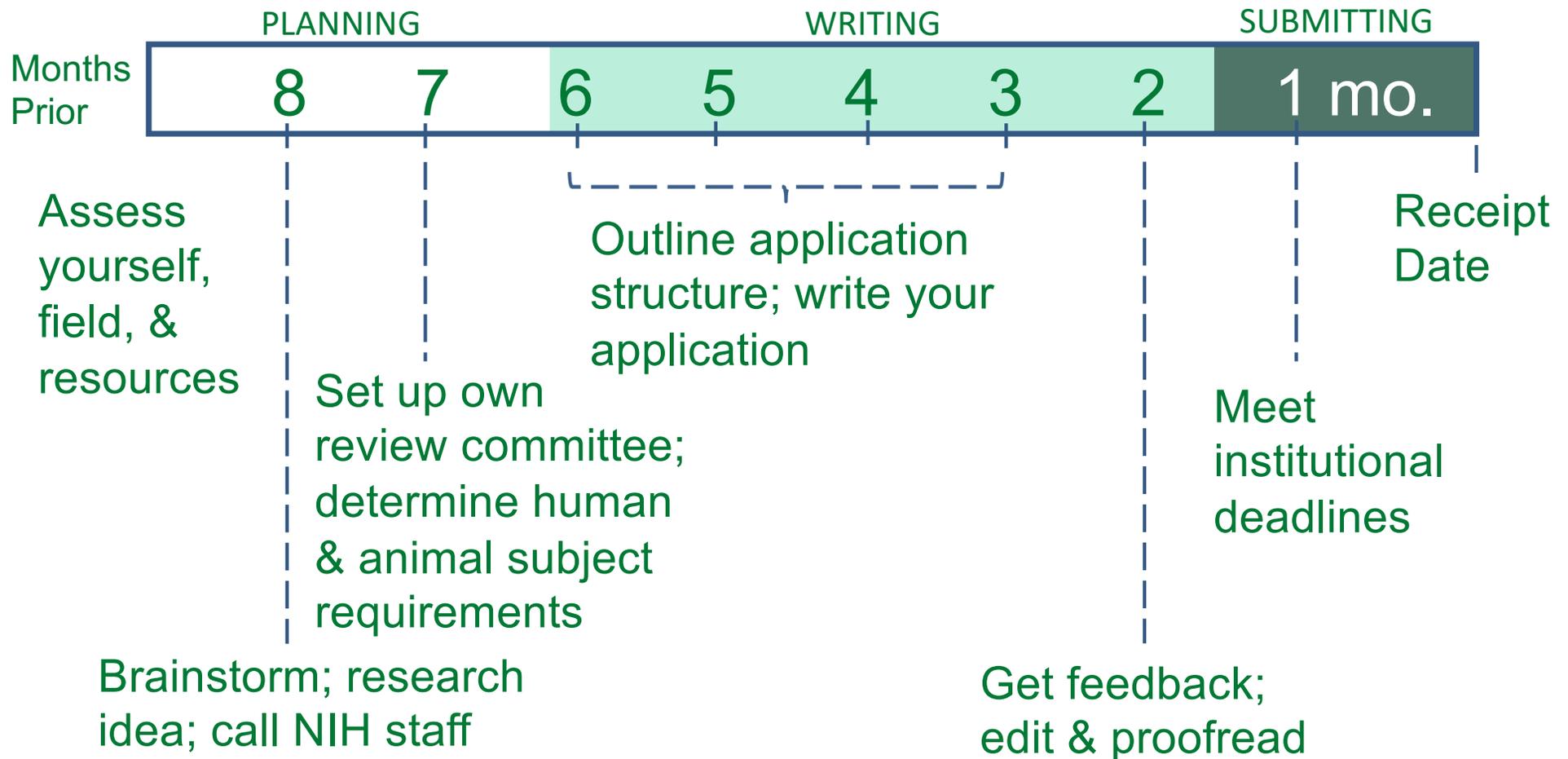
- Questionable reasoning in experimental approach
- Absence of acceptable scientific rationale
- Unrealistically large amount of work
- Lack of sufficient experimental detail
- Uncritical approach



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Timeline for successful submission



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Refining your idea

1. Define the niche you are systematically trying to develop
2. Collect and critically analyze background information
3. Generate a preliminary idea that is pertinent to your research problem
4. Assess your idea's potential for success and modify as necessary
5. Seek constructive criticism
6. Refine idea to maximize potential impact



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Refining your idea

Heilmeier Catechism

- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What is new in your approach and why do you think it will be successful?
- Who cares? If you are successful, what difference will it make?
- What are the risks?
- How much will it cost?
- How long will it take?
- What are the mid-term and final “exams” to check for success?

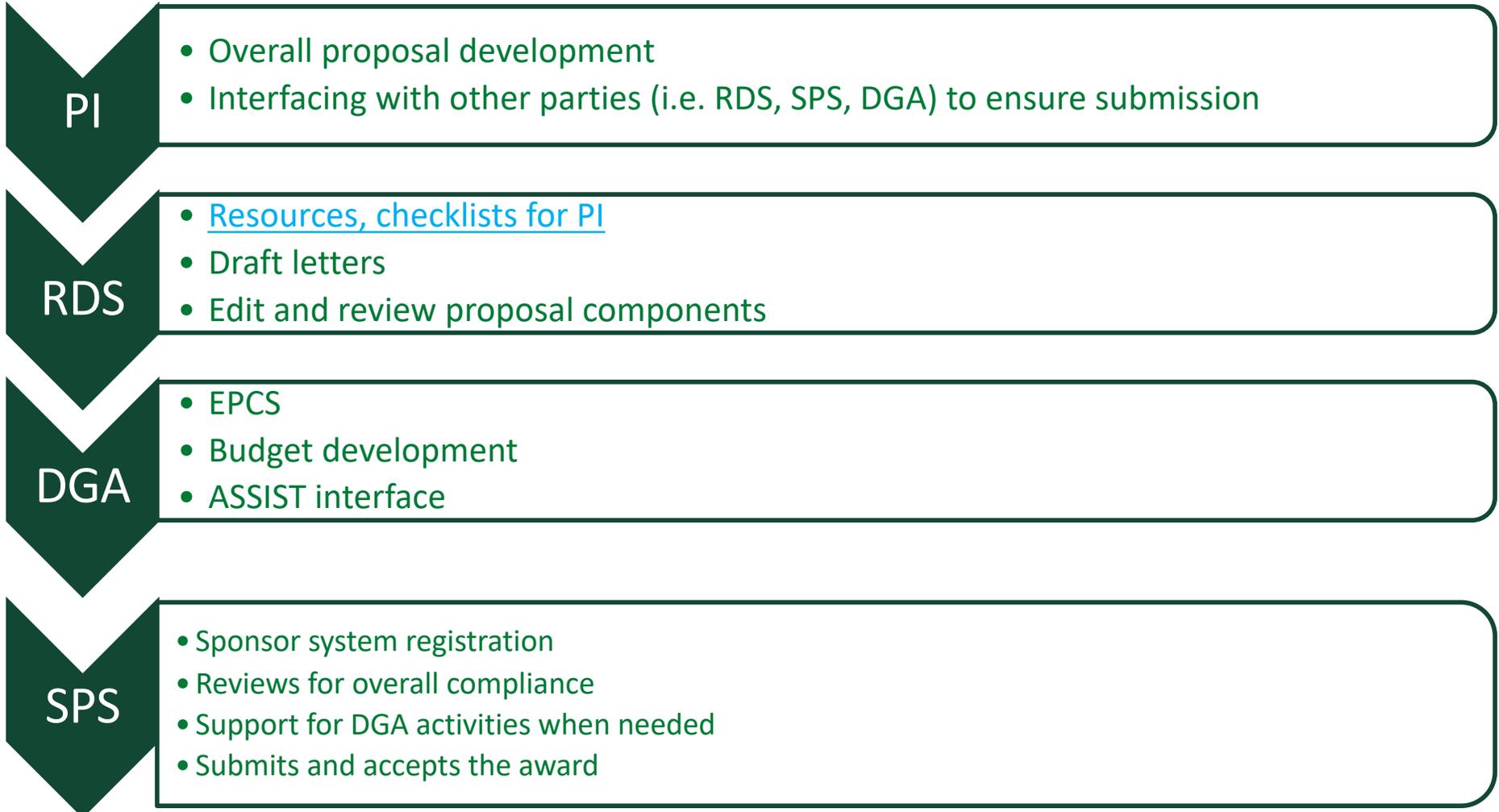


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Submission Process

Who is responsible for what?



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Grant Components: Ancillary

Item	Description	Resources
Budget	Modular vs. Detailed	DGA/SPS
Budget Justification	Modular vs. Detailed	RDS template
Biographical Sketches	5 pages	NIH template
Facilities & Other Resources	No page limit	RDS templates and boilerplate
Equipment	No page limit; can be combined with Facilities	RDS templates and boilerplate
Letters of support	No page limit; must include for consultants and significant contributors	RDS can help draft
Assignment Request Form	Indicate institute and study section preference; key words; COI	NIH template



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Grant Components: Ancillary (if applicable)

Item	Description	Resources
Consortium/contractual arrangements	Documents for subawards	DGA/SPS
Cover Letter	Required for late applications, K grants, etc.	RDS template
Foreign Justification	If foreign subaward	RDS template
Facilities & Other Resources	No page limit	RDS templates and boilerplate
Diversity eligibility certification	Depends on FOA	RDS templates



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Grant Components: Scientific

Item	Description
Specific Aims	1 page; MOST important component of the proposal
Research Strategy	6 or 12 pages for most proposals
Project Summary	30 lines of text
Project Narrative	2-3 sentences
Bibliography	Include PMID numbers for your publications
Authentication of Key Biological and/or Chemical Resources	~1 page
Resource Sharing Plan	My DMP Tool
Human Subjects (clinical v. non-clinical v. justification for using human specimens data)	RDS template and examples
Vertebrate Animals	RDS template
Multiple PI Leadership Plan	RDS template and examples



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Grant Components: Scientific (if applicable)

Item	Description	Resources
Introduction	1 page response to reviewer critique	PI
Progress Report Publication List	Required for renewals only	RDS template
Select Agent Research	For particular biosafety considerations	RDS template



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Research Strategy Outline

- Significance
 - Innovation
 - Approach
- Represent 40% of your score



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Research Strategy Outline

Significance: Extend and validate the assertions you make in the first paragraph of your aims

- Importance of the problem to be addressed
- Rigor of the prior research supporting the aims*
 - ❖ Aim 1 (literature & prelim data)
 - ❖ Aim 2 (literature & prelim data)
- Significance of expected research contribution

**Relatively recent shift to incorporate preliminary data within aims; not the only way to present your early results*



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Research Strategy Outline

Innovation: New and relevant departure from the status quo that addresses an important, NIH-relevant problem, thereby enabling new, NIH-pertinent horizons to be reached that otherwise would like have remained unattainable

- **Part 1:** diplomatically frame status quo
- **Part 2:** statement of innovation (in our opinion)
- **Part 3:** describe how what you are proposing will break down barriers that have prevented others from reaching the “new horizons” you envision



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Research Strategy Outline

Approach: Make reviewers WANT to read the details

Each Aim: re-state verbatim

Introduction: objective, working hypothesis, approach, rationale, expectation (1/4-1/3 of page)

Research Design: Rigorous experimental design for robust and unbiased results; consideration of relevant biological variables;

Expected Outcomes: highlight ROI

Potential Problems & Alternative Strategies

Timeline and Benchmarks for Success

Future Directions



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Early Career Reviewer Program

Career Advancement

- Help emerging researchers advance their careers by exposing them to experience in peer review that may make them more competitive as applicants

Training

- Educate qualified scientists without prior CSR review experience to develop critical and well-trained reviewers

Broaden Review

- Enrich the existing pool of reviewers by including scientists from less research-intensive institutions



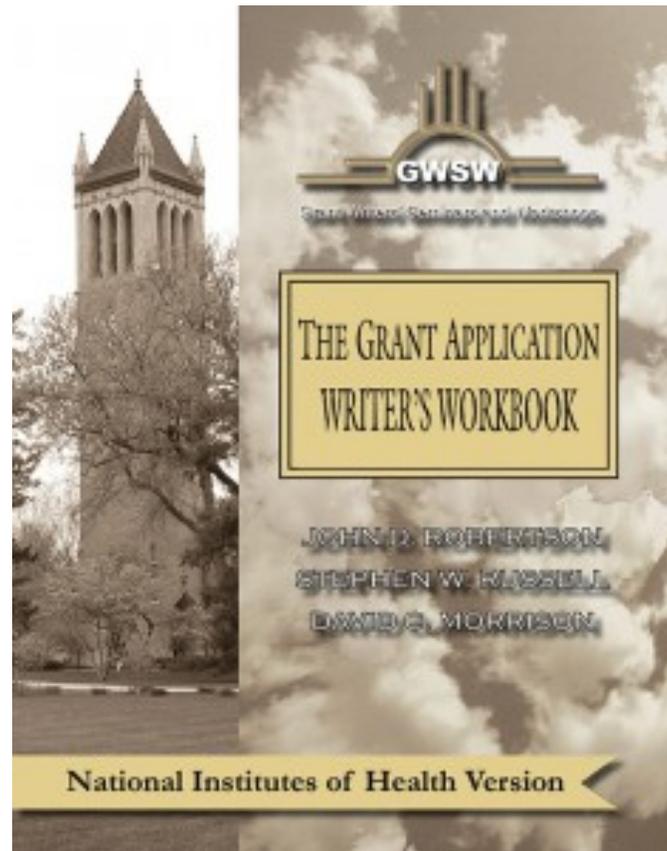
Work with RDS

Contact us for supporting the development of your proposals.

Research Development Services

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