

NSF FACULTY ROTATOR PERSPECTIVE

Michael Briley
Department of Physics & Astronomy
University of Wisconsin Oshkosh

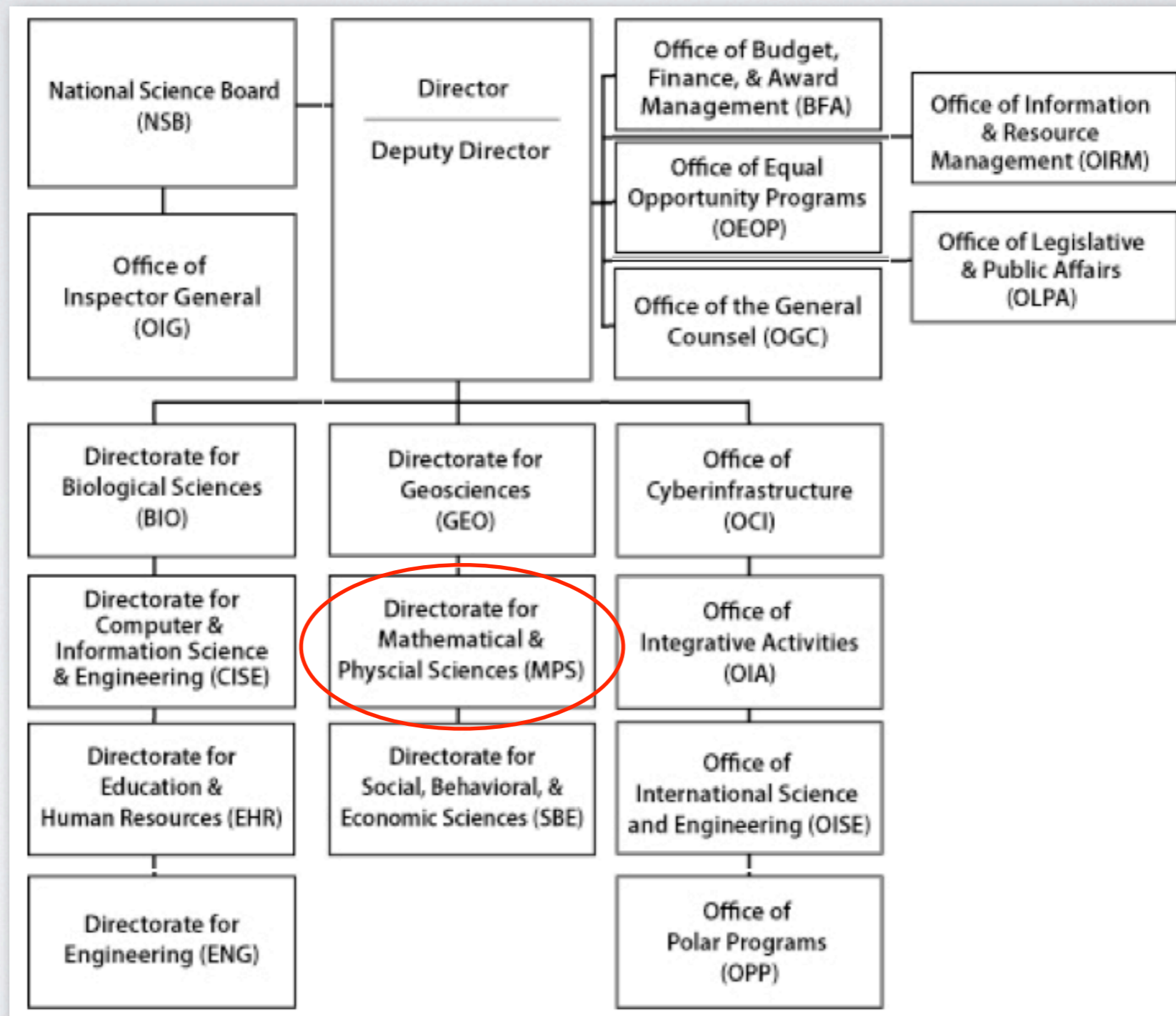
WHAT IS A ROTATOR?

- University Faculty (most often)
 - Brought in to manage a program for a year or two or more
- Visiting Scientist, Engineer, and Educator Program
- Intergovernmental Personnel Act

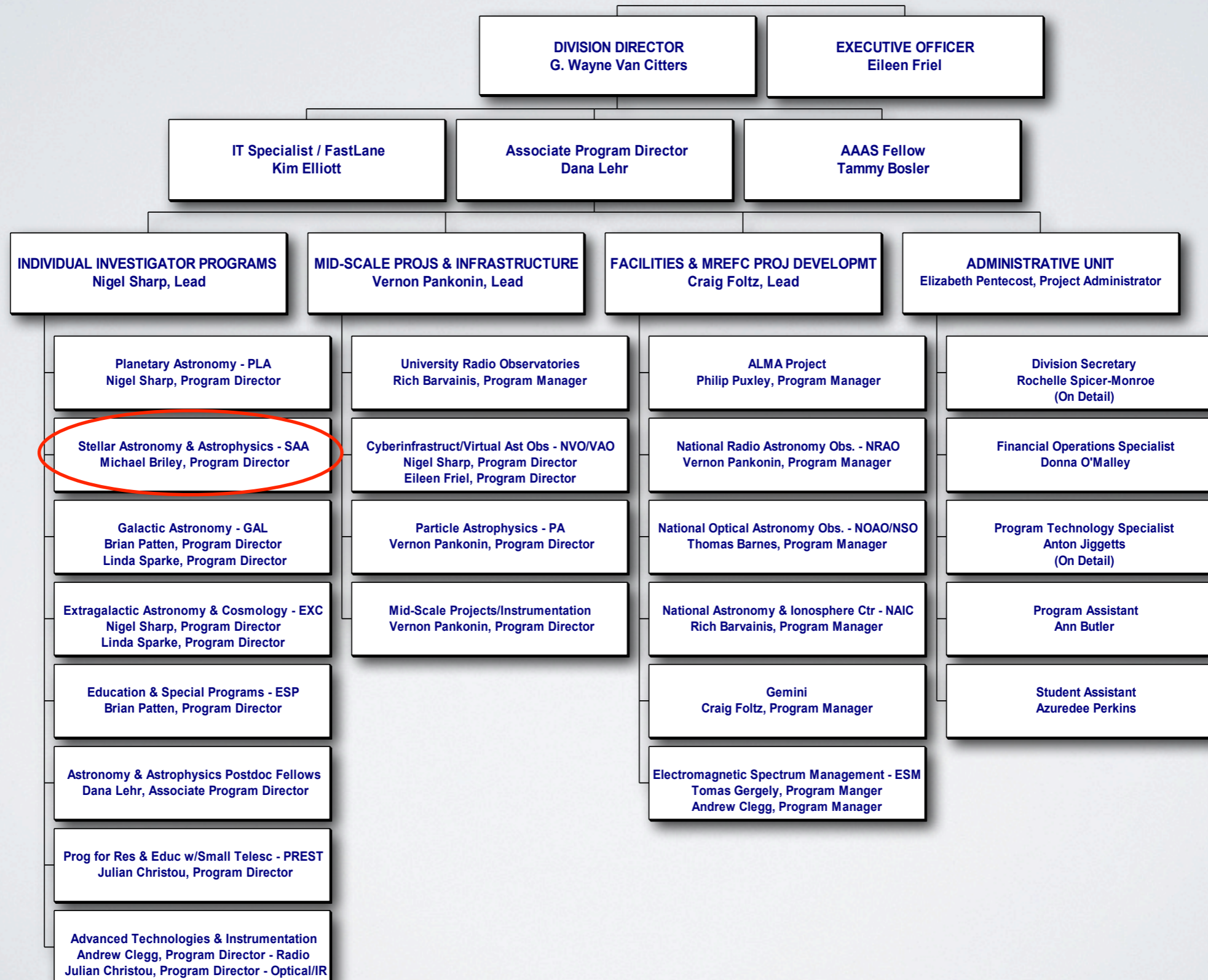
MY ROTATION

- Division of Astronomical Sciences (MPS)
 - Sept. 2004 - August 2005: VSEE
 - Sept. 2005 - August 2008: IPA
 - Sept. 2009 - December 2009: "Expert"
 - Ran 20+ panels, recommendations for 600+ proposals

MY ROTATION



MY ROTATION



OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
It's worth getting to know them (or them getting to know you)

STELLAR ASTRONOMY & ASTROPHYSICS

- 140 Active Awards (\$30M)
- 150 New Proposals/Year
- \$10M Annual Budget (~35 New Projects)

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
Many times they do not want to decline a proposal and arguing with them about it is not going to help.
If you are declined, you’re not notified until after it has happened for this reason (mostly).
Ask if it should be resubmitted, and if so, what changes to make (of course there’s still no guarantee).

STELLAR ASTRONOMY & ASTROPHYSICS

- Studies of the structure and activity of the Sun and other stars
- The physical properties and composition of all types of single and multiple stars
- Compact objects and their interactions
- Extra-solar system planet formation and detection
- Star formation and stellar evolution
- Stellar nucleosynthesis
- The properties of atoms and molecules of relevance to stellar astronomy

STELLAR ASTRONOMY & ASTROPHYSICS

- Studies of the structure and activity of the Sun and other stars
- The physical properties and composition of all types of single and multiple stars
- Compact objects and their interactions
- Extra-solar system planet formation and detection
- Star formation and stellar evolution
- Stellar nucleosynthesis
- The properties of atoms and molecules of relevance to stellar astronomy

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
- Program Directors do Not Necessarily Have Research Experience in All Areas of their Program

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
- Program Directors do Not Necessarily Have Research Experience in All Areas of their Program
When talking about a project, start with a broader brush than you'd expect and get to finer detail as necessary.
But they will know the big issues in the field - connect your work with them.

PROGRAM DIRECTOR DUTIES

(TYPICAL, OR AT LEAST NINE)

- Strategic/Long-term Planning
- Policy Development
- Outreach/Education
- Facilities Management
- Division/Directorate/Foundation Activities
- Program Management (140 active projects/year)
- Proposal Processing (150 proposals/year)

OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
- Program Directors do Not Necessarily Have Research Experience in All Areas of their Program
- Program Directors can be Pretty Busy

OBSERVATIONS

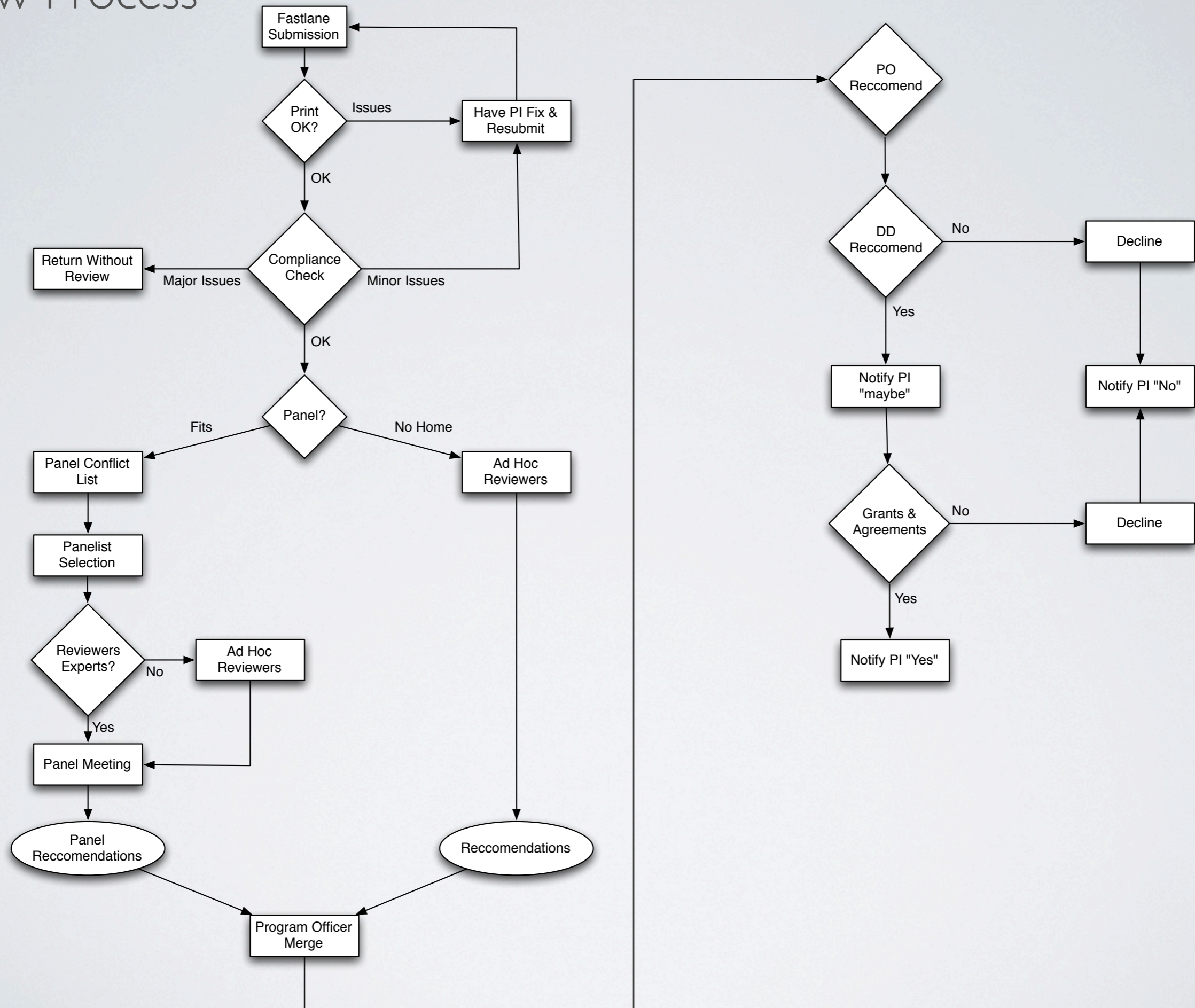
- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
- Program Directors do Not Necessarily Have Research Experience in All Areas of their Program
- Program Directors can be Pretty Busy
Try not to call out of the blue. Email with some times to talk usually works best. Talking is better than email too! (mostly)

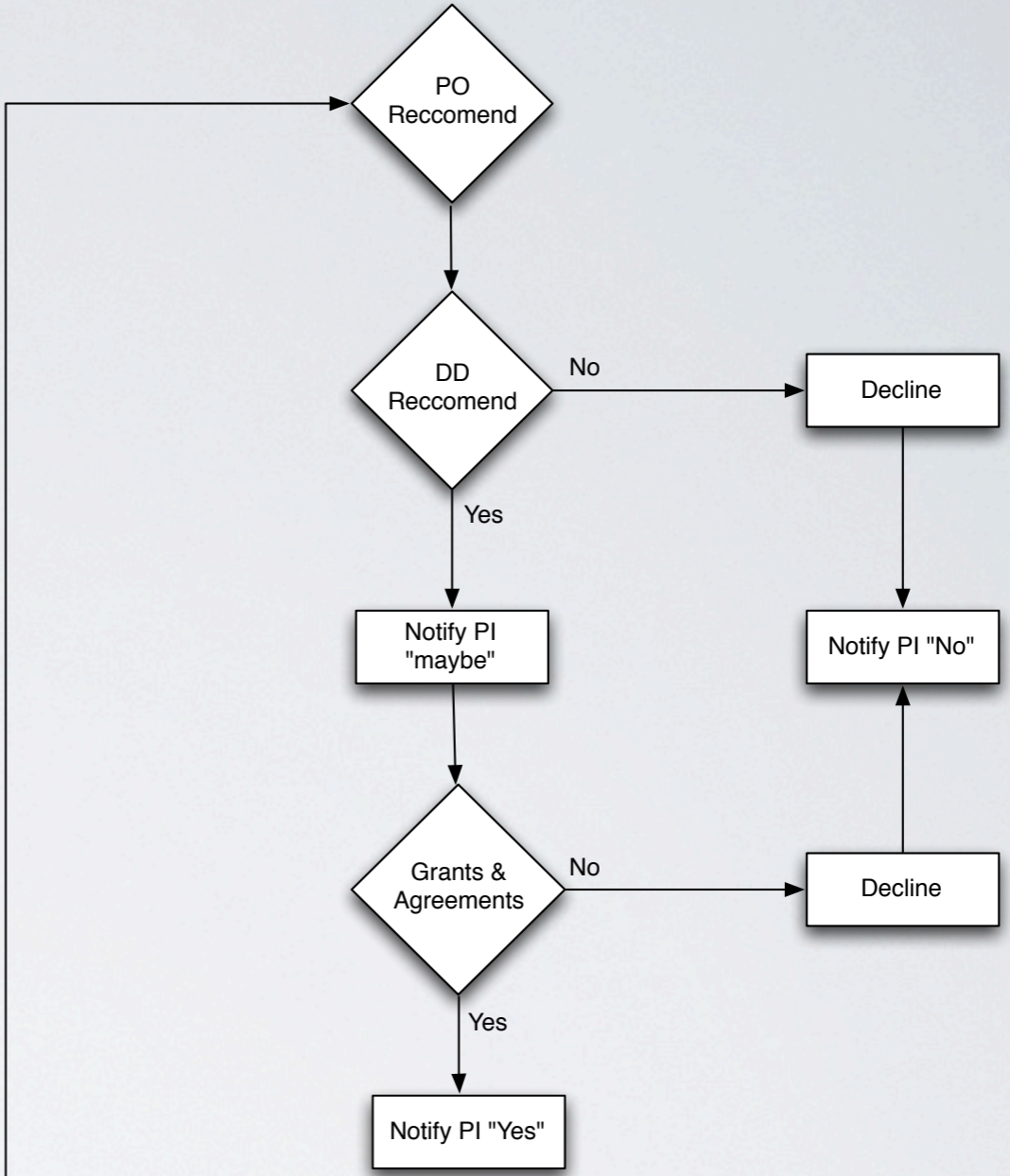
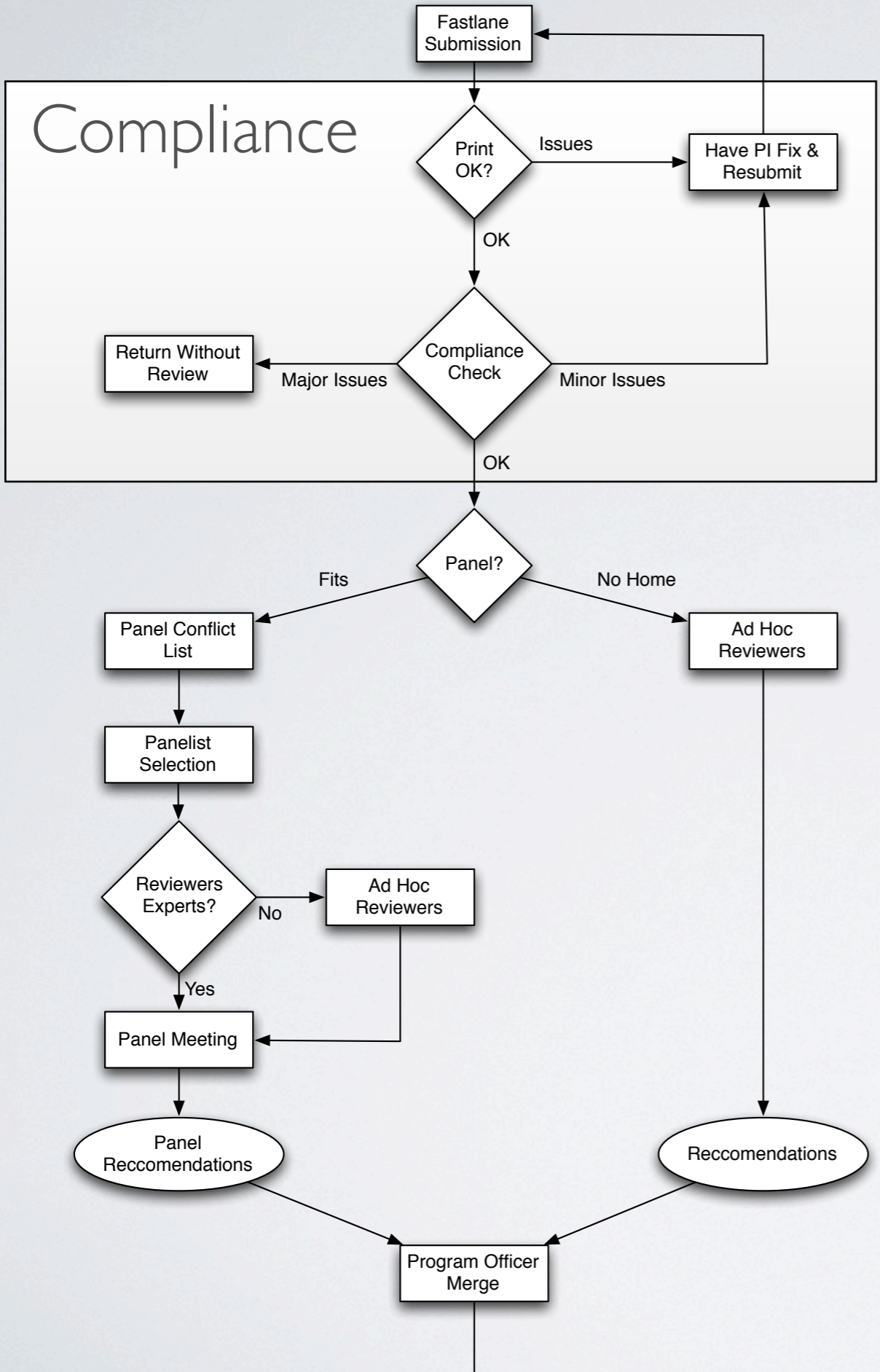
PROGRAM DIRECTOR DUTIES

(TYPICAL, OR AT LEAST NINE)

- Strategic/Long-term Planning
- Policy Development
- Outreach/Education
- Facilities Management
- Division/Directorate/Foundation Activities
- Program Management (140 active projects/year)
- Proposal Processing (150 proposals/year)

Review Process





FY2008 AAG PROPOSAL COMPLIANCE CHECKLIST

PI _____

Proposal # _____

Checklist (other GPG items at PO discretion)

Action

Technical errors:

- No printing or font problems **due to PDF conversion** (only FastLane errors can be corrected)

- Give PI seven calendar days to exchange the bad PDF file(s) with corrected files, using the Proposal File Update utility in FastLane.

Cover Page:

- Received by deadline date?
- Electronic Signature?
- Special Proposal, i.e. SGER, etc?
- Same proposal to another agency?
- Color/high resolution graphics?

- Process as "Return without review"
- Request AOR provide e-signature via FastLane
- Process separately
- Coordinate with other agency
- Receive hard copies from PI, for assigned reviewers

Project Summary:

- Both Merit Review criteria separately addressed
- One page limit

- Process as "Return without review"
- Process as "Return without review"

Project Description:

- 15 page limit (unless deviation approved)
- Results from Prior Support included (if applicable)
- Formatting (character sizes, fonts, etc.)
- No Broader Impacts

- Process as "Return without review"
- Process as "Return without review"
- Process as "Return without review" (discretion allowed)
- Warn PI of policy and potential for return next year

Budget:

- Main proposal; each year and cumulative
- Each subaward; each year and cumulative

- Contact PI to submit via FastLane
- Contact PI to submit via FastLane (can fix after review)

Biographical Sketch:

- Contains lists of collaborators for all senior personnel
- Two page limit per person

- Get list by email, and request FastLane Proposal File Update if possible within a few days
- Proposal File Update within 5 business days or return

Other Documentation:

- Current & Pending Support statement
- Letters of collaboration (letters of recommendation are not allowed)

- Proposal File Update within 5 business days
- Warn PI of policy; Proposal File Update within 5 business days to replace inappropriate material

Appendices:

- None (unless RUI or AD approved **before** submission)

- Warn PI of policy; Proposal File Update within 5 business days to remove inappropriate material.

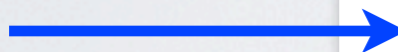
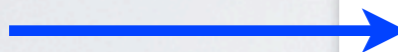
Assign to Program:

Key Words:

"Do Not Use" Reviewers:

Potential Reviewers:

Comments/Action: _____

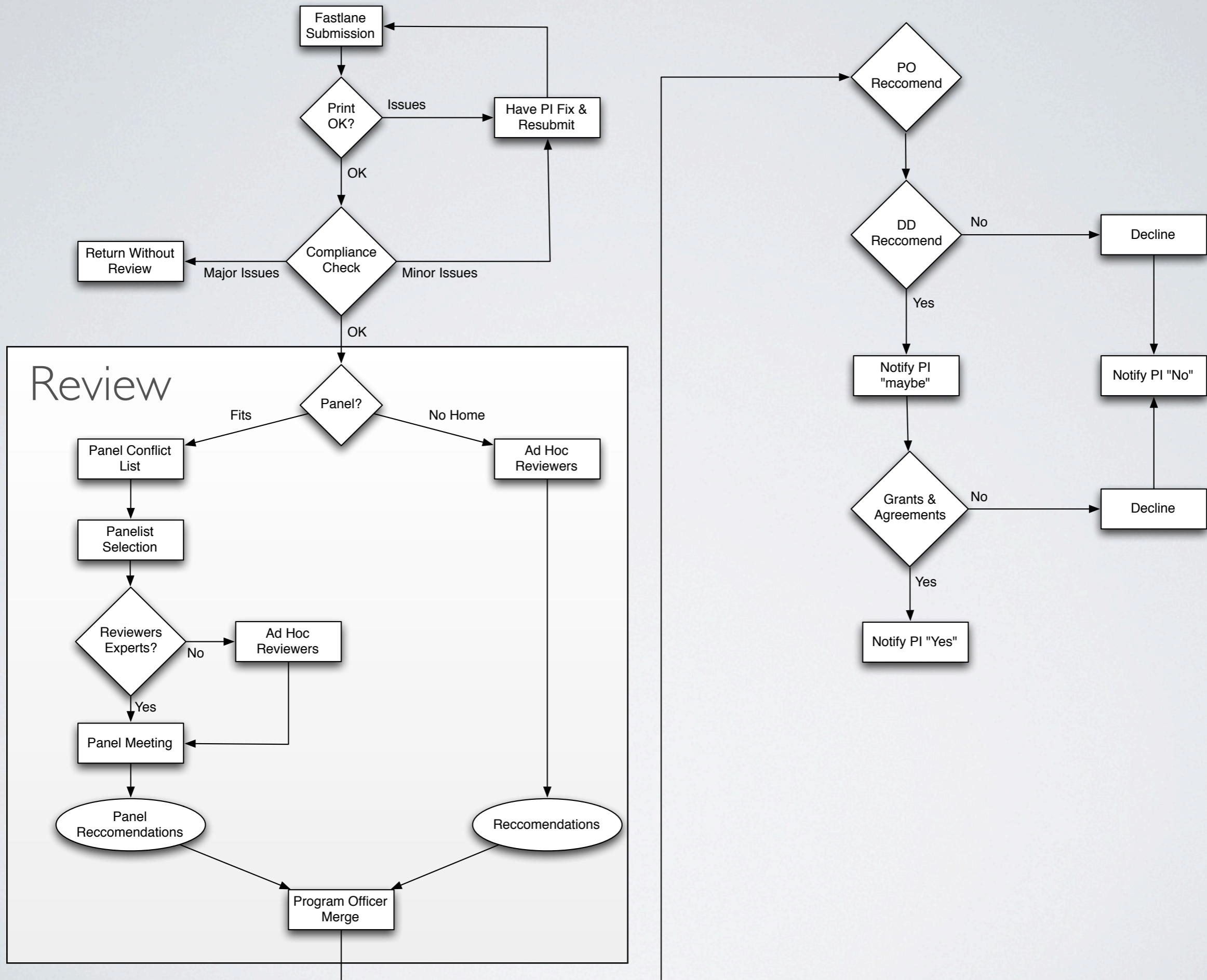


OBSERVATIONS

- Program Directors Have a Lot of Power in Funding Decisions
- Program Directors Have to Say “No” a Lot
- Program Directors do Not Necessarily Have Research Experience in All Areas of their Program
- Program Directors can be Pretty Busy
- Every Directorate is DIFFERENT in How They Do Things

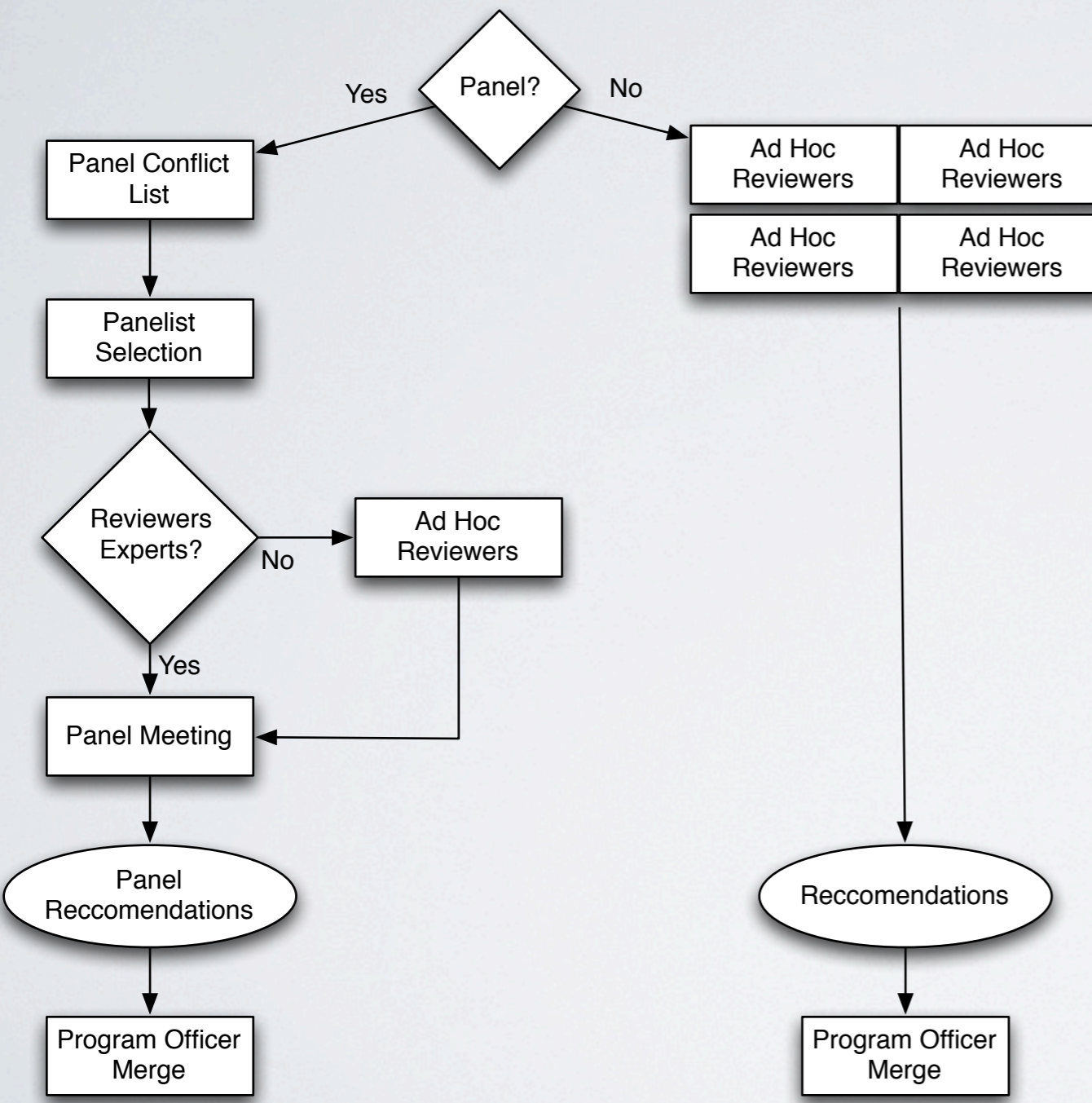
“It is important that all proposals conform to the instructions provided in the GPG. Conformance is required and will be strictly enforced unless an authorization to deviate from standard proposal preparation requirements has been approved. NSF **may** return without review proposals that are not consistent with these instructions. See GPG Chapter IV.B for additional information.”

GPG Chapter II.A



THE REVIEW PROCESS

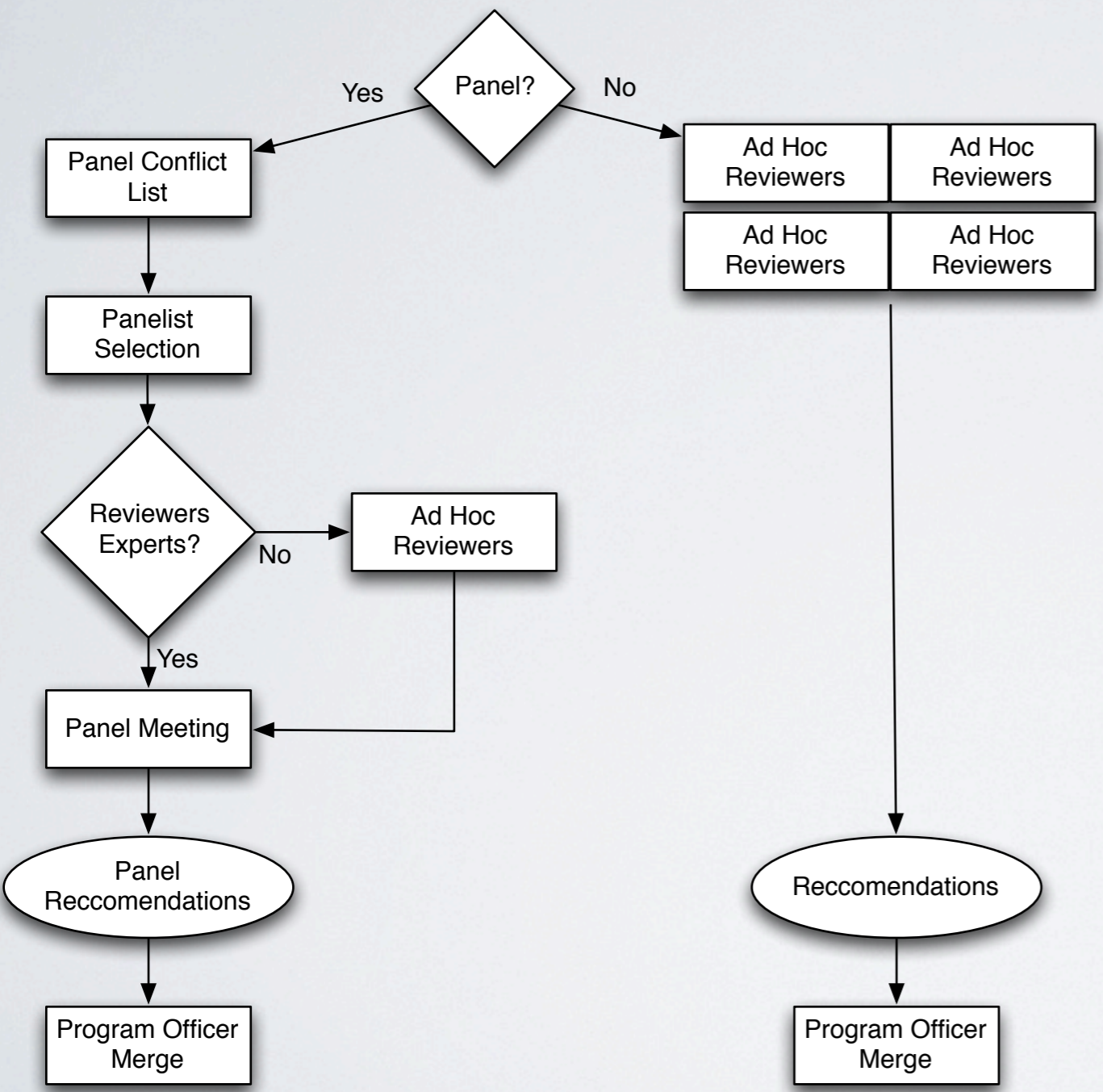
THINGS TO KNOW



- Suggest Reviewers!

THE REVIEW PROCESS

THINGS TO KNOW



- Suggest Reviewers!
- Panel or Mail (Ad Hoc)?
Different Audiences

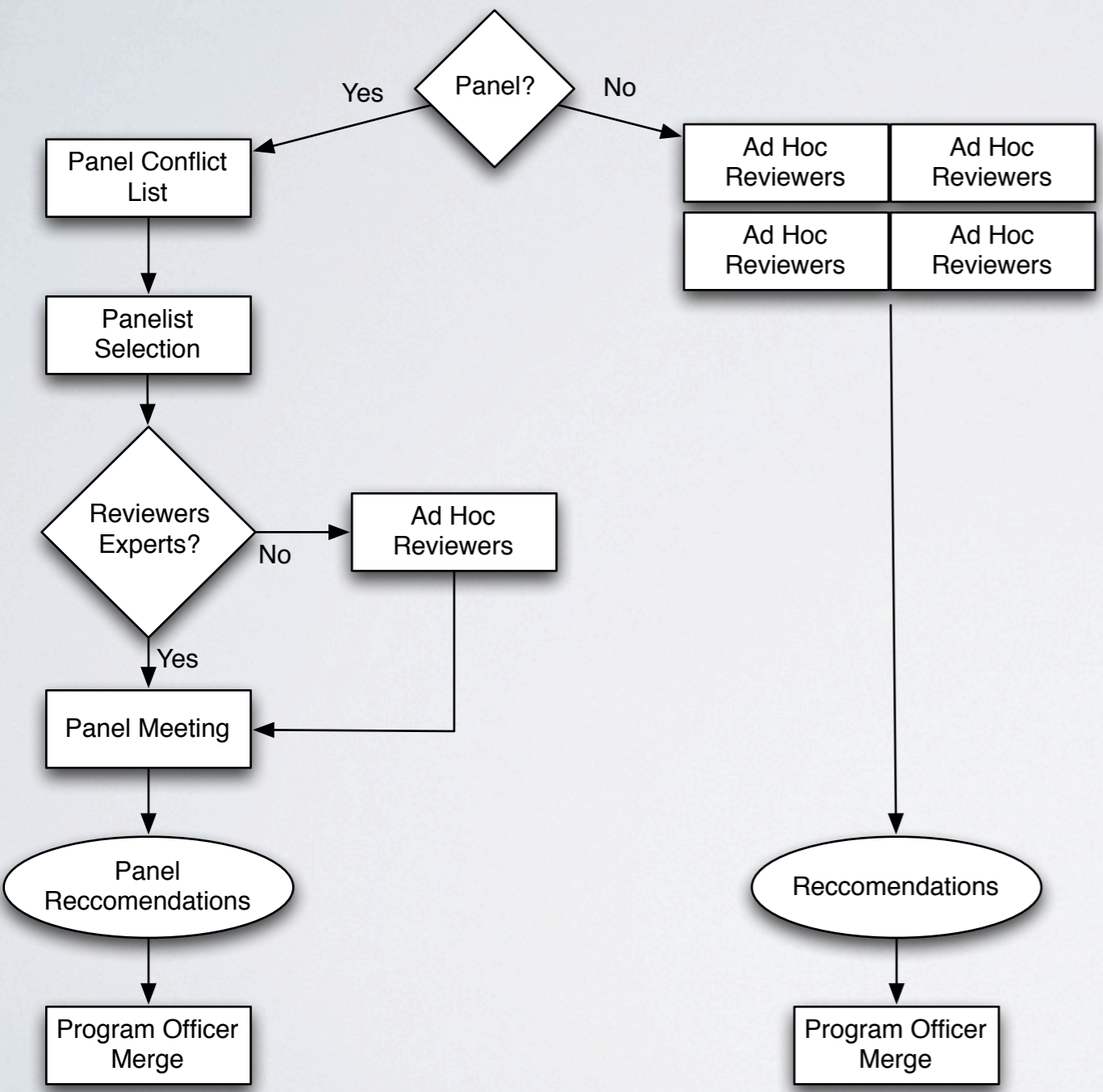
THE REVIEW PROCESS

THINGS TO KNOW

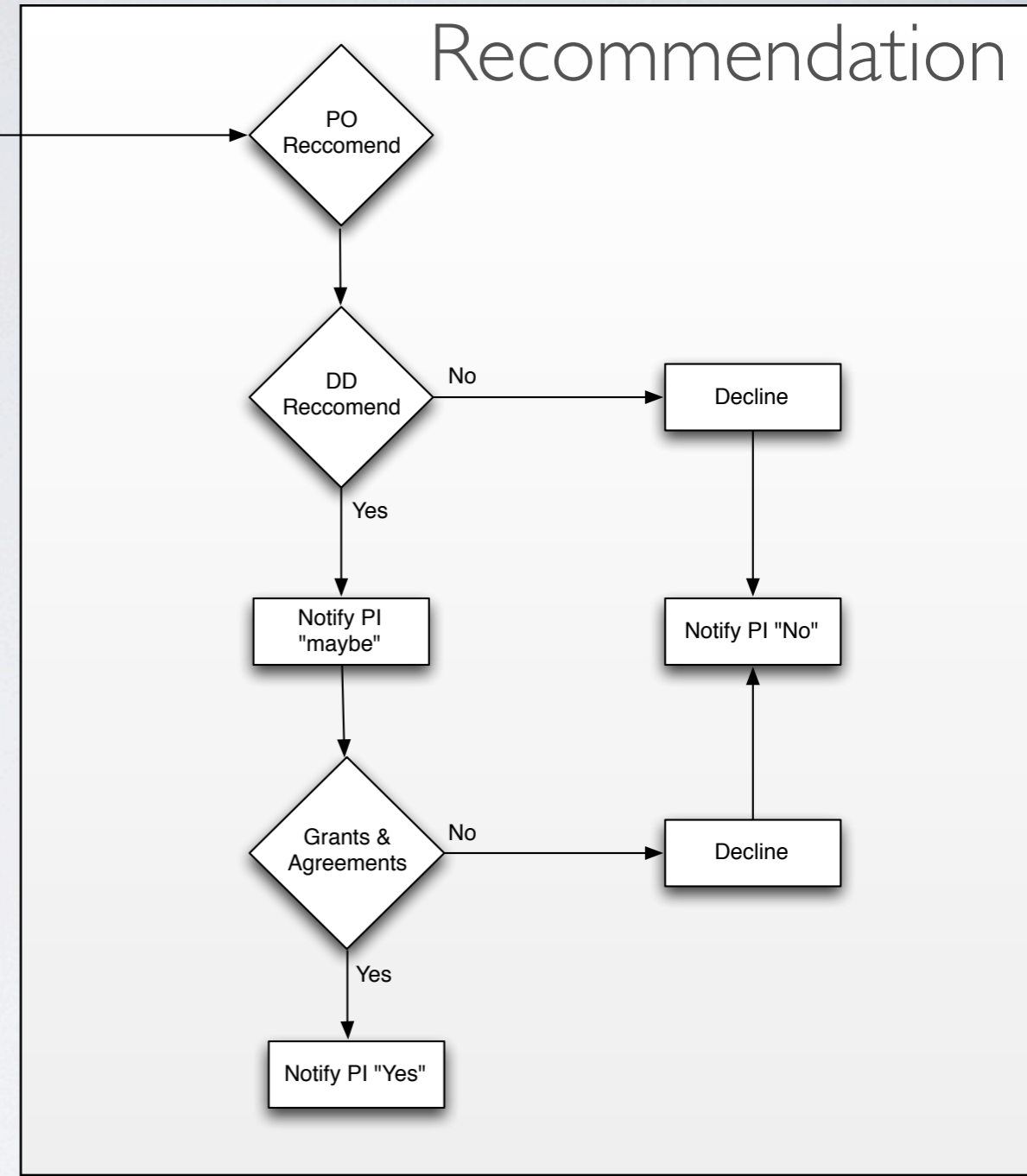
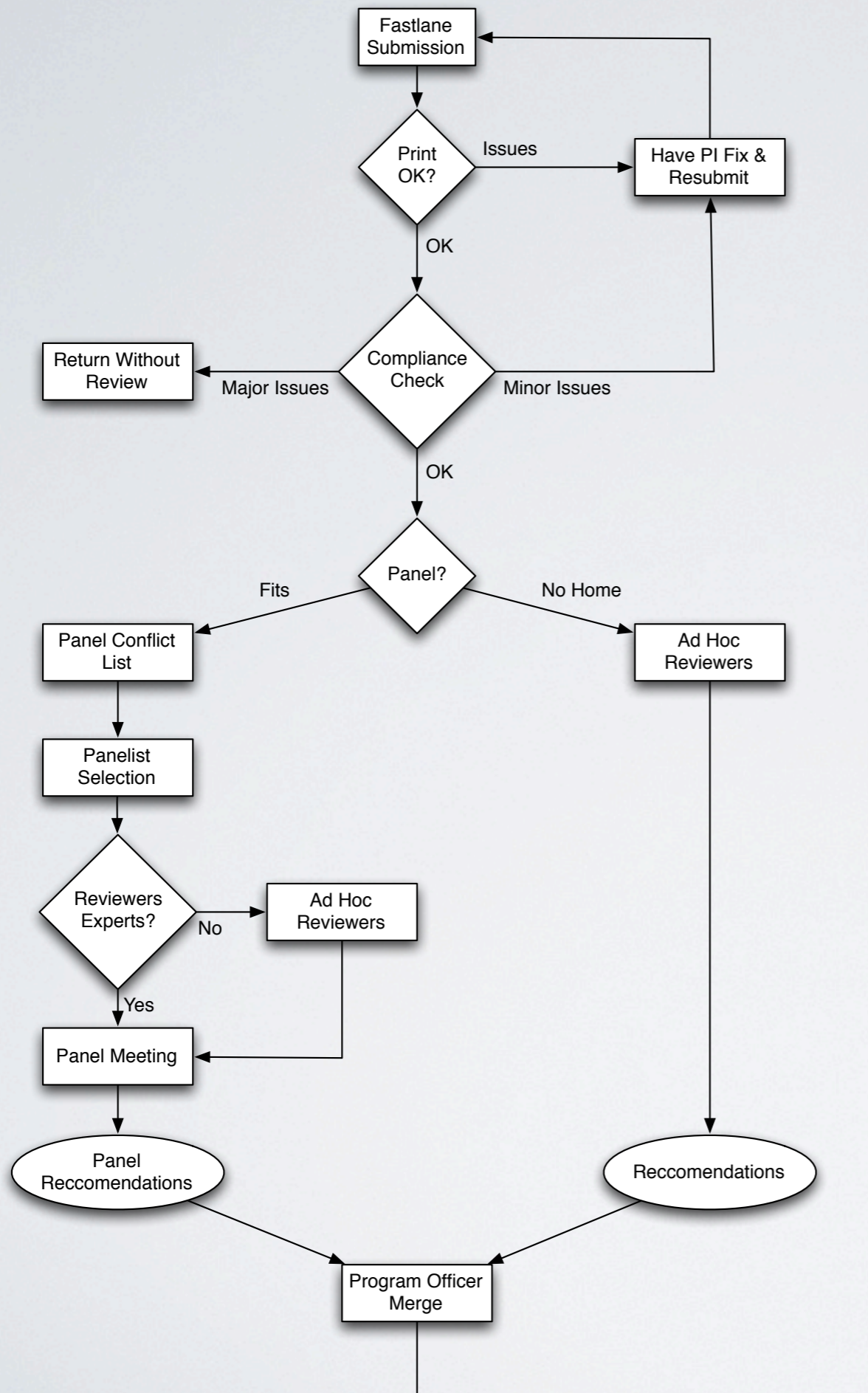
- Example: Stellar Astronomy & Astrophysics Panels (2008)
 - Exoplanets - their formation, evolution, and properties
 - Exoplanets - their detection and characterization
 - Neutron stars and pulsars
 - Interactions - cataclysmic variables, novae, compact object accretion, binaries, common envelope binaries
 - Stellar atmospheres, winds, and dust
 - Stellar interiors, evolution, and pulsation
 - Supernovae and their remnants

THE REVIEW PROCESS

THINGS TO KNOW

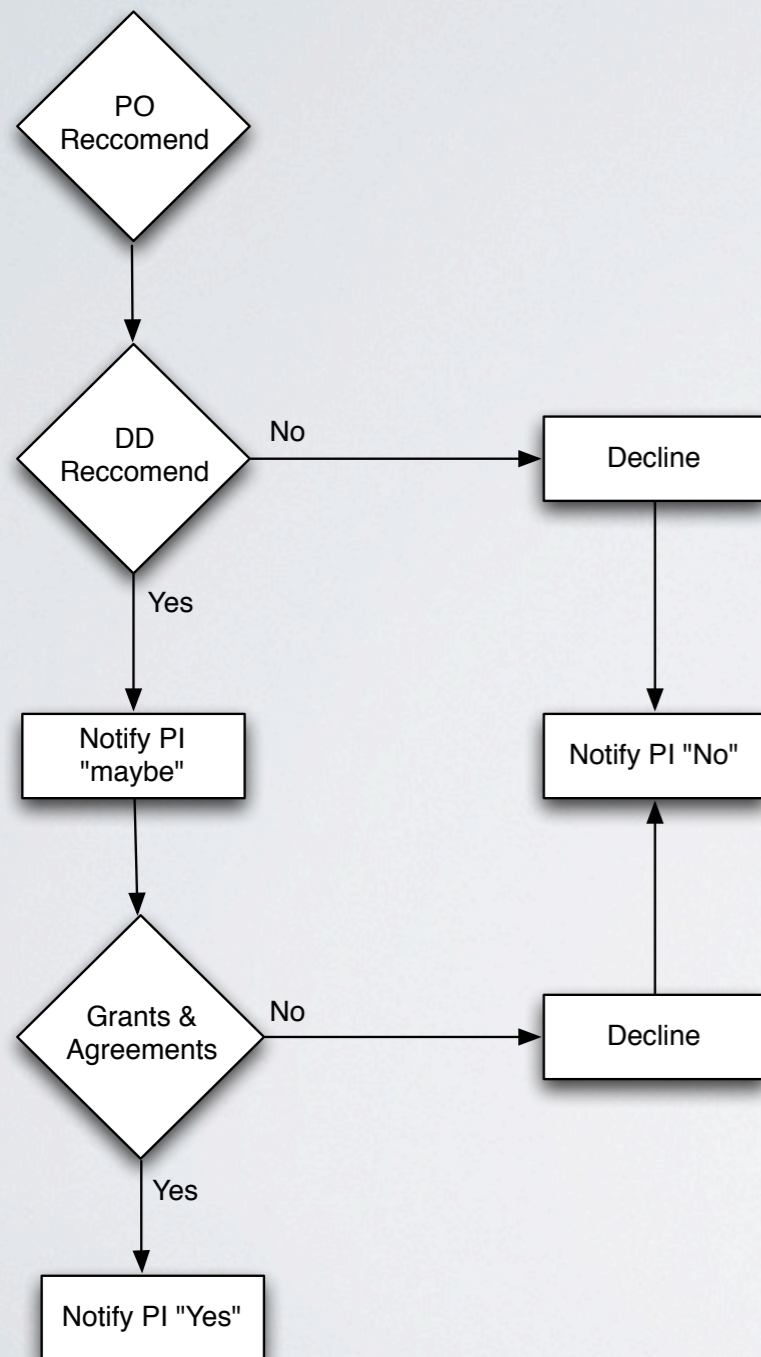


- Suggest Reviewers!
- Panel or Mail (Ad Hoc)?
Slightly Different Audiences
- Reviewer Rotation
Do you need to mention the previous submission?
 - Don't unless panelists will remember
 - Don't unless you have to



THE RECOMMENDATION PROCESS

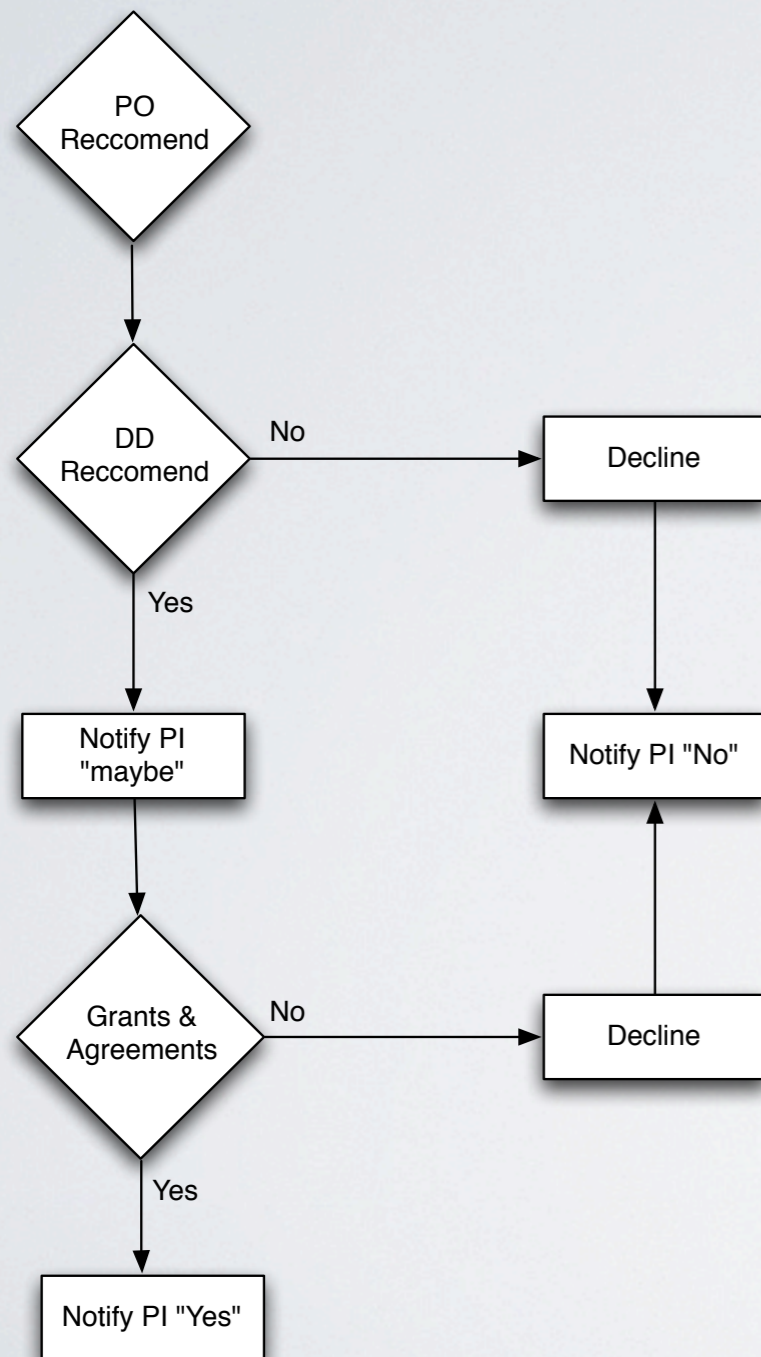
THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded

THE RECOMMENDATION PROCESS

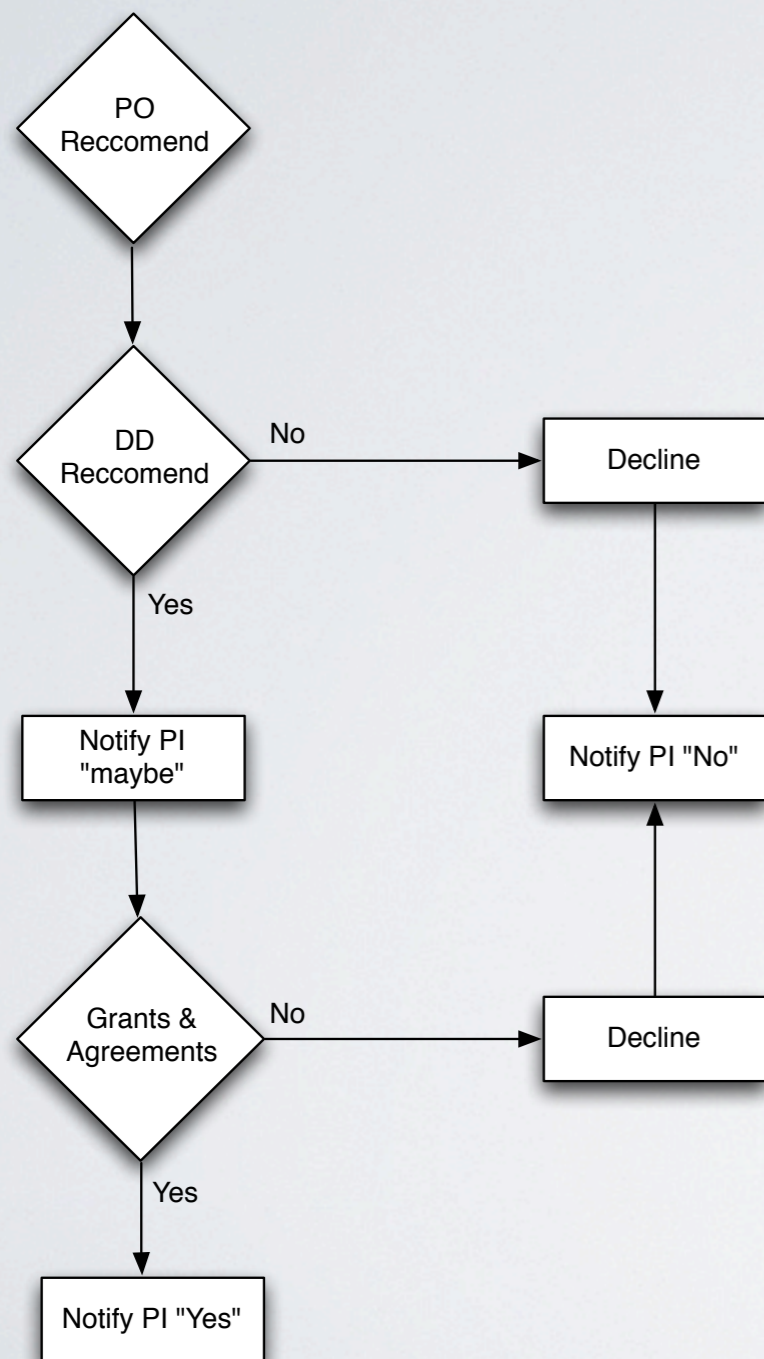
THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded
- POs often start with bottom 50% (decline) and top 10% (award)

THE RECOMMENDATION PROCESS

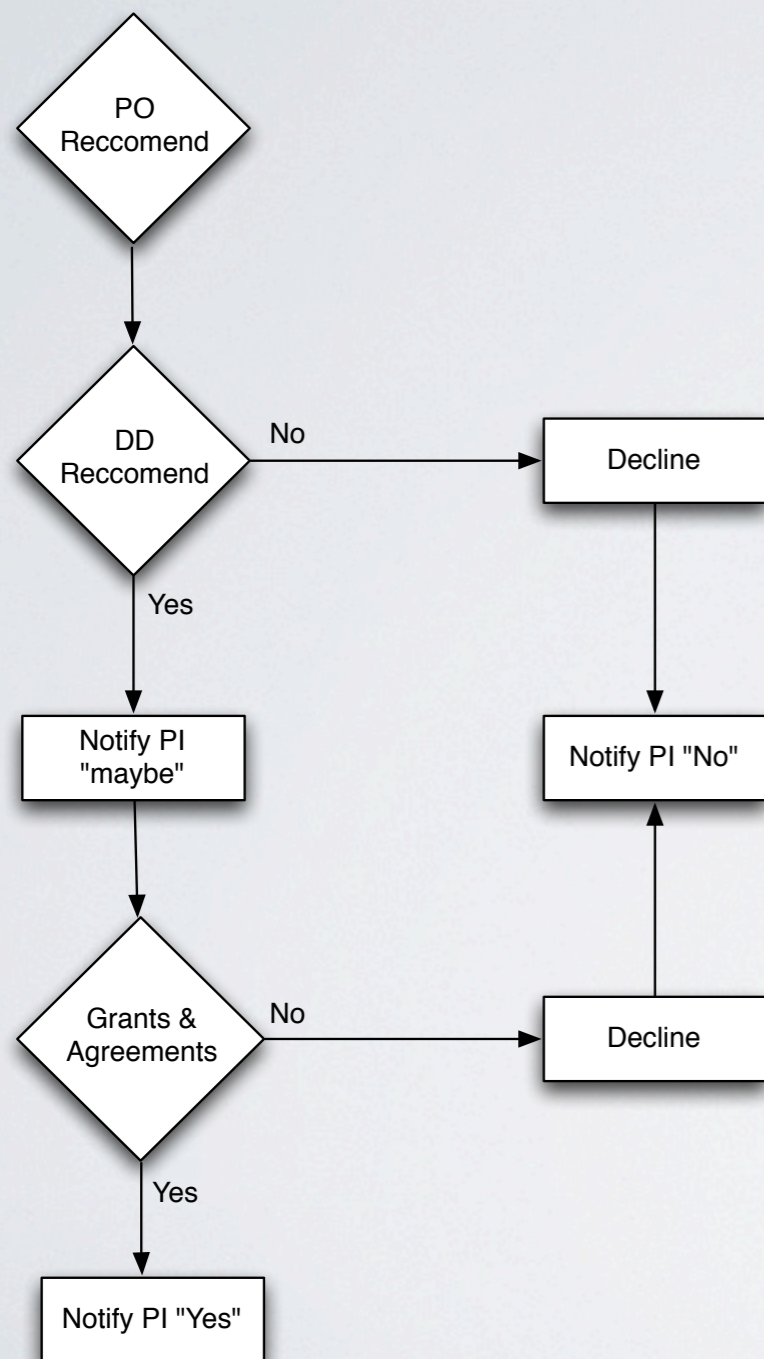
THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded
- POs often start with bottom 50% (decline) and top 10% (award)
- The closer to cutoff you get, the more important "other" aspects become

THE RECOMMENDATION PROCESS

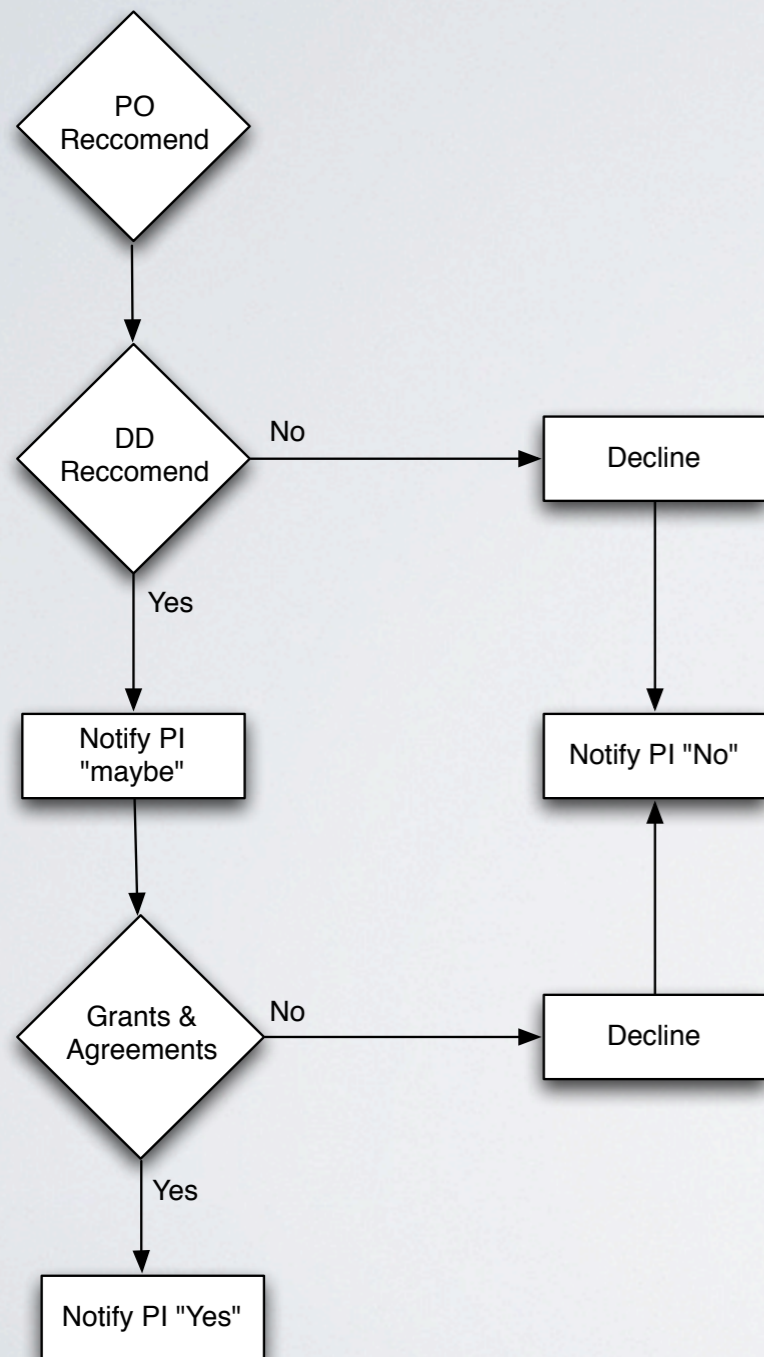
THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded
- POs often start with bottom 50% (decline) and top 10% (award)
- The closer to cutoff you get, the more important "other" aspects become
- A few held for end - try to be one

THE RECOMMENDATION PROCESS

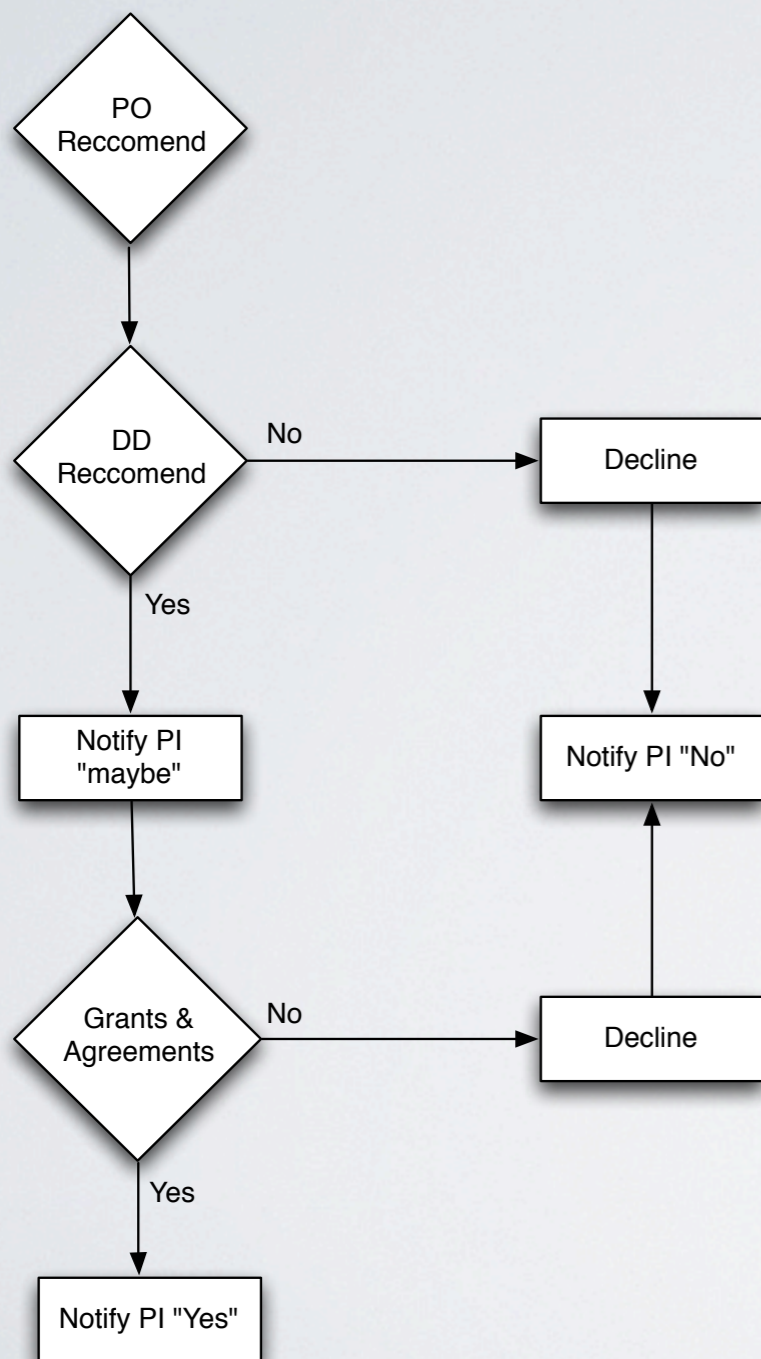
THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded
- POs often start with bottom 50% (decline) and top 10% (award)
- The closer to cutoff you get, the more important "other" aspects become
- A few held for end - try to be one
- Very rare for PO to be overridden

THE RECOMMENDATION PROCESS

THINGS TO KNOW



- Panels provide advice
You don't need all excellent to be funded
- POs often start with bottom 50% (decline) and top 10% (award)
- The closer to cutoff you get, the more important "other" aspects become
- A few held for end - try to be one
- Very rare for PO to be overridden
- There is an appeals process (kind of)

MORE STRATEGIES

- Submit to the Right Program
Talk to the Program Director to be sure

MORE STRATEGIES

- Submit to the Right Program
Talk to the Program Director to be sure
- If Interdisciplinary
Talk to the Program Director
Talk to the Other Program Directors - make sure they know
(And select other units on cover page if allowed)

MORE STRATEGIES

- Submit to the Right Program
Talk to the Program Director to be sure
- If Interdisciplinary
Talk to the Program Director
Talk to the Other Program Directors - make sure they know
(And select other units on cover page if allowed)
- Every Division is Different
Talk to the Program Officer

MORE STRATEGIES

- Submit to the Right Program
Talk to the Program Director to be sure
- If Interdisciplinary
Talk to the Program Director
Talk to the Other Program Directors - make sure they know
(And select other units on cover page if allowed)
- Every Division is Different
Talk to the Program Officer
- Things Change (even from last year)
Talk to the Program Officer

OTHER ADVICE

- Most projects are declined not because they are bad science.

OTHER ADVICE

- Most projects are declined not because they are bad science.
- Be sure to stress where work fits into the broader picture, especially if you can work in transformative nature of project.

OTHER ADVICE

- Most projects are declined not because they are bad science.
- Be sure to stress where work fits into the broader picture, especially if you can work in transformative nature of project.
- Reviewers are conservative - be sure they see the progress you'll make on an important science issue.

OTHER ADVICE

- Most projects are declined not because they are bad science.
- Be sure to stress where work fits into the broader picture, especially if you can work in transformative nature of project.
- Reviewers are conservative - be sure they see the progress you'll make on an important science issue.
- Broader impacts are broadly defined - they aren't just EPO. There is an opportunity for creativity here. And they do matter.

OTHER ADVICE

- Most projects are declined not because they are bad science.
- Be sure to stress where work fits into the broader picture, especially if you can work in transformative nature of project.
- Reviewers are conservative - be sure they see the progress you'll make on an important science issue.
- Broader impacts are broadly defined - they aren't just EPO. There is an opportunity for creativity here. And they do matter.
- Be sure to use RUI if you can.



NSF Proposals: How Not to Get Funded

NSF Division of Astronomical Sciences

Every year, the Division of Astronomical Sciences receives over 800 proposals. Of these, about 1 in 4 will be awarded. So, how do you write something that will review well? Just about anyone can give you advice on that... Here, we'll give you some tips on how to do poorly.

How Not to Get Funded: The Fast Path

The following Grant Proposal Guideline (GPG) violations are fatal. If you would like your proposal to be quickly returned unread with a note from your program officer telling you how sorry they are but that their hands are tied, do one of these:

Have more than a one page Project Summary

You are allowed one page at the beginning of the proposal to summarize the intellectual merits and broader impacts of your proposal. Anything longer than one page will get you turned down very fast.

Have more than 15 pages of Project Description

You are allowed 15 pages to talk about your project and the good things that will come of it. Anything longer than 15 pages and you'll be eligible to be on the very panel that would have been looking at your proposal.

Soon to be Fast Paths to Non-Funding

For reasons we do not understand, the next two items are left out of some proposals. While their absence is not fatal this year, that may change in the near future.

Don't include Results of Prior Support in the Project Description

Nobody wants to know if you or your co-PIs have received any NSF Support in the past five years. After all, your past record with NSF funding doesn't matter, and impressing the reviewers with the results from that work isn't going to improve your chances of being highly ranked. Really. We promise.

How Not to Get Funded: The Slow Path

If you'd like your proposal to go to review before not getting funded, try some of these!

Cram as much in the Project Description as possible

This is also known as "my project is so interesting, no one will mind..." or "Oh, rarely had the words poured from my penny pencil with such feverish fluidity..." There's nothing reviewers like more than rambling prose that isn't concise and to the point, so the more words you can use, the better. Along these lines, below are some tips for making room for all your prose.

Use the smallest possible font size

Most reviewers read proposals on their computers instead of printing them out. And the Acrobat Viewer has a zoom feature, so tiny type doesn't matter. Besides, picking up a proposal—out of a stack of 30 that need to be read before the meeting—and seeing all that tiny type makes a great first impression.

Use slightly smaller margins

If you need extra room, cheat the margins. Nobody will notice because they'll be distracted by all the words you're using. Really. Reviewers like this approach so much, it may soon join the Fast Track to Non-Funding.

Make the figures really small

A picture may be worth a thousand words, but why not use both? Legible axes and distinguishable markers for different data points are over rated. And again, Acrobat does have a zoom feature!

Leave out any discussion of Postdoc Mentoring

If you're including a postdoc, don't write about mentoring them in career planning, preparation of grant proposals, publications and presentations, ways to improve teaching, how to effectively collaborate with researchers, and training in responsible professional practices. This requirement was new in 2009, so no one will blame you for leaving it out. We'll just return the proposal.

No discussion of Broader Impacts in Your Project Summary (a.k.a. the #1 cause of returns)

You're submitting to the National Science Foundation, not the National Broader Impacts Foundation, right? It turns out these are taken very seriously, and if you don't include them in your summary, your proposal will be returned.

Leave out any discussion of Broader Impacts from the Project Description

Why give up precious space to talk about Broader Impacts, especially after you've devoted an entire paragraph to them in your Project Summary? After all, there are two review criteria (intellectual merit and broader impacts) - do you really need to worry about both of them? It turns out the answer is "yes, yes you do." Not only will the reviewers probably downgrade the proposal if Broader Impacts are missing, we may just send it back unread in the future.

Cut your proposal budget until you can't do the project

The resources you have to do the project are an important consideration. So a good way to make sure your proposal isn't successful is to come up with a budget that cuts things like page charges for publications, support for your time, travel to observatories (if you'll be observing), and money for the postdoc who will be helping wade through the code.

Cite papers that you really really expect to be in journals by the time your proposal is reviewed

Odds are you'll get to it. And what could go wrong? Especially if important parts are in the hands of collaborators.

Don't download the completed proposal to make sure it's OK

The odds of your uploading the wrong version of your Project Description is pretty low, right? Likewise, Fastlane never has any formatting errors. Ever. Trust the proposal will look exactly like what you expect it to.

Don't proof read

No one equates typos and other errors with being sloppy. And it's not like your trying to convince anyone you can carry out a complex project.

And remember, you don't need to put your work in context

The entire panel will be super-experts in the minutiae of your field (for example, there will be an entire panel devoted to the composition of NGC 104, right?), so it's OK to jump right in because the broader problems and longstanding questions that your work will address will be obvious to all.

And no matter what you do, don't talk to your Program Officer. They might offer advice, tips, or ideas for funding. It's also not a good idea to try to sit on some panels to get a feel for what successful proposals look like. Instead, listen what the person down the hall who got one 15 years ago has to say. Nothing has changed. Really.