ZIEGFELD AND ASSOCIATES

Proposal Development Workshop
©2017

For California State University

Dr. Richard Ziegfeld, CEO

Presentation Overview

- Workshop Goals
- Process Overview and Tips
    - Phase I—Make Application Decision
    - Phase II—Organize the Process
    - Phase III—Prepare Content
    - Phase IV—Write Content
    - Phase V—Review & Revise
    - Phase VI—Produce & Submit Proposal
    - Phase VII—Process Post-Submission
- Using the Proposal Template Tool (Included in the Workshop Document Package)

Workshop Goals

1. Provide a process framework (a tool)
2. Provide insights about what makes a proposal successful and how to accomplish that goal
3. Offer feedback about *your* project
4. Suggest next steps
5. Assist with developing a support network
6. Foster an interactive experience—feel free to ask questions

Top Ten Tips for Writing Winning Proposals

1. **Follow RFP outline slavishly—Make the evaluator's job easy:** *Nobody* has a better outline than the program officials whose program you target because score sheets follow the RFP outline; include an RFP cross reference after headings that addresses a) proposal contents outline and b) evaluation principles and criteria

   Have seen evaluators knock proposals off the table because they could not easily locate score-able items—especially if they perform a word search and the phrase is not present!

2. **Be responsive:**

   - Indicate a) what challenges the project will involve, how to avoid them, and how to ameliorate them if they materialize and b) how you will perform tasks; do not simply regurgitate requirements
   - Demonstrate *how* your project supports objectives and goals
   - Where feasible, include collaborative work and members of under-represented groups

3. **Limit discriminator lists to 3-7 critical items:** Provide 3-7 succinct statements with precise data on why your solution/team are best qualified and tell evaluators where you will elaborate on them in the proposal

4. **Demonstrate strong management:** Indicate that your team is technically outstanding, but it is also critical to demonstrate you have experienced management and have the ability to act as a team

5. **Fill proposal roles and provide sound processes:** Proposal team members may assume multiple roles but assign all roles: PI, proposal manager, writer, SME, reviewer, editor, artist, desktop specialist, and budget lead; have a clear process guide that spells out steps/responsibilities and provides means to deliver good reviews

6. **Make it a marketing document:** Many writers focus on offering a tech solution that a journal editor would publish, when evaluators really want evidence your project is do-able and the team can perform effectively

7. **Write to a general audience:** Evaluation teams often have reviewers who are not current in your specialty (e.g., program officers, senior administrators, experts from other fields), so write in clear, concise prose free of jargon

8. **Develop a thorough basis-of-estimate for the budget:** Start early—Requires interaction among numerous groups such as technical, management, administrators, partners, and outside vendors to create estimates:
   - Roles including consultants, level of effort, duration, labor rates, and overhead
   - Bill of materials—equipment, software, tools, licenses
   - Miscellaneous budget elements—travel, external services, and security

9. **Demonstrate past-performance quality:** Focus on how past work relates to target program project description items for size, scope, complexity, and accomplishments (quality)—Focus on *your work quality* and not just *what* you did

   Size: a) project dollar value and b) number of Full-Time Equivalents

   Scope
   - Explain how project tasks that relate directly to RFP or SOW requirements
   - Users are of the same as or similar to those that the RFP involves

   Complexity
   - Number and type of locations—domestic sites; foreign cultures and languages involved
   - Number of clients, teaming partners, client organizations, or integrated product team members
   - Number of elements in technical solution—e.g., lines of code, pieces of equipment, phases
   - Number of key personnel employed—pre-award designation of key personnel
   - Security: # and level of security clearances required; security facility and storage requirements
   - Technical sophistication of product, service, or solution
   - Challenges bred of working uncharted territory—new process, technology, organization
   - Standards/frameworks employed—CMMI, Earned Value Management, ISO, ITIL, PMP

   Accomplishment types
   - Innovations and improvements
   - Problems averted or solved
   - Milestones/goals exceeded—Budget, management, quality, schedule, deliverables, closeout
   - Benefits/value to client

10. **Tailor resumes to the project:** Because each project is unique, tailor resumes to specific project tasks and indicate clearly *where* and *how* the individual's accomplishments match project tasks

60-Day Proposal Process—a Tool

No Single Process

- Specious to argue that one process is *the* way to proceed
- Critical—Have a process (a tool) that keeps you focused and on-schedule

Keys

- **3 parallel "swim" lanes**—Involve collaboration and team work
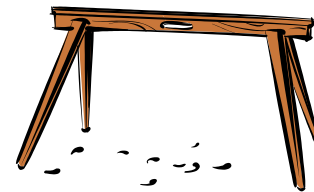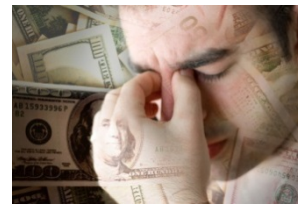- Proposal development
- Input
- Review

Phases and Proportion

- Planning—1/3
- Writing—1/3
- Review and polish—1/3

"I Don't Know What I'm Building, Dad, But I'm Behind So I Started Construction Anyway"

Department Chair; Dean; SRO

Principal Investigator
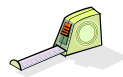
Managing a Proposal Project

I	II	III	IV	V	VI
Decide to Apply (1-3)	Organize Process (4-8)	Prepare Content (9-16)	Write Content (17-20)	Review & Refine (21-37)	Produce Proposal (38-40)

Process Post-Submission (41-42)

VII
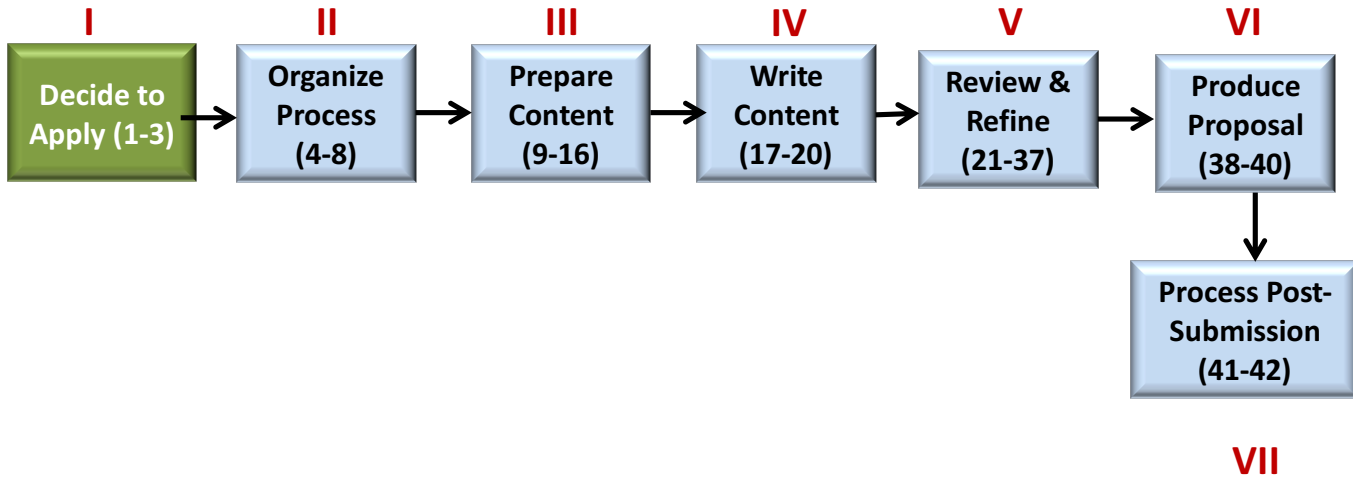
Step Guide on Proposal Development Process

Step Work   **Role(s) Involved: O=Owner; C=Contributors--as needed/available**

I. Make Decision—30% of time on Stages I, II, III

1. Review proposal opportunity & support docs — O—PI; C—Mentors

2. Contact critical officials for feedback — O—PI; C—Program Officer; mentors; O—Campus Sponsored Research Office (SRO) and Campus officials

3. Decide whether to apply — O—PI

II. Organize Process

4. Review requirements, gather data, identify gaps — O—PI; C—Colleagues & mentors

5. Set schedule — O—PI; C—Department Chair

6. Do initial budget estimate & level of effort — O—PI; C—Department Chair; equipment OEMs; service suppliers

7. Determine required submission method — O—PI; C—Colleagues; Campus Sponsored Research Office (SRO); Program Officer

8. Hold kickoff/strategy session — O—PI; C—Any roles that PI cannot fill

III. Prepare Content

9. Review known/assumed requirements — O—PI; C—Colleagues

10. Conduct literature review; collect data from all sources — O—PI; C—Colleagues; CSU boilerplate library; mentors

11. Ask Program Officer or SRO about any questions — O—PI; C—Program official; SRO

12. From template, draft outline—tech, outreach, career — O—PI; C—Colleagues

13. Review outline — O—PI; C—Colleagues

14. Identify gaps—data, expertise, facilities, equipment — O—PI; C—Colleagues; mentors; Department Chair

15. Request department support letter — O—PI

16. Fill gaps; revise plan based on how well PI filled gaps — O—PI; C—Colleagues & mentors

IV. Write—40% of time

17. Write draft text: project plan, bio, & 2nd budget estimate — O—PI; C—Colleagues & mentors

18. Create draft art — O—PI; C—Graphic artist

19. Polish draft for review — O—PI; C—Colleagues; desktop specialist

20. Draft department letter — O—Department Chair

V. Review & Revise—30% of time for Stages V

21. Refine content for draft — O—PI

22. Review draft; supply feedback to PI — O—Reviewers

23. Incorporate review suggestions; revise text & art — O—PI; C—Graphic artist

24. Set final budget; adjust plan based on budget issues — O—PI; C—Colleagues & mentors

25. Do final content QA check & fixes — O—PI; C—Colleagues & mentors

26. Determine if department letter needs revisions; request — O—PI

27. If department letter needs revisions, obtain them — O—PI & Department Chair

28. Create final version — O—PI; C—Desktop specialist

29. Do a test run in submission tool if it is not email — O—PI

VI. Produce

30. Produce package — O—PI; C—Desktop specialist

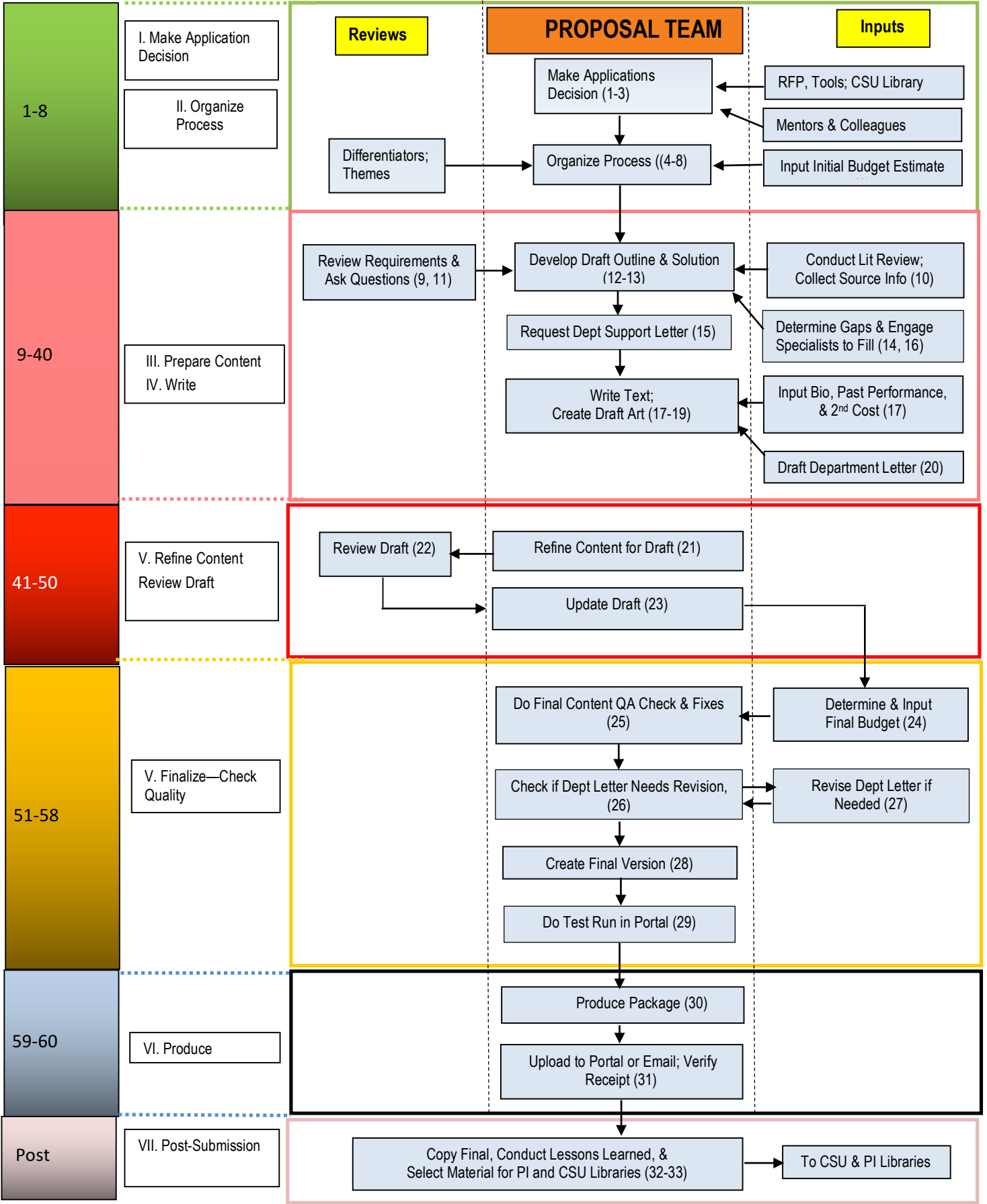**31.** Upload to online tool or email — O—PI; C—SRO; colleague ("buddy system"—for successful, timely upload)

VII. Process Post-Submission

32. Conduct lessons learned session — O—PI; C—All people who contributed to the process

33. Select /enter material for CSU and PI's libraries — O—PI

Proposal Step Guide

Day # in Process	Major Process Phases	Major Steps in the Process—Number in Parentheses = Step in Text Version of Process

Reviews   **PROPOSAL TEAM**   **Inputs**

1-8

I. Make Application Decision

II. Organize Process

- Make Applications Decision (1-3)
  - RFP, Tools; CSU Library
  - Mentors & Colleagues
- Differentiators; Themes
- Organize Process ((4-8)
  - Input Initial Budget Estimate

9-40

III. Prepare Content
IV. Write

- Review Requirements & Ask Questions (9, 11)
- Develop Draft Outline & Solution (12-13)
  - Conduct Lit Review; Collect Source Info (10)
- Request Dept Support Letter (15)
  - Determine Gaps & Engage Specialists to Fill (14, 16)
- Write Text; Create Draft Art (17-19)
  - Input Bio, Past Performance, & 2nd Cost (17)
  - Draft Department Letter (20)

41-50

V. Refine Content
Review Draft

- Review Draft (22)
- Refine Content for Draft (21)
- Update Draft (23)

51-58

V. Finalize—Check Quality

- Do Final Content QA Check & Fixes (25)
  - Determine & Input Final Budget (24)
- Check if Dept Letter Needs Revision, (26)
  - Revise Dept Letter if Needed (27)
- Create Final Version (28)
- Do Test Run in Portal (29)

59-60

VI. Produce

- Produce Package (30)
- Upload to Portal or Email; Verify Receipt (31)

Post

VII. Post-Submission

- Copy Final, Conduct Lessons Learned, & Select Material for PI and CSU Libraries (32-33)
  - To CSU & PI Libraries

Phase 1. Make an Application Decision: Steps 1-3

Step Work   **Role(s): O=Owner; C=Contributors**

I. Make Decision—30% of Time on Stages I, II, III

1. Review proposal opportunity & support docs   O—PI; C—Mentors

2. Contact critical officials for feedback   O—PI; C—Program Officer; mentors; Campus SRO; Campus officials such as AVP

3. Decide whether to apply   O—PI

Phase I: Steps 1-3—Visual

Day # in Process Major Process Phases   Major Steps in the Process—Number in Parentheses = Step in Text Version of Process
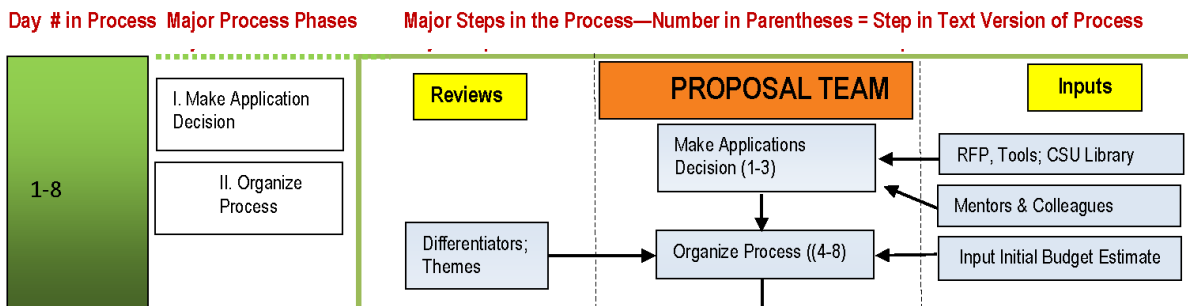
Tips for Steps 1-2

- **Carefully Read RFP:** Both content outline *and* evaluation criteria
- **Review Support Documents**
  - **STEM Track such as NSF CAREER Program**
    - *Grant Proposal Guide*
    - *Guide for the Preparation and Submission of NSF Applications*
    - NSF Strategic Plan, 2014-2018—see program specialties, pp. 20-29
    - Portal guide if target program provides one
  - **Non-STEM Track such as ACLS**
    - *Collaborative Research Fellowship Sample Application*
    - *Writing Proposals for ACLS Fellowship Competitions*
    - *Sample Budget*
- **Explore Submission Portals:** Check portal guide if target program provides one—Loss because Portal Was Challenging
- **Obtain Copies of Winning proposals in your field;** talk with winners; see proposal examples and sample reviewer comments in the support package
- **Ask for Input** from program official in program in which you will submit and from SRO—Obtain feedback that can help shape the proposal; example: SRO meeting federal department /agency officials to gain insight and to promote CSU
- **Research the Literature** in your field—ensure you cite the most critical items
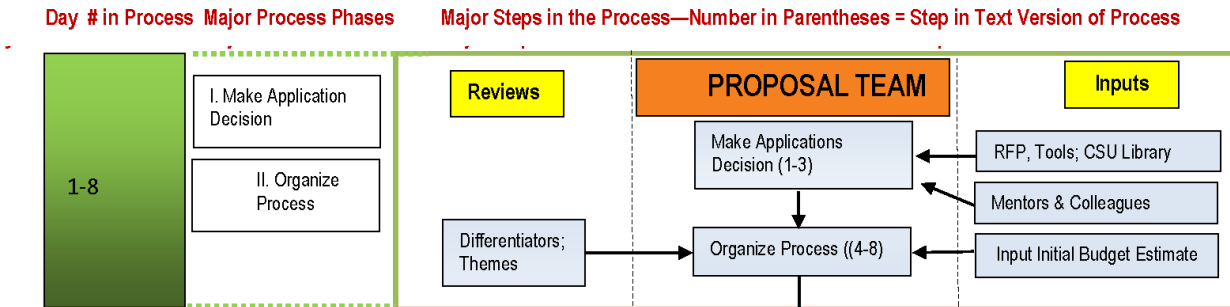
Tips for Step 3

Questions to Consider Before Deciding to Apply

- Do you have grant experience/publications that your target program will take seriously?
- Do mentors and colleagues believe you have a significant, do-able project?
- Do you have a project that fits within the target program strategic plan?
- Does your program official consider your idea meritorious?
- Does your institution support your project—department, college, provost, and SRO?
- Do you have time (50-150 or more hours) to write a winning proposal?

Phase II. Organize Process: Steps 4-8

Step Work	Role(s)
II. Organize Process	
4. Review requirements, gather data, identify gaps	O—PI; C—Colleagues & mentors
5. Set schedule	O—PI; C—Department Chair
6. Do initial budget estimate & level of effort	O—PI; C—Department Chair; equipment OEMs; service suppliers
7. Determine required submission method	O—PI; C—Colleagues; Campus SRO; Program Officer
8. Hold kickoff/strategy session	O—PI; C—Any roles that PI cannot fill

Steps 4-8—Visual

Tips for Steps 4-8: Organize Process

- Use proposal checklist that cites all required documents
- Using enclosed template, outline three elements—Technical, outreach, career goals
- Technical is critical but do not neglect other topics that some RFPs require such as outreach and career goals because evaluators also score these elements
- Allocate page counts and follow page counts and limits:
  Drafts that arrive significantly over the page count require significant revision time: I am an expert at tightening to meet page limits and I need 30-60 minutes to trim each page that is over the limit
- Establish realistic schedule with intermediate due dates—Allow sufficient time to 1) let the proposal evolve organically and to work with the SRO
- Organize materials: Literature review results; data from all sources; concepts/themes; differentiators
- Establish a relationship with the SRO—visit early and often; this office can help you!

PI's Role

Overview—PI's Role: Directs whole proposal project—Technical, management, budget
- Participates in strategy decisions
- Establishes and maintains contact with SRO
- Tracks elements, controls schedule, & maintains compliance with RFP
- Makes role assignments if you need help
- Guides writing, reviews, and production
- Reviews drafts to ensure completeness
- Handles queries & resolves differences among groups if they arise
- Oversees production and ensures timely delivery of product

Roles to Fill

Determine Expertise You Need—Subject experts; non-tech specialists; trades

Fill All Roles: Someone must fill these seven roles, so assess your abilities and if you cannot *effectively* fill all roles, recruit people who can

> *Most winning proposals involve teamwork—even for "solo" PIs—so be willing to request help if you need it.*

- **Mentors/Colleagues:** People who "have your back" and want to see you succeed
- **SRO:** Helps you understand what institutional research support exists
- **Proposal Manager:** Leads proposal development
- **Writer:** Drafts responses that show understanding and insight about the RFP
- **Reviewers:** Two types—domain expert; proposal/writing expert; both offer meaningful ideas on how to improve content
- **Graphic Artist/Desktop Specialists:** Creates effective visuals; refine look-and- feel
- **Editor:** Refines the writing

Role Details

Role	Duties
Mentor or colleague	**Guides your career and/or supports you** • Refines your solution • Provides strategic insight on the program you target • Provides tips on winning a grant in the program you target • Helps obtain institutional sign off on proposal
Proposal Manager	**Directs overall effort; focuses on strategic (big picture)** • Establishes strategy (approach, outline) & guides process • Finds people to fill other roles and handles questions • Leads formal review teams; incorporates comments • Ensures timely delivery of product
Writer	**Develops content** • Helps shape outline & elicit source data; prepare content • Revises after reviews
Review Team	**Reviews content for quality & accuracy—details in review package** • Offers insight on funder, competitors, solution • Identifies overlap, missing items, means to strengthen • Assesses compliance, responsiveness to RFP & funder needs/goals, flow, quality of argument
Editor	**Quality assurance** • Ensures complete, consistent, good prose, single style • Handles language, grammar, and punctuation
Desktop Publishing	**Creates integrated electronic product** • Creates effective visuals • Prepares inputs (transport, translate, scan) • Lays out and handles format (including styles)
SRO	**Assists you with understanding what institutional research support exists** • Alerts you to deadlines and compliance requirements • Indicates support it can offer, including mentoring workshops such as this one

Organize Process

- Use proposal checklist that cites all required documents
- Using enclosed template, outline three elements—technical, outreach, career goals
- Technical is critical but do not neglect other topics that some RFPs require such as outreach and career goals because evaluators also score these elements
- Allocate page counts and follow page counts and limits
- Establish realistic schedule with intermediate due dates—Allow sufficient time to let the proposal evolve organically
- Organize materials such as literature review results; data from all sources; concepts/themes; differentiators
- Establish a relationship with the SRO—visit early and often; this often can help you!

# Phase III. Prepare Content: Steps 9-16

Step Work   **Role(s)**

III. Prepare Content

9. Review known/assumed requirements   O—PI; C—Colleagues

10. Conduct literature review; collect data   O—PI; C—Colleagues; CSU library; mentors

11. Ask Program Officer and SRO about any questions   O—PI; C—Program official; SRO

12. From template, draft outline—tech, outreach, career   O—PI; C—Colleagues

13. Review outline   O—PI; C—Colleagues

14. Identify gaps—data, expertise, facilities, equipment   O—PI; C—Colleagues; mentors; Dept Chair

15. Request department and institutional support letters   O—PI

16. Fill gaps; revise plan based on how well PI filled gaps   O—PI; C—Colleagues & mentors

Steps 9-16—Visual
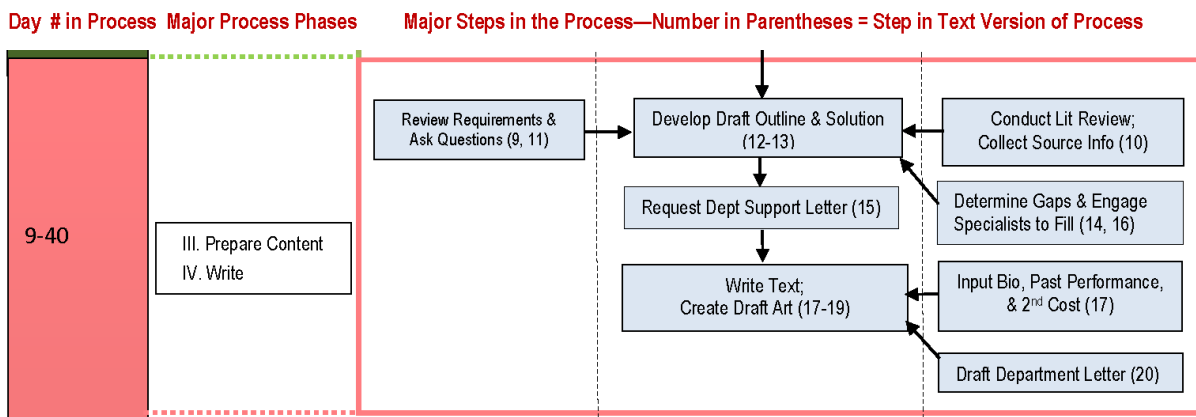
Tips for Steps 9-16: Model Differentiators

10-Minute Exercise

1. Proposal writers provide titles with original packages before the event
2. Workshop leader selects three titles to discuss and sends those titles to all participants before the event
3. Plenary participants offer observations and suggestions
4. Writers revise title before initial consultation

Differentiators Defined

- What makes your approach unusual or unique
- Phrased in specific terms that may include quantitative elements
- Develop 8-20 differentiators initially but cull the list to the best 3-7

Example 1—STEM: Computational Complexity of Halfspace-Based Learning

Understanding: Algorithms for learning to classify data have important applications in almost every area of computer science: e.g., data mining, computer vision, compiler design, operating system design, speech recognition, computational biology, computational game theory and neuroscience, and traditional algorithm design. A common, simplifying assumption in learning theory is that we can classify labeled data by a halfspace in many dimensions. Several of the most important learning algorithms in the past 30 years—as Perceptron, Winnow, Boosting, and Support Vector Machines—make critical use of a provably efficient algorithm for learning a single halfspace.

Given the ubiquity of halfspace-based learning methods, it is important to understand the computational complexity of the most fundamental halfspace-based learning tasks. This proposal addresses several basic questions about halfspace-based learning that remain unsolved despite three decades of research:

Differentiator: Our work focuses on these three questions:

1. Can we develop algorithms for learning a halfspace in the presence of noise?
2. Can we efficiently learn intersections of halfspaces?
3. What hardness results can we prove for learning halfspace-based concept classes?

Example 2—Non-STEM: Why Regional Parties

Understanding: This project explains the emergence/success of regional political parties in India. It first advances a general argument about party systems under conditions of clientelism—individualized and discretionary allocation of goods, services, and state capacity. Under clientelism, voters are relatively indifferent to the type of party for which they vote, so long as the party provides benefits. Hence, elites determine whether parties to which they belong—and which win votes through clientelistic means—are regional or national. Thus, when trying to understand party systems in clientelistic democracies, one must focus on preferences/calculations of elites, particularly as they consider how to further their political careers.

Differentiators:

I apply the general argument to the question of regional parties explaining:

1. Why regional parties in India are more successful than in most other countries
2. Why India's regional parties became more successful in the 1990s
3. Why regional parties are more successful in some Indian states than in others

15-Minute Exercise

1. Participants draft two differentiators before the event
2. Workshop leader selects three differentiators to discuss and sends those differentiators to participants before the event
3. Plenary participants offer observations and suggestions
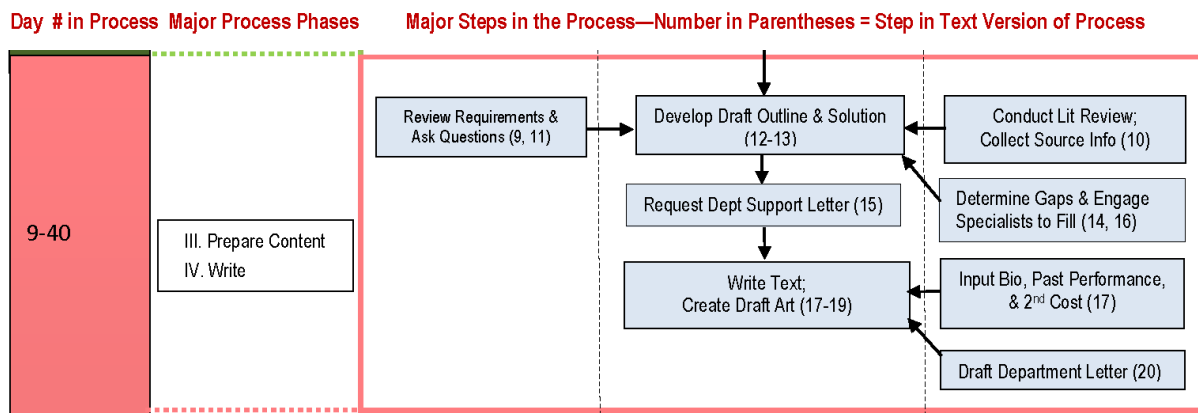4. Writers revise title before initial consultation

Phase IV. Write: Steps 17-20

Step Work   **Role(s)**

IV. Write—40% of time

17. Write draft text: project plan, bio, & 2ⁿᵈ budget estimate   O—PI; C—Colleagues & mentors
18. Create draft art   O—PI; C—Graphic artist
19. Polish draft for review   O—PI; C—Colleagues; desktop specialist
20. Draft department letter   O—Department Chair

Steps 17-20—Visual

Day # in Process Major Process Phases   Major Steps in the Process—Number in Parentheses = Step in Text Version of Process

Day #	Major Process Phases	Major Steps in the Process
9-40	III. Prepare Content IV. Write	Review Requirements & Ask Questions (9, 11) → Develop Draft Outline & Solution (12-13) ← Conduct Lit Review; Collect Source Info (10) Request Dept Support Letter (15) ← Determine Gaps & Engage Specialists to Fill (14, 16) Write Text; Create Draft Art (17-19) ← Input Bio, Past Performance, & 2ⁿᵈ Cost (17) Draft Department Letter (20)

Tips for Steps 17-20: Key Elements

- **Idea:** Offer an idea with intellectual merit and broad impact that poses questions about a significant challenge and then explain how you will address the challenge

- **Work Plan:** Cite phases, steps, due dates, deliverables, and responsible person

- **Biographical Sketch:** Demonstrate you can accomplish project tasks and instill confidence in your abilities

  - **Letters of Reference:** Reduce evaluator risk concerns—show that established experts deem your work worth funding: concerns—Show that established domain experts deem your work worth funding: For solo or small-group grants such as NSF or ACLS

- **Past Performance Citations:** Reduce evaluator's risk concerns—show that your team has already done similar work: For team efforts submitted to departments such as Energy or DoD

Show Understanding

Show Mastery of Your Discipline and Project—Use the List of 18 Options to Brainstorm What Topics May Apply to Your Project

1. Availability/cost of training

2. Availability of items needed—Speed, technique, capability

3. Challenges that make this project difficult

4. Changing trends in the field

5. Compatibility with existing equipment/systems

6. Confidentiality/security issues inherent in your project that you address

7. Costs—initial and/or life-cycle

8. Flexibility/adaptability that will surmount challenges

9. Knowledge of local issues

10. Labor needed—Experience level, hours, roles, skills

11. Legal/regulatory compliance

12. Organizational experience & quality of past performance

13. Personnel qualifications

14. Productivity or quality improvements you offer

15. Risk and steps you take to avoid them

16. Site/location experience

17. Support—maintenance, service, reliability, maintainability

18. Technology commitment

Good Letters of Reference

First Things First:

1. Have you asked referees if they are comfortable rating your work "exceptional"?
2. Is the work the referee knows similar to your current project?

If Your Answer to #1 or #2 is "No", Do Not Use This Reference

If You Answer "Yes" on #1 and #2, Send the Referee a Data Sheet or Offer to Draft the Letter for the Referee:

- Project data
- Connections between work the referee knows and the current project
- Project description
- Work performed
- Size, scope, and complexity
- Accomplishments
- Key words

Five Keys

Goal: Reduce risk and enhance the reviewer's confidence

What You Did

1. **Scope/relevance**—Help referee establish that you have done this work

2. **Size/complexity**—Help referee show that work was of similar size and complexity

How Well You Did

3. **Show quality**—Help referee demonstrate that you did the work well

Tips

4. **Refresh memory**—Most referees write many letters of reference, so offer refresher details

5. **Make connections**—Help referee establish connection between work that referee knows and the current project and the RFP to which you are responding

Good Past Performance (PP) Citations

First Things First:

1. Does citation meet maturity (6 mos.) & recency (3-5 years) requirements?

2. Have you asked referees whether they are comfortable giving you a rating of "exceptional"?

3. Is the citation similar to your target program project in size, scope, and complexity?

If Your Answer to #1, #2, or #3 is "No", Do Not Use This Reference

If Your Answers to #1, #2, AND #3 Are "Yes", Have You Sent the Referee an Updated Citation with These Items?

- Contract data
- Program description
- Work performed
- Size/scope/complexity
- Accomplishments
- Key words

Six Keys

Goal: Reduce risk and enhance the reviewer's confidence

What

1. **Scope/relevance**—Establish that you have done this work

2. **Size/complexity**—You meet size/complexity requirements

How Well

3. **Scoring "exceptional" or "very good"**—Must show quality

4. **Show quality**—Demonstrate that you did the work well

Tips

5. **Refresh memory**—Most referees manage many contracts; offer details

6. **Make connections**—Do not expect reviewers to connect RFP to your PP

Reviewer Evaluation Criteria

1. **Intellectual Merit:** Potential to advance knowledge

2. **Broader Impacts:** Potential to benefit society and contribute to the achievement of specific, desired societal outcomes

Elements to Consider in the Review for Criteria 1 and 2

1. What is the potential for the proposed activity to:

    a. Advance knowledge/understanding in its own field or across different fields (Intellectual Merit)?

    b. Benefit society or advance desired societal outcomes (Broader Impacts)?

3. Do proposed activities suggest/explore creative, original, or potentially transformative concepts?

4. Is plan for carrying out proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?

5. How well qualified is individual, team, or organization to conduct proposed activities?

6. Are there adequate resources available—at home or via collaboration—to carry out proposed tasks?

Why Evaluators Fund a Proposal

Evaluators Fund a Proposal when the PI:
- Addresses RFP categories and evaluation criteria clearly—in same order; be aware that funding organizations provide evaluation check sheets so use bolded headings to make it easy for evaluators to locate items they need to review
- Offers precise description of a significant, attainable goal
- Demonstrates intellectual merit and broader impacts—Technical advances; benefits
- Demonstrates how PI will accomplish project activities—Includes detailed work plan
- Provides credible, quantifiable project metrics—Success measures
- Provides a schedule and milestones that are realistic
- Demonstrates an understanding of budget elements—level of effort, supplies, equipment, services, overhead—knowing that funders may analyze budget-realism
- Shows that mechanisms are in place to monitor/control budget
- Controls budget and completes the project within budget
- Instills confidence that he/she can achieve their goals—low risk
- Demonstrates how proposal relates to funder's strategic goals: NASA example

Sample Comments: PI #1 1st Try—Unsuccessful

Topics
- Probabilistic framework for comparative analysis of biological network
- Probabilistic network model for integrated data analysis
- Application of developed models/methods in biology & medicine

Positive
- Overall proposal is well written; research is interesting, and appropriately scoped
- Proposed problems are of fundamental importance

Negative
- There was discussion about how the (linear) HMM models could be extended for graphs, but the details were not clear
- There was concern about … lack of positioning with respect to existing work

Sample Comments: PI #1: 2nd Try—Successful

Topics Were More Coherent and Detailed
1. Developing a probabilistic framework for comparative network analysis
2. Application of the proposed framework to network alignment and network querying
3. Develop a network synthesis model for benchmark creation & performance assessment
4. Identification and analysis of novel biological pathways

Positive
- Proposal is well written and structured, and different aims are well connected forming a coherent whole
- Ideas are elaborated very clearly and the motivation, rationale, innovative aspects are articulated very well
- Well organized and polished … a nice balance between computer science & molecular biology
- PI described enough details and has enough experience to suggest that the project would have a good chance of success

Additional Sample Comments

Positive

- PI has offered some very good ideas and insights into addressing this challenge. PI has also demonstrated an excellent understanding of the literature and has a good track record in this topic area. The proposal is overall well thought out.

Negative

- The PI uses a significant number of terms and ideas without clarifying their meaning or formal use. The research plan seems to jump around among topics without a clear, unifying strategy. The PI discusses a number of scientific investigations, but never articulates his primary research questions he wants to study and answer.
- Overall the concept for the PIs approach is very interesting and involves novel components. However, technical details are not sufficiently described, in particular approaches for handling the complexity of the various models.

PP Citations—Data to Provide
1.0 Contract Data

Category	Data for Each Line Below
Project name	
Contract number/order number	
Client name	
Client address	
Location of performance	
Performance dates—award, start, & end—month/year	
Percentage complete	
Type of contract: Firm fixed price; time & materials; award fee	
Codes used—CAGE, SIC, DUNS, FSC, NAICS—whatever applies	
Contract value—Awarded, to date, projected if other than awarded	
Original projections	
Staffing (number of Full-Time Equivalent positions)	
Contract role (prime or sub—if sub, cite prime Point of Contract (POC)	
Contract POC	
User POC	
Contracting Officer's	
Name	
Title/position	
Agency/organization	
Street address	
Phone/fax	
Email address	

2.0 Client Program Description

Describe the purpose and main activities of your contract funder's program

3.0 Work You Performed

- Describe how your project relates to the funder's program—Make the connections for the evaluator and do not expect the evaluator to "intuit" connections
- Establish relevancy and how well you and/or your team performed
  - Project objectives/goals
  - Deliverables
  - Roles and tasks
  - Risks encountered and addressed

4.0 Size/Scope/Complexity

Size: $ value; # of FTEs

Scope—Number of
- Elements in solution—e.g., service types, pieces of equipment, phases
- Locations—Domestic sites; foreign cultures and languages involved
- Users

Complexity
- Number of clients, teaming partners, organizations
- Technical sophistication of product, service, or solution
- Challenges in uncharted territory—New process, technology, organization
- Standards/frameworks used—CMMI Level III, ITIL, COBIT, PMP, EVM, etc.
- Key personnel employed
- Clearances required

5.0 Accomplishments

Project Elements to Address: Budget control, management, quality, schedule

Type of Accomplishments

- Improvements
- Innovations
- Problems averted or solved
- Milestones/goals exceeded—Budget, management, quality, schedule at startup, deliverables, closeout
- Benefits/value to client

Awards and 3rd-party Praise: Commendations, evaluation snippets—If you need permission to quote, get them before proposal closeout

Challenges—Cite at least two (to address "ability to solve problems with minimal Government intervention" criterion)

- Issues encountered—who and what caused them
- Mitigation devised—what we did, speed of resolution
- Result/benefit to client

Rating Results

- Federal evaluations system electronic location and ID number **if applicable**—SAM, CPARS, PDR, CCASS, etc.
- Non-electronic evaluations—Budget control, schedule, product and service quality, quantitative data—award fee, bonus
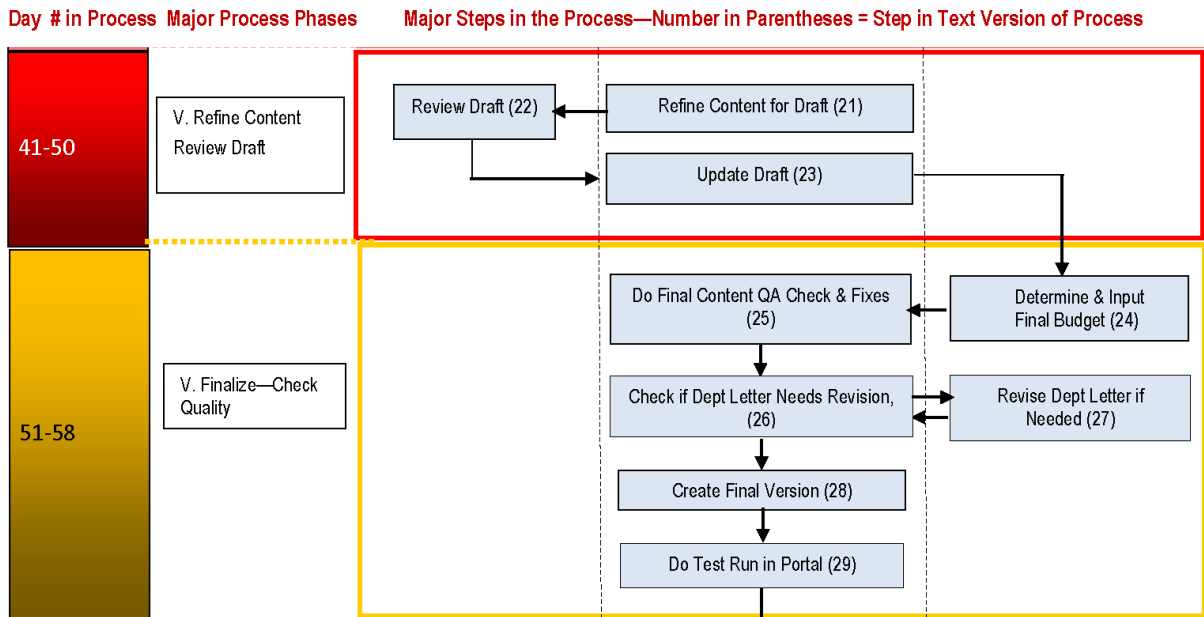
Phase V. Review: Steps 21-29

Step Work	Role(s)
V. Review & Revise—30% of time for Stages V	
21. Refine content for draft	O—PI
22. Review draft; supply feedback to PI	O—Reviewers
23. Incorporate review suggestions; revise text & art	O—PI; C—Graphic artist
24. Determine final budget; adjust plan based on budget issues	O—PI; C—Colleagues & mentors
25. Do final content QA check & fixes	O—PI; C—Colleagues & mentors
26. Determine if department letter needs revisions; request	O—PI
27. If department letter needs revisions, obtain them	O—PI & Department Chair
28. Create final version	O—PI; C—Desktop specialist
29. Do a test run in submission tool if it is not email	O—PI

Steps 21-29—Visual

Day # in Process Major Process Phases   Major Steps in the Process—Number in Parentheses = Step in Text Version of Process

41-50

V. Refine Content Review Draft

- Review Draft (22)
- Refine Content for Draft (21)
- Update Draft (23)

51-58

V. Finalize—Check Quality

- Do Final Content QA Check & Fixes (25)
- Determine & Input Final Budget (24)
- Check if Dept Letter Needs Revision, (26)
- Revise Dept Letter if Needed (27)
- Create Final Version (28)
- Do Test Run in Portal (29)

Review Process—Overview

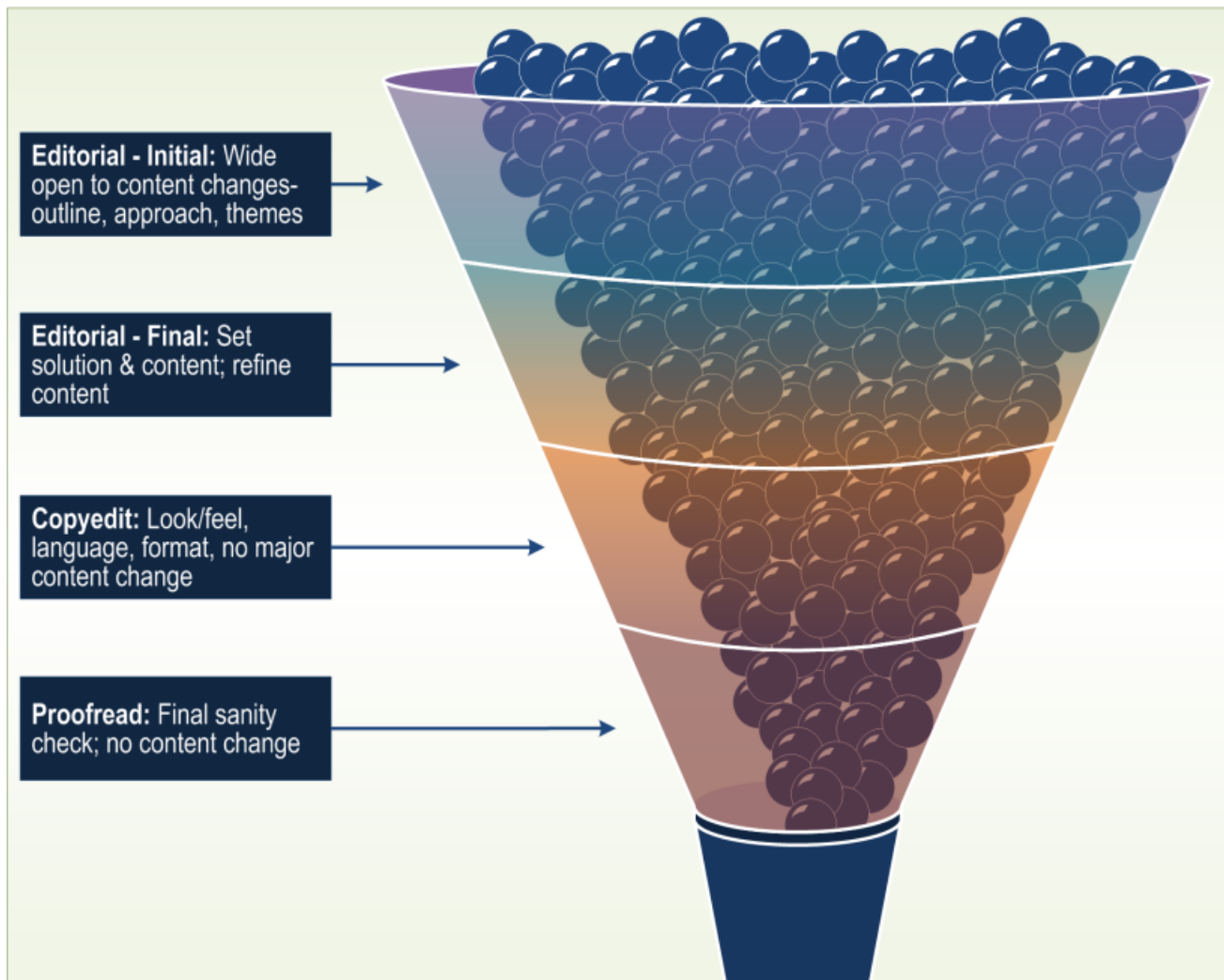## Process and Policies for Delivering Outstanding Reviews

Narrowing Funnel: Proposal process involves a narrowing funnel—at wide top of funnel, you address broad issues; gradually, as the funnel narrows, you set content and tie down specific detail and format.

Stages: Use the four review stages cited below; always remain flexible in carrying out reviews, based on proposal size and complexity—at times you may abbreviate a review or combine review stages

Review Process—4 Stages: Text Version

Stage overview	Focus on	Don't focus on
Editorial - Initial Review: • *Purpose:* ensure we have best outline and solution • *Change:* broad changes are acceptable	• Compliance with RFP • Responsiveness to client needs/goals • Structure—what is in pro; order of items • Solution • Graphics—approach/elements • Themes, differentiators, & callout boxes	• Completeness of detail • Format • Layout • Format • Spelling • Style guide issues
Editorial - Final Review: • *Purpose:* ensure benefits to client are clear; refine content & detail • *Change:* alter outline / solution only if we find basic flaw	• Best possible argument • Benefits clear to client • Completeness of section & callout detail • Graphic detail • Phrasing of presentation • Layout approach	• Format • Language detail • Spelling • Style guide compliance
Copyedit Review: Executive review for risk/profit; copyedit • *Purpose:* instill exec perspective; refine look/feel and language details • *Change:* iterative process—layout, language, & pg count affect each other	• Business and legal issues • Layout and format • Language • Style guide and consistency (copyedit) • Spell check • RFP compliance • Cutting for page count	• Content/solution except to correct major errors
Proofreading Review: Proof for fine details & OMG errors	• Corrections from final review • Layout, format, style guide adherence	No content changes unless we locate catastrophic error

Review Process—4 Stages: Visual Version

Editorial - Initial: Wide open to content changes- outline, approach, themes

Editorial - Final: Set solution & content; refine content

Copyedit: Look/feel, language, format, no major content change

Proofread: Final sanity check; no content change

Phase VI. Produce Proposal: Steps 30-31

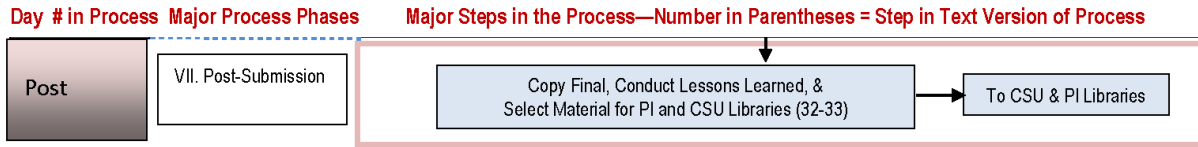| Step Work	Role(s)
VI. Produce	
30. Produce package	O—PI; C—Desktop specialist
31. Upload to online tool or email	O—PI; C—SRO; colleague ("buddy system"—for successful, timely upload)

Steps 30-31—Visual
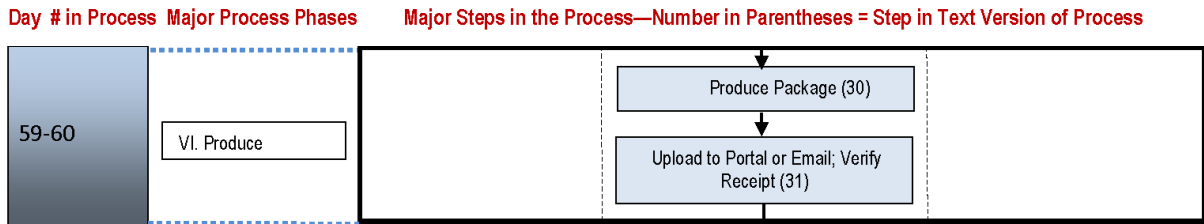
Tips for Steps 30-31

Professionalism: Ensure that you produce a professional looking document—If need be, obtain help from a desktop specialist

Anticipate Production Challenges: Allow for fact that production often takes more time than you expected; allocate at least one full day

2nd Set of Eyes: For the final QA check, have someone other than yourself review the document carefully

Upload Early: For the upload process to an online tool, allow plenty of time to surmount "murphy" because portals are often slow

Experience with Portal: Have someone experienced with uploading to your portal of choice lead the process—Portals often have quirky requirements

Phase VII. Process Post-Submission: Steps 32-33

Step Work   **Role(s)**

VII. Process Post-Submission

32. Conduct lessons learned session   O—PI; C—All people who contributed

33. Select/enter material for PI's library   O—PI

Steps 32-33—Visual

Day # in Process   Major Process Phases   Major Steps in the Process—Number in Parentheses = Step in Text Version of Process

Post	VII. Post-Submission	Copy Final, Conduct Lessons Learned, & Select Material for PI and CSU Libraries (32-33)	→	To CSU & PI Libraries

Tips for Steps 32-33: Lessons Learned Template

Element	Score	What Went Well	What To Improve	Ideas For Doing So
Proposal Process Stages	**N/A**			
I. Make Application Decision				
II. Organize Process				
III. Prepare Content				
IV. Write				
V. Review & Revise				
VI. Produce & Submit Proposal				
VII. Process Post-Submission				
Process Subtotal				
Proposal Team Infrastructure	**N/A**			
1. Resources				
2. Tools				
3. Attitude among Contributors				
Infrastructure Subtotal				
Total				

Tips for Steps 32-33: CSU and PI's Proposal Library Elements

- Proposal copy for records if accuracy or completeness issues arise with target program

- Re-usable content—In a "building blocks" folder, file content you are likely to repeat

- Differentiators

- Equipment, facilities, and security

- Letter-of-reference data sheets

- Marketing materials

- Past performance citations

- PI, university, or team capabilities

- Proposal kit—process step guide, roles/responsibilities

- Resumes and biographical sketches

- University or organization logos

- Visuals—photos and figures

- Work samples

Using the Proposal Template Tool

Proposal Template Tool Is in the Workshop Document Package

Purpose: Optional tool to help you comply with proposal requirements

Shaded Blue Text Boxes: Boxes quote RFP, so you and your reviewers know exactly what you are to address

Bracketed Phrases after Headings: Indicate 1) whether heading relates to proposal requirements and 2) page limits if applicable

Deleting Blue Boxes: After you complete the review process, delete these items

Determining Page Count with Blue Boxes Still in the Proposal: Check page count before you add any content, so as you draft content, simply subtract the original page count from the current page count

Template Sample

1 PROPOSAL [PROPOSAL UPLOAD; ITEM 2] [10 DOUBLE-SPACED PAGES]

Proposal Content: A concise statement describing your research project is required. The narrative statement should explain, briefly but specifically, what you plan to do and why, as well as describe progress already made. The statement should also make clear the relevance of the project to the professional experience of all participants, and discuss the significance of this work within their specific and general fields. Please balance the description of specific work plans against an overview of your goals and the contribution this project will make to the field(s) it engages. Please give your proposal a brief, descriptive title, and label sections of your narrative as appropriate to assist readers.
Equally important, the proposal should explain in detail the process and product of the collaboration. It should make clear the goal of the collaboration, its structure, how credit and acknowledgement would be determined, and how the process and project of collaboration would be mutually informing. Finally, the proposal should explain how collaboration enables research that is intellectually innovative and produces a final outcome that would be more valuable than the sum of individual efforts of the project members.

1.1 BRIEF DESCRIPTIVE TITLE

1.1.1 CONCISE STATEMENT DESCRIBING YOUR RESEARCH PROJECT

Evaluation Criterion 1: Intellectual significance of the project, including its ambition and scope, and its potential contribution to scholarship in the humanities.

Evaluation Criterion 6: Potential for success, including the likelihood that the work proposed will be completed and will lead to distinct results within the projected timeframe; where appropriate, the collaborators' previous record of success; and the size and allocation of the proposed budget in relation to anticipated results.

1.1.2 WHAT YOU PLAN TO DO AND WHY

1.1.3 PROGRESS ALREADY MADE

1.1.4 RELEVANCE OF PROJECT TO PROFESSIONAL EXPERIENCE OF ALL PARTICIPANTS

Evaluation Criterion 2: Relevance of the research questions being posed, appropriateness of research methods, feasibility of the work plan, appropriateness of the field work to be undertaken, the archival or source materials to be studied, and the research site.

1.1.5 SIGNIFICANCE OF WORK WITHIN SPECIFIC AND GENERAL FIELDS

1.2 COLLABORATION

1.2.1 EXPLAIN IN DETAIL PROCESS AND PRODUCT OF THE COLLABORATION

Evaluation Criterion 5: Detail and soundness of the process and product of the collaboration, including dissemination

1.2.2 GOAL OF COLLABORATION

1.2.3 COLLABORATION STRUCTURE

1.2.4 HOW PI WILL DETERMINE COLLABORATION CREDIT AND ACKNOWLEDGEMENT

1.2.5 HOW PROCESS AND PROJECT OF COLLABORATION WOULD BE MUTUALLY INFORMING

1.2.6 HOW COLLABORATION ENABLES RESEARCH THAT IS INTELLECTUALLY INNOVATIVE AND PRODUCES A FINAL OUTCOME THAT WOULD BE MORE VALUABLE THAN THE SUM OF INDIVIDUAL EFFORTS OF THE PROJECT MEMBERS

Key Takeaways

- Establish and adhere to a process
- Follow the RFP meticulously
- Give yourself the gift of time
- Establish relationships—Program Officers; SRO; mentors
- Persuade your evaluators that your research merits funding (market yourself)

Workshop Documents Package Elements

- Presentation—PowerPoint (Brief) and Word (More Detail)

- ACLS Package
  - Sample Application
  - Sample Budget
  - Writing Fellowship Proposals (Guide)
  - Proposal Templates with and without Blue Boxes

- NSF Package
  - NSF Career Packet
  - NSF Proposal Guide
  - NSF Strategic Plan
  - NSF Career Proposal Templates with and without Blue Boxes—2
  - Career Sample Winning Proposals—5
  - Career Workshop Review Comments—2