# Common Proposal Review Mechanisms

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    - "Understanding the Agency Review Process," by Dr. Marjorie Piechowski, Director Emerita of Research Support, College of Engineering & Applied Science, University of Wisconsin-Milwaukee

    - Holly J. Falk-Krzesinski and Stacey C. Tobin, "How Do I Review Thee? Let Me Count the Ways: A Comparison of Research Grant Proposal Review Criteria Across US Federal Funding Agencies," *Journal of Research Administration* 46, no. 2 (Fall 2015): 79-94.

    - "Review Process," copyright © 2018 by Holly J. Falk-Krzesinski

    - Cohort for Efficiencies in Research Administration, David Ngo

# Michael Spires

- **Research Development (12 years)**
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- **NORDP (6 years)**
  - Enhancing Collaboration, Professional Development, Conference, Governance, Executive Conference, and NORD Steering Committees
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  - Proposal reviewer for USEd, NASA, Smithsonian
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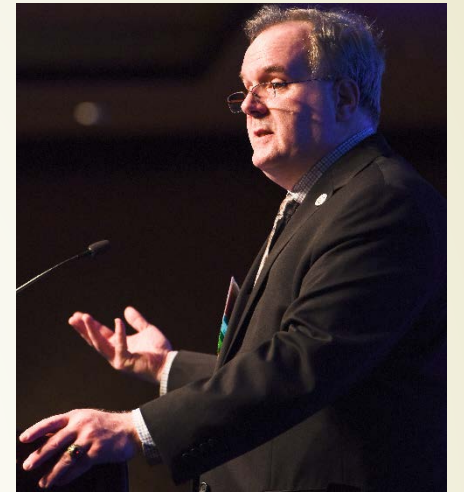
# Take-Home Messages

- Understanding the kind of review process that a proposal will undergo will help your team write a more competitive proposal for that competition

- If you (or anyone else on the team) are not clear about the review process, then ask someone about it:

  - A colleague in your sponsored research or research development officer(s)

  - Your corporate/foundation/government relations person

  - Your grant writer

  - A responsible official (usually a program officer) at the sponsoring agency

# Starting Premises

- Funding agencies* use different processes for reviewing proposals. This presentation discusses the most common types, with the end goal of helping you craft proposals that speak to the reviewers.

- "Proposal review" is not necessarily the same thing as "peer review." Many sponsors use peer review as part of their proposal review process—but not all of them do.

- When sponsors do incorporate peer review into the proposal review process, they don't all define "peers" in the same way.

- Not all sponsors share reviews with applicants.

- Sponsors give their staff different levels of responsibility (and latitude) in their review processes.

# Standard Types of Review

- Agencies differ on specific procedures (and may use different ones for different proposal types or competitions), but most proposals are reviewed in one of the following ways:

  1. **Individual review by subject matter experts** (e.g., NSF "mail" or *ad hoc* reviews)

  2. **Group review by subject matter experts** (e.g., NIH, NSF panel reviews/study sections)

  3. **Group review by lay people** (i.e., a foundation's board of directors)

- While proposal review (whether by peers or otherwise) is a key factor in the funding decision, reviews are normally advisory: the program staff can agree or disagree with the reviewers' judgment, wholly or in part.

# Peer Review

- Peer review system is well-established in the academic world (i.e., journal and book publishing).

- The goal of peer review is a fair, transparent process that allows a judgment of the merits of research and academic work.

- Most federal granting agencies use some kind of peer review in the proposal review process:
  - Scientific review panels/study sections (NSF, NIH)
  - External reviewers (NSF, AFOSR, ONR, ARL, USEd, NEH)
  - Source selection teams (DOE, NASA, EPA, DARPA*)

- Many large private granting agencies also use some form of peer review for proposals. Smaller ones usually do not.

# The Basics of Proposal Review

**Submission**
- Basic business process & technical compliance checks
- *Return without review for serious failures at this stage*

**Processing/ Initial Review**
- Assignment to appropriate review process
- Identification of ad hoc reviewers, if needed
- Solicitation of reviewer comments/initial rankings
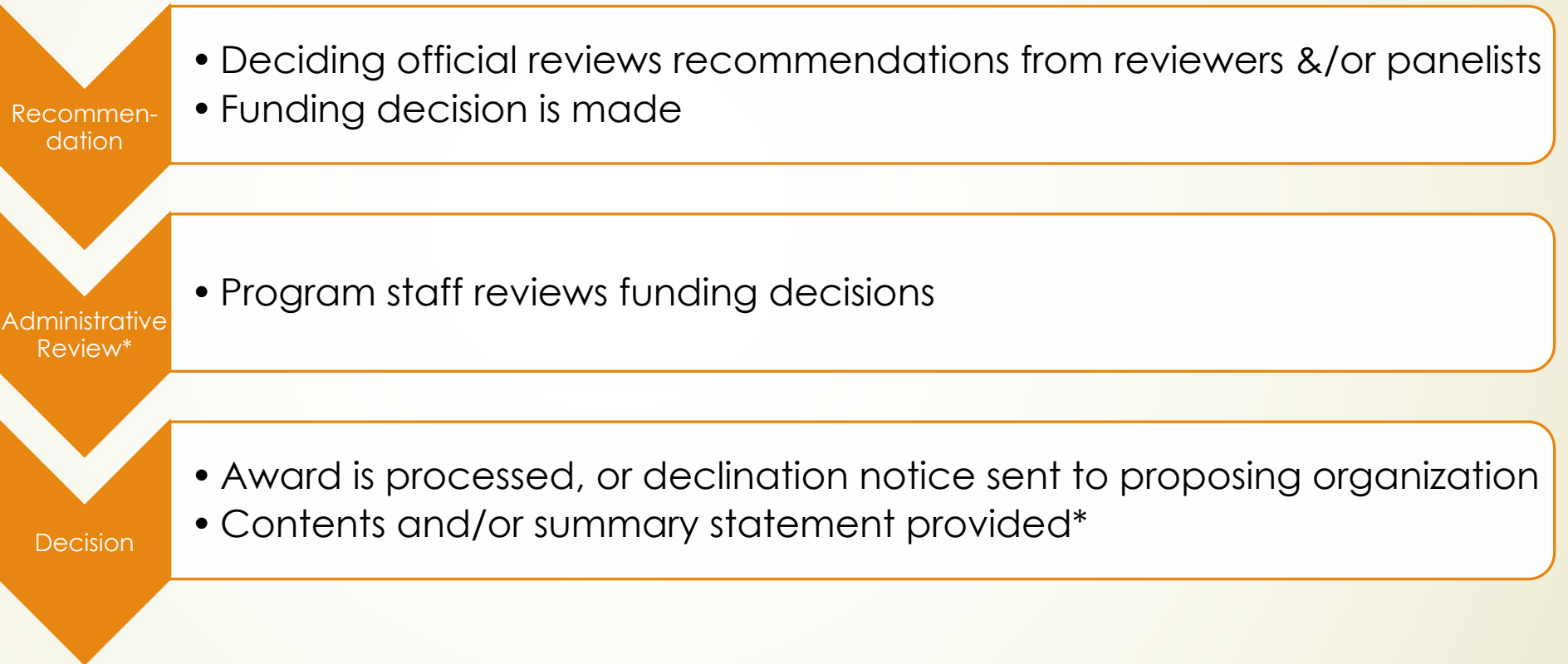- *Solicitation of additional comments\**

**Panel\***
- Individual reviewers present (& may discuss) their findings
- Initial ratings may be revised
- Panel discussion summarized

\*If applicable

# The Basics of Proposal Review, 2

**Recommen-dation**
- Deciding official reviews recommendations from reviewers &/or panelists
- Funding decision is made

**Administrative Review***
- Program staff reviews funding decisions

**Decision**
- Award is processed, or declination notice sent to proposing organization
- Contents and/or summary statement provided*

*If applicable

# Types of Review: Individual

- Review by individuals with subject matter expertise is fairly common, especially among federal agencies (e.g., NSF, USEd, DOD, NEH)

- The number of reviews for a given proposal will vary.
  - A minimum of three is fairly standard
  - Possibly five or more, especially if the project is interdisciplinary or if there is substantive disagreement between reviewers.

- Reviewers are individually contacted by program staff.
  - They may only read one or a few proposals, or they may have dozens.
  - They are provided copies of the proposals, and given a time frame within which to complete their reviews.

# Types of Review: Individual, 2

- If not enough reviewers agree to review the proposal, or if they do not complete their reviews in a timely manner, the program staff will solicit additional reviewers (which lengthens the review process).

- Reviewers do not know or interact with each other, and send their reviews directly to the program staff.

- Depending on the agency and its process, reviewers' comments may or may not be shared (verbatim or in summary form) with the principal investigator(s) after the review process is complete.

- Program staff may or may not provide additional review comments or guidance.

# Selection of Individual Reviewers

- Agency processes differ, but some common ways program staff identify individual reviewers include the following:
  - Previous award recipients working in the same discipline
  - Authors of works cited in the proposal
  - Recognized experts in the relevant field(s), identified through publications, conference programs, etc.
  - Individuals recommended by the PI(s)
  - Self-nominations

# Selection of Individual Reviewers, 2

- Individuals normally will not be asked to review proposals where they have either a personal or professional conflict of interest with someone on the project team (and PIs may be able to name such individuals). Some types of disqualifying conflicts include the following:

  - Significant relationship with someone on the project team (family member, collaborator, colleague, former student/advisor)

  - Institutional affiliation

  - History of animosity

  - Direct competitor in the field

- If for some reason a reviewer with a conflict has to be asked to review a proposal, there will normally be some kind of procedure in place to ensure that his/her review is fair and objective.

# Types of Review: Panel

- Two types of panel reviews:
  - *Ad hoc*, where the panel is put together for a given competition
  - **Standing** (sometimes called "chartered" or "regular"), where members of the panel serve (frequently by appointment) for a specified term of years and participate in numerous proposal competitions
    - Members of these panels sometimes get special submission privileges
- Two types of panel processes (at least):
  - All panelists read all submitted proposals (or those they are assigned to read) ahead of the panel meeting, and comment on them (used at NSF, USEd)
  - A few designated individuals read all of the proposals assigned to them, and then present them to other members of the panel before discussion begins (used at NIH)

# Types of Review: Panel, 2

- Panel review is becoming more common, especially virtual panels (enabled by electronic submission of proposals and better technology for telepresence) that don't require panelists all to travel to the same location

- Most panel review processes involve two rounds:

  - Initial review by some or all panel members (in greater or lesser depth, depending on the type of process and panelists' assigned roles), preliminary scoring—typically done individually, prior to the panel meeting

  - Panel discussion, revision of individual reviews and preliminary scores to reflect discussion; assignment of final comments/ratings

- There may be a "triage" process for proposals considered unlikely to be successful, to allow more time for discussion of others believed to be stronger or more meritorious, or where there is less consensus among the panelists

# Basics of Panel Review

### NIH

- Proposals are submitted to the agency

- Proposals then passed to the Center for Scientific Review, or CSR

- CSR assigns proposals to appropriate panels or study sections and designates an individual to manage the review process*

### Non-NIH (NSF, USEd, others)

- Proposals are submitted to the agency

- Proposals are then assigned to one or more staff in the appropriate program(s) for the proposal's discipline

- The program officer(s) identify and recruit potential panel members, depending on the proposal's topic

# Basics of Panel Review, 2

## NIH

- The review manager assigns two or three panelists to make detailed reviews of each proposal

- Panels have between 15 and 30+ regular members

- Reviewers score and comment on proposals assigned to them ahead of the meeting, and submit scores and comments ahead of time to the review manager

## Non-NIH (NSF, USEd, others)

- Program officers may assign proposals to specific reviewers, or may ask panelists to read all proposals if the volume permits

- Panels may or may not have a set number of members

- Reviewers score and comment on proposals assigned to them ahead of the meeting, and may or may not submit scores and comments to program staff ahead of the panel meeting

# Basics of Panel Review, 3

## NIH

- The review manager, with assistance from technical staff employed by CSR, runs the panel meeting

- Typically, proposals ranked below a certain level (often the bottom half of the number received) are "streamlined"—meaning they are not discussed at the panel meeting unless a panel member objects

## Non-NIH (NSF, USEd, others)

- The program officer runs the panel meeting, and may have support from agency staff or recruit one or more panelists to help

- Proposals that did not score well on individual review may or may not be discussed in full, if panel members agree

# Basics of Panel Review, 4

## NIH

- Panelists must recuse themselves from discussing proposals where they have (or feel they have) a conflict of interest; they may be asked to leave the room while such proposals are discussed

- The primary reviewer ("discussant") presents the proposal and her/his comments to the rest of the panel

## Non-NIH (NSF, USEd, others)

- Panelists are typically screened for conflicts of interest before proposals are assigned to them/their panel, and will not normally be asked to review any where they have a conflict: but they must still recuse themselves if they discover a conflict during the review

- The program officer may open discussion of a given proposal, or ask one of the assigned reviewers to do so

# Basics of Panel Review, 5

## NIH

- Other assigned reviewers then discuss the proposal (and may simply note agreement with comments already made by the primary reviewer)

- Other panelists will often read assigned reviewers' initial comments, and read or skim proposals (or their abstracts) during the presentation by assigned reviewers (but are not required to do so)

## Non-NIH (NSF, USEd, others)

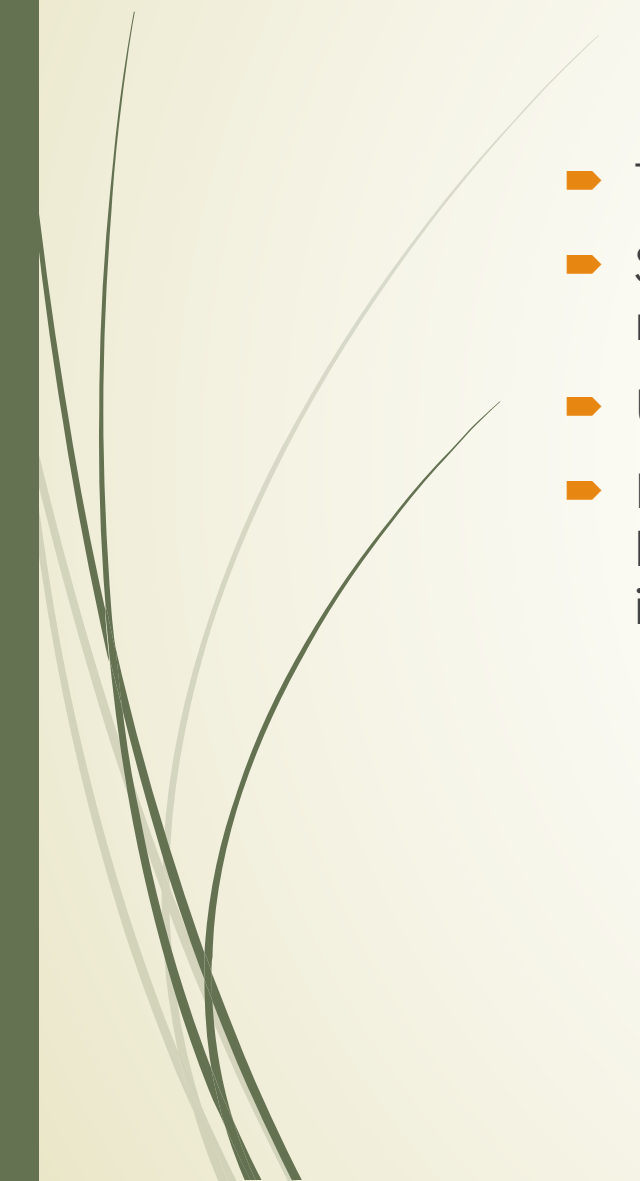- Other panelists may weigh in with comments, questions, or disagreements with the initial review

# Basics of Panel Review, 6

- All panelists who do not have conflicts of interest may comment on or discuss proposals under review, even if not assigned to them, if they feel they have anything to add or if they feel something's been missed

- The panel (review officer, program officer) may recommend that some proposals not be reviewed further (e.g., if there are problems with methodology, or any other significant issues with the proposal or the proposed research)

- Otherwise, the panel then assigns final scores/evaluations to each discussed proposal; the initial ratings/comments by the assigned reviewers may stay the same or be changed at this point in response to panel discussion

- Triaged or streamlined proposals will only receive the comments and/or rankings provided by the assigned reviewers

- Proposals discussed at the panel meeting will receive both the individual reviewers' comments (as modified in response to panel discussion, if applicable), and may also receive a summary of the panel discussion that is prepared by the review officer, a program officer or by a panelist recruited as scribe

# Board or Internal Review

- This type of review is most common with private funders

- Some agencies (e.g., NSF) may also use it for certain types of funding mechanisms or supplemental requests

- Usually, this type of review involves one or a very small number of people

- Reviewers are normally not subject matter experts, but will often have other kinds of expertise (e.g., business or business practices, community involvement and history, philanthropy)

# Individual Review: Pros & Cons

- Pros
  - Often shorter review time
  - Less political
  - Reviewers all responsible for reading the entire proposal
- Cons
  - Lack of opportunity for discussion among reviewers
  - If enough reviewers lack expertise (or are careless), meritorious proposals may be rejected anyway for lack of an advocate
  - In highly technical areas, finding a sufficient number of unbiased, non-conflicted reviewers to provide adequate feedback may be difficult
  - Proposals reviewed in isolation: difficult to get a sense of where a project fits with others submitted for the same competition

# Panel Review: Pros & Cons

- Pros
  - Allows for discussion among reviewers
  - Proposals can be compared relative to others submitted for the same competition
  - Reviewers can revise initial appraisals in light of discussion
- Cons
  - If assigned reviewers lack expertise, are careless, or ineffective as advocates, meritorious proposals may be rejected anyway
  - Volume of proposals to review may weigh on those considered near the end of the process
  - Proposals may not be read as carefully/thoroughly
  - "Difficult" panelists may be obstacles for longer periods

# Board Review: Pros & Cons

- Pros
  - Proposals are often shorter
  - Review process often takes less time
  - Institutional or personal history with the funder (and/or a member of the board) can add weight
- Cons
  - Proposals are often shorter
  - Unpleasant institutional or personal history with the funder (and/or a board member) can sink meritorious proposals
  - Difficulty in explaining importance of work or critical elements to an audience of laypeople

# Eight Key Questions Considered by Reviewers

## Key Question

1. Why does this matter?

2. How is this new?

3. How will it be done?

4. In what context will it be done?

5. What is special about the people involved?

## Review Criteria Terms

➡ Significance, Importance

➡ Innovation, Novelty, Creativity

➡ Approach, Plan, Methodology, Objectives, Aims

➡ Environment, Facilities & Other Resources, Populations

➡ Investigators, Organization, People, Researchers, Personnel, Partners, Collaborators, Staff

# Eight Key Questions Considered by Reviewers, 2

## Key Question

6. What is the return on investment?

7. How effectively will the financial resources be managed

8. How will success be determined?

## Review Criteria Terms

➡ Impact, Value, Relevance

➡ Budget, Budget Justification

➡ Evaluation, Assessment

# Writing for Reviewers

- Understanding how the proposal will be reviewed is crucial to helping the reviewers see the project through the team's eyes

- Some basic rules apply no matter what kind of review process the proposal will receive:

    a) Craft a title that is informative (and strive to avoid cutesy acronyms)

    b) Organize the narrative so it aligns with the review criteria: This helps reviewers see that all the key points have been addressed

    c) Use the terminology, section headers, order, and formatting specified in the solicitation or the agency's general guidelines

    d) Consistency, consistency, consistency!

    e) Pay attention to relative weights, or bonuses/penalties: Devote more time/space to elements that receive higher weights or bonuses

    f) Use friendly formatting

# Assist the Reviewer (Subtly)

- Make tables, charts, graphs, figures, schemes, etc., as self-explanatory as possible.

- Give context for all non-textual information (i.e., don't simply toss in a figure to "break up the text")

- Use topic sentences at the beginning of paragraphs, and especially at the beginning of a new section: set the stage for the reader to follow the line of argument.

- Subtly reiterate where to find related information: e.g., "As previously noted in Section 3.4.2," or "See facilities, equipment, and other resources statement."

- Assist reviewers in finding responses to review criteria, required elements, etc., as quickly as possible. (See next slide)

# Assist the Reviewer (Subtly), 2

- The **significance** of our results lies in…
- This approach is **feasible** because…
- The **outcome** of this project will be…
- The **innovation** of this project is shown by…
- This research is **potentially transformative** as evidenced by…
- The **team** is **especially well-qualified** to undertake this project because…
- The **environment** contributes significantly to this project in that…
- This project will **advance knowledge** by….
- The **broader impacts** of this work are found in…

*Source: Holly J. Falk-Krzesinski, Ph.D.*

# Assist the Reviewer (Subtly), 3

| Administrative | Scholarly | Programmatic | Financial |
|---|---|---|---|
| General institutional information | Abstract/Summary | Key personnel biosketches & other support | Detailed budget |
| Performance site(s) | Specific aims | Facilities, equipment, & other resources | Budget justification |
| Administrative contacts | Research strategy/ Scope of work | Resource sharing plans | Supporting documentation (if applicable) |
| Institutional certifications | Compliance plans | Letters of intent or collaboration | |

*Source: David Ngo*

# Writing for Individuals

- If a proposal will be reviewed only by individuals, then the narrative should be written in a way that:
    - makes the strongest possible case for the importance of the proposed work (and the qualifications of the team to do it), in the manner most appropriate to the discipline(s) involved; and
    - ensures the reader will be able to locate (and follow) all essential arguments, required elements, and necessary pieces of information
- Emphasize key points through judicious use of headings, and either boldface or italics for emphasis
- Make sure that both the abstract or summary and the conclusion are strong
    - Write these pieces after finishing the bulk of the narrative, so that they reinforce it rather than detract from it

# Writing for Panels

- If a proposal will be reviewed by a panel at some point, and especially if it will be an NIH-style panel where individual panelists present and advocate for the proposal:

  a) The abstract/summary is even more important than usual: it may be the only part of the proposal most panelists read

    i. Make sure to discuss the importance of the work, and any key findings or methods that are necessary to understand the rest of the project

    ii. Summarize the main goals and objectives, so reviewers who only skim the rest of the proposal have some idea of the work plan

    iii. Summarize expected outcomes, deliverables, and/or broader impacts

    iv. Give assigned readers a reason to keep reading past the first page (it may also catch the interest of others)

# Writing for Panels, 2

b)   Use bullet points, lists, etc., to advantage: it helps the assigned readers make the project's case to the rest of the panel

c)   Subtle repetition helps make sure readers see and remember the important information

d)   Stick as closely as possible to the structure of the review criteria: it helps assigned readers present relevant information to the panel as it is needed

e)   Clarity is vital: if assigned readers miss a point, or get confused about the work plan, they can't make a strong case for it to the rest of the panel

# Writing for Boards

- Keep it as non-technical as possible: a good rule of thumb is "Would your mom be able to understand this?"

- Emphasize outcomes and deliverables: what are they going to get if they fund this project?

- Relate the project to the funder's own strategic goals and plans: show how the project "scratches their itch"

- Explain how their funding fits into the overall picture: are they paying for it all, or will their funding be part of a bigger mix of sources?

- Clearly identify, in the first couple of sentences:
  - Who is the applicant?
  - How much funding is being requested?
  - What the project involves

# Questions?