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Welcome to the ***Developing a Proposal*** Workshop! We will begin at 9:00 am.

Leslie Ponciano, Ph.D.
Director of Research Opportunities, Office of the Chancellor

Developing a Proposal

Agenda:

Morning Workshop

9:05	**Developing the project and the proposal: Tools for getting started** • Presentation (questions & comments in chat box) • Large group discussion with Live polling & Padlet
9:25	**Writing & Mentoring Time!**
10:00	**Break**
10:05	**Building diverse, equitable, and inclusive collaborations** • Presentation (questions & comments in chat box)
10:15	**Live Q&A with Mentor Panel**
10:35	**Finding the compelling story** • Presentation (questions & comments in chat box) • Small group activity, Large group discussion & Live polling
11:05	**Break**
11:10	**Writing the project summary** • Presentation (questions & comments in chat box) • Next Steps & Live polling
11:25	**Writing & Mentoring Time!**

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Logistics

1. **We cannot cover the development of a full proposal in this short workshop**.
   - The content will provide helpful tips and tools for proposal planning and writing.
   - The writing time sessions will get you started on writing products that will contribute to your proposal; however, it is expected that you will complete them after the workshop ends.

2. **Power point slides will not be provided. Short videos will be available in a few weeks.**

3. **We will be recording all workshop events in the main Zoom meeting room and some of the events in breakout rooms.**
   - These recordings are for evaluation purposes only.

4. **The afternoon workshop (12:30 – 3:30) includes writing suggestions for strengthening an existing proposal using this same Zoom link.**
   - Everyone is invited to listen to the afternoon workshop presentations.
   - Please allow the mentors to focus on participants who have **existing proposal drafts**.

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To gain the greatest value:

- **Ask questions in the chat box and participate in all activities!**
  - ✓Try to avoid multi-tasking and/or distractions. There will be a break!
- **Use the opportunity for small group mentoring in breakout rooms!**
  - ✓Ask questions and seek advice.
  - ✓Be courteous to others who are waiting to ask a question.
  - ✓Listen to the mentor's responses to others.
- **Utilize the writing time!**
  - ✓Leave the breakout room if you want to focus on writing.
  - ✓Turn off your camera and confirm that you are muted.
  - ✓Keep an eye on the clock (set a timer?) and return promptly for the next scheduled event.

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Developing the Project and the Proposal

Dr. Archana McEligot, CSU Fullerton

CALIFORNIA STATE UNIVERSITY
FULLERTON

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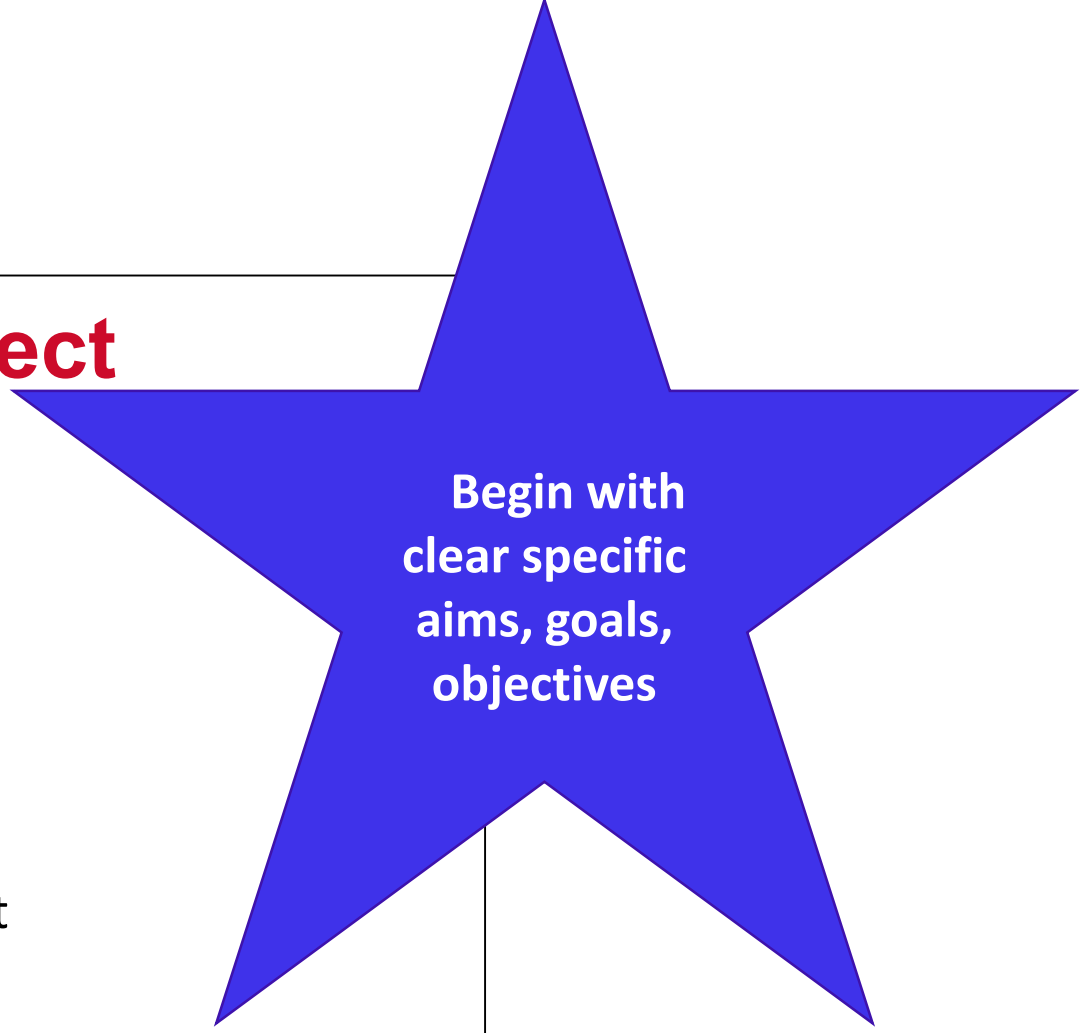
Developing the Project

- Curating the Concept
  - Attend conferences
  - Note funding sources for similar projects
  - Know the literature in your specific area
- Targeted consultation with others
  - Colleagues and Chair in your department
  - Research Office
  - Colleagues outside of your department with grant success
  - Colleagues in your field outside of your university



Find the Right Funding Mechanism

Consider eligibility:

- Qualifications of PI
- Career stage
- Size and scope of project
- Institutional requirements
- Institutional qualifications
- Indirect costs
- Available time and effort
- Deadlines
- Needed equipment, space, travel
- Co-PIs, collaborators, staff, students

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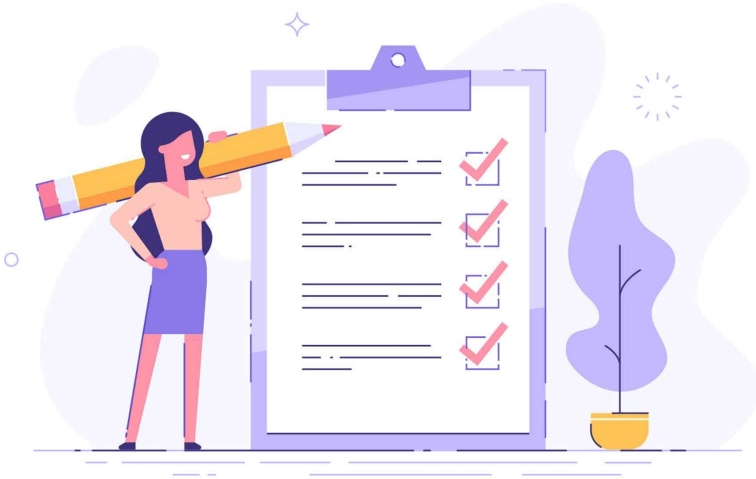
Planning the Proposal



- Closely review the funding announcement
- Begin early
- List tasks for the project
- Determine the timeline for the tasks
- Determine needed qualifications for tasks
- Determine roles and responsibilities
  - co-PIs, collaborators, consultants, advisors
- Collect any needed data
  - enrollment vs. graduation rates, preliminary data, pilot-testing
- Draft a minimum budget and a wish list – work with research office
- Read successful proposals

TALK TO YOUR RESEARCH OFFICE!!!

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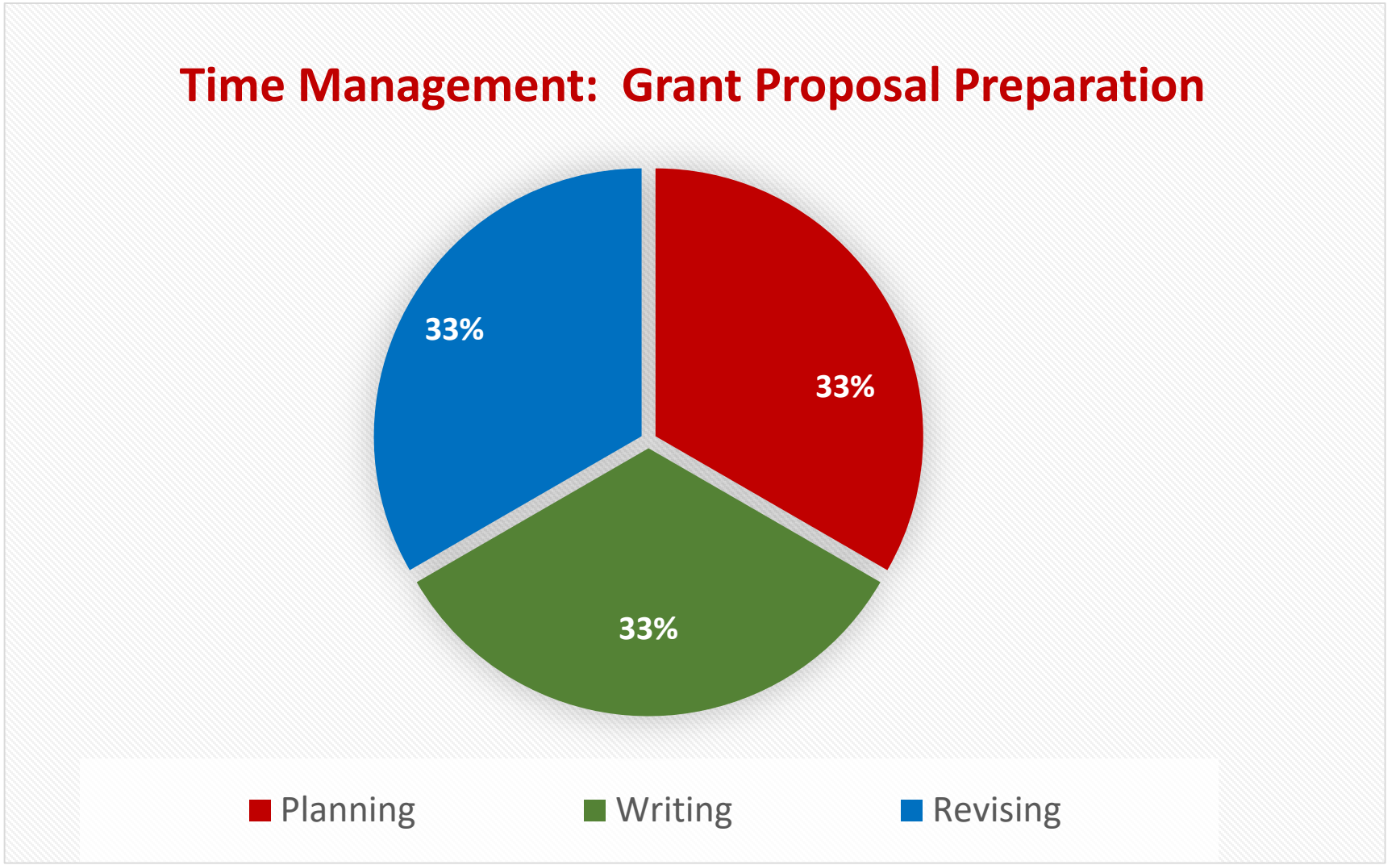
Planning - Create a Checklist

DESCRIPTION		RESPONSIBLE PERSONNEL	TARGET COMPLETION DATE
Internal Routing	Preliminary Budget	PI/OGC	MM/DD/YY – Month 1
	Draft Aims/Goals	PI	MM/DD/YY – Month 1
	Finalize Budget	PI/OGC	MM/DD/YY – Month 2
	Finalize Budget Justification	PI/OGC	MM/DD/YY – Month 2
Other Proposal Requirements	Facilities and Other Resources	PI/OGC	MM/DD/YY – Month 2
	Equipment	PI	MM/DD/YY – Month 2
	Biographical Sketch	PI/co-PI	MM/DD/YY – Month 2
	Letters of Support	PI	MM/DD/YY – Month 2 - 4
	Letter of Institutional Commitment	PI	MM/DD/YY – Month 2 - 4
	Human Subjects	PI	MM/DD/YY – Month 3 - 4
Research Plan Requirements	Specific Aims/Goals (1 page)	PI/co-PI	MM/DD/YY – Month 2 - 4
	Project Summary/Abstract		MM/DD/YY – Month 2 - 3
	Project Narrative (25 pages)	PI/co-PI	MM/DD/YY – Month 2 - 4
	References Cited	PI/co-PI	MM/DD/YY – Month 4

Time Management: Grant Proposal Preparation



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Curricula Aims

Thus, CSUF, in collaboration with USC proposes the *Big Data Discovery and Diversity through Research Education Advancement and Partnerships* (BD^3-REAP) program, which will develop new neuroimaging and epigenetics BDs curricula at CSUF, while providing mentored, student-owned research experiences for diverse undergraduate CSUF students and faculty. The BD^3-REAP aims are:

(1). **BD^3-REAP Student Research Experiences:** Engage three consecutive cohorts (n = 6 per year) of predominantly underrepresented sophomore and junior undergraduates (≥ 18 yrs, 9 females and 9 males) in a 2-year faculty mentored, yet student-led BDs research experience on examining and synthesizing Big Data neuroimaging, genetics, proteomics, and epidemiologic data types/data sources in relation to brain health. Specifically, student's will: (a) Engage in small-group research and scientific discovery at CSUF (academic year) and USC (summer experience) (b) Increase BDs computational and analytic skills, and self-efficacy by participating in didactic training integrated with in-depth research experience (c) Prepare and present research posters (d) Improve scientific written and oral skills (e) Participate in BD^3-REAP program advisement to ensure program/major graduation, increase knowledge and linkages to BDs careers and graduate school entry.

(2). **BD^3-REAP Faculty Research Experiences:** The BD^3-REAP core faculty (n = 5) will augment their BDs research experience via partnering with USC faculty and accessing neuroimaging, epidemiologic and -omics data, addressing multivariate facets of brain health. Subsequent faculty cohorts (n = 3 per year) in Years 3 – 5 will participate in research workshops integrating BDs analytics and visualization in their research.

(3). **BD^3-REAP Curriculum Development:** BDs curricula will be integrated across two colleges (NSM and HHD), specifically into four existing courses [Health Science 401 (*Epidemiology*, n = 60) & 349 (*Research Methods*, n = 60), Biology 473 (*Bioinformatics*, n = 20) and Math 437 (*Modern Approaches to Data Analytics*, n = 20)]. These four courses will expose a pool of students [(n = 160) to introductory BDs competencies from which six will be competitively selected to participate in an in-depth BDs research experience (aim 1). In addition, a new *Neuroimaging and Big Data* (HESC/MATH 349A) 5-week course will be established that explores: (a) an overview of brain health, neuroimaging and respective literature critique; (b) an understanding of next generation Big Data workflow technologies coupled with modern computation and communication strategies specifically designed for large-scale biomedical datasets; and (c) further develop a knowledge discovery interface to enable modeling, visualizing, and the interactive exploration of large-scale imaging data.

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Scientific Specific Aims

Specific Aim 1: To determine the influence of micronutrient intakes, as well as dietary plasma biomarkers, including, vitamins involved in the folate metabolism pathway, and selected antioxidants associated with modulating DNA repair on breast cancer risk.

1a. To assess the influence of dietary intakes (folate, vitamin B12, vitamin B6, and carotenoids and vitamin C) on breast cancer risk in 191 cases and 191 sister/cousin controls > 50 years. In addition to energy intake, other variables influencing breast cancer risk, such as hormone replacement therapy (HRT) use, alcohol use, body mass index (BMI), age and estrogen exposure (i.e. age at menarche, age at first birth, parity and age at menopause) will be examined and included in the adjusted analysis of dietary intake and breast cancer risk.

Hypothesis: Intake of selected micronutrients will be inversely associated with breast cancer risk in women 50 years and older.

1b. To investigate the relationship between plasma folate, vitamin B12 and vitamin B6 concentrations and breast cancer risk. Other variables influencing breast cancer risk, such as HRT use, alcohol use, BMI, age and estrogen exposure (i.e. age at menarche, age at first birth, parity and age at menopause) will be examined and included in the adjusted analysis of dietary plasma biomarkers and breast cancer risk.

Hypothesis: Plasma concentrations of selected micronutrients will be inversely associated with breast cancer risk in women 50 years and older.

Specific Aim 2: GenexMicronutrient Interactions: To measure interactions between polymorphisms in DNA repair genes XRCC1 (Arg399Gln, Arg194Trp & Arg280His), XRCC3 (Thr241Met & IVS5-14), p53 (arg72pro & intron 3 16bp) and MTHFR (C677T), with micronutrient intakes (folate, vitamin B12, vitamin B6, and carotenoids and vitamin C). Interactions between genetic polymorphisms and dietary plasma biomarkers (folate, vitamin B12, vitamin B6) will also be assessed. We will use a case-only design of 500 cases to conduct this analysis and compare the results to the case-control design. Other breast cancer risk factors such as HRT use, alcohol use, BMI, age and estrogen exposure (i.e. age at menarche, age at first birth, parity and age at menopause) will be adjusted for when investigating the relationship between polymorphisms in DNA repair genes and sub-optimal dietary micronutrient intakes.

Hypothesis: The interaction between intake of selected dietary micronutrients, and dietary plasma biomarkers with polymorphisms in DNA repair genes (XRCC1, XRCC3 and p53) critical to maintaining DNA integrity will be associated with breast cancer

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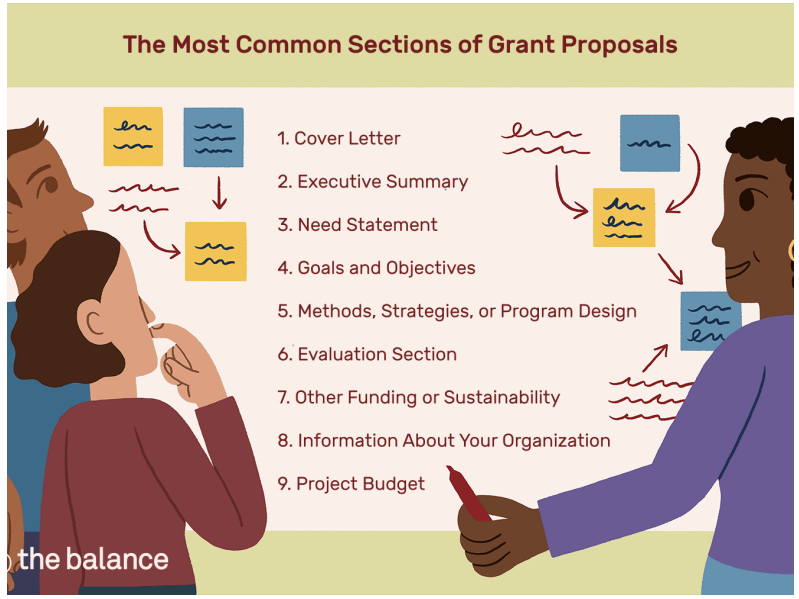
Preparing to Write the Proposal

- Read the guidelines and create an outline
  - Headings and subheadings in exact order
  - Copy exact phrases from RFP into the outline
- Review evaluation criteria
  - What will be scored?
  - How will it be scored?
  - Proportion the content to meet the evaluation criteria
- Contact the Program Officer
  - Be prepared with questions
  - Send a brief summary or abstract of the project in advance of meeting
  - Request to see successful proposals



Large Group Discussion

1. Live polling results
2. Tools for planning and writing a proposal
3. Padlet: What are the important tasks that need to be planned for most projects?

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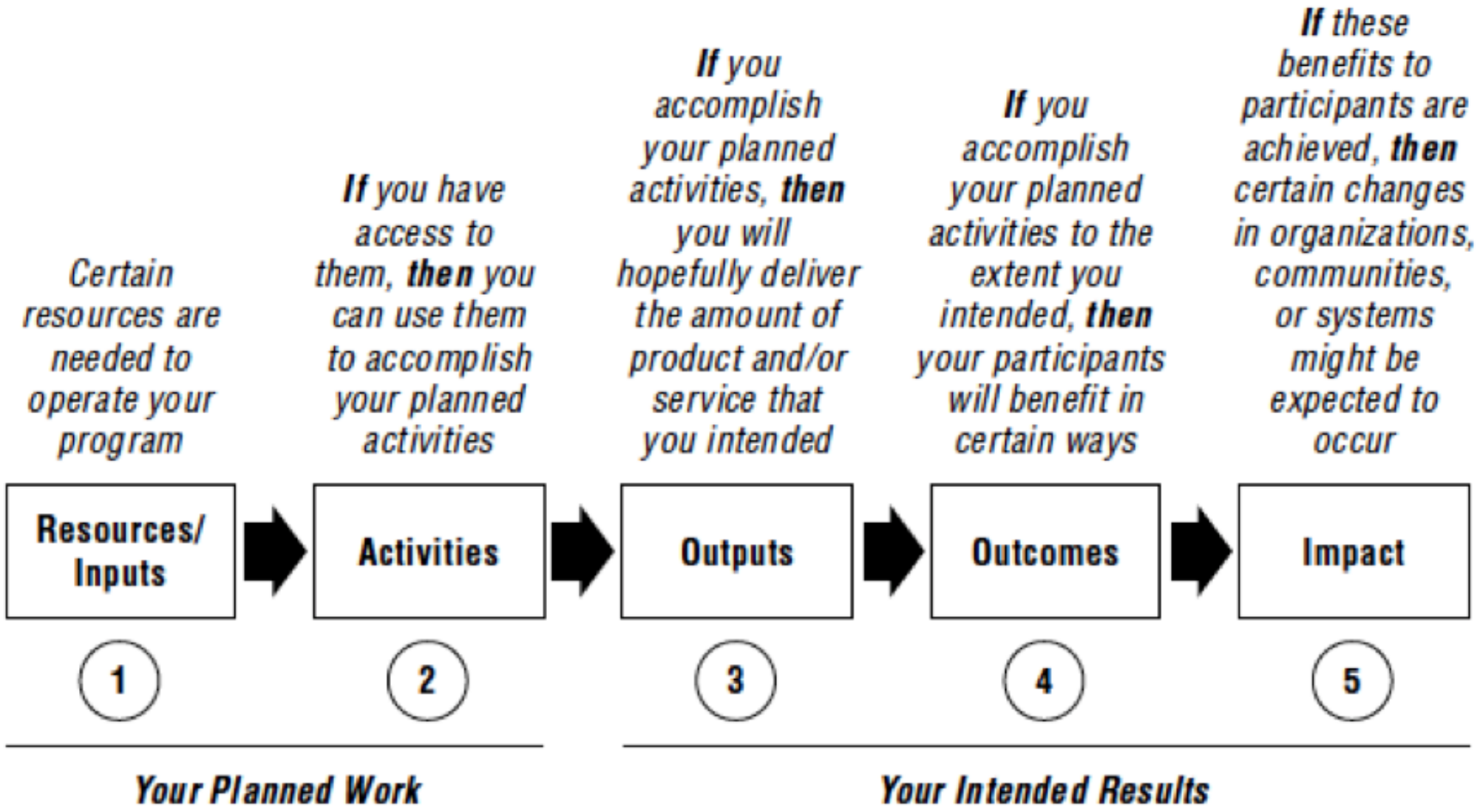
Create a Table/Timeline

Objective Activities		Performed by	Output/ Deliverable	Timeline
Objective 1	Activity 1a Activity 1b Activity 1c	• PI • Co-PI • Consultant • Qty of students		Step 1: mm/yyyy – mm/yyyy Step 2: mm/yyyy – mm/yyyy Step 3: mm/yyyy – mm/yyyy
	Impact:			
Objective 2	Activity 2a Activity 2b Activity 2c	• PI • Co-PI • Qty of students		Step 1: mm/yyyy – mm/yyyy Step 2: mm/yyyy – mm/yyyy Step 3: mm/yyyy – mm/yyyy
	Impact:			
Objective 3	Activity 3a Activity 3b Activity 3c	• Co-PI • Qty of students • External Evaluator		Step 1: mm/yyyy – mm/yyyy Step 2: mm/yyyy – mm/yyyy Step 3: mm/yyyy – mm/yyyy
	Impact:			


Certain resources are needed to operate your program
If you have access to them, then you can use them to accomplish your planned activities
If you accomplish your planned activities, then you will hopefully deliver the amount of product and/or service that you intended
If you accomplish your planned activities to the extent you intended, then your participants will benefit in certain ways
If these benefits to participants are achieved, then certain changes in organizations, communities, or systems might be expected to occur
Resources/ Inputs
Activities
Outputs
Outcomes
Impact
1
2
3
4
5
Your Planned Work
Your Intended Results

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What Expertise is Needed?

Expertise Needed	Name	Qualifications	Commitment level
Stroke rehab	Jane Doe Consultant	X years in Y, X years in Z	25%
Biomechanical devices	Co-PI	Post-doc in X, Y pubs in Z	50%
Biofeedback	Corp X	X years in Y	10%
Grant management	PI	3 completed grants	75%
Efficacy testing	Co-PI	X years in efficacy design	30%
Student mentoring	PI & Co-PIs	Mentored X students	30%
Evaluation	Center for Eval	20+ years in eval design	20%

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Roles and Responsibilities?

ROLE	OVERSIGHT RESPONSIBILITY	PROCEDURE/METHODS
PI	• Write the grant proposal	Google docs for proposal draft
	• Communicate with research office and program officer	Email and phone calls
	• Manage timeline for submission and implementation	Smartsheet and weekly Zoom mtgs with research team
	• Report writing and payroll	CSUX Foundation and Research Office
	• Laboratory testing for Objective 1	Dept of X lab reserved, equipment procured
	• Conference presentations & journal articles	Google docs for conference abstracts and manuscripts
Co PI #1	• Communicate with research team	Weekly meetings
	• Recruit and train students	Presentations at student groups, weekly meetings
	• Laboratory testing for Objective 2	Dept of Y lab reserved, equipment procured
Co PI #2	• Laboratory testing for Objective 3	Dept of Z lab reserved, equipment procured
	• Faculty/student mentoring	Monthly meetings
	• Curriculum development	

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Writing & Mentoring Time!

Select one of the tools and start writing!

Enter breakout room to listen or talk to mentors.

May be recorded for evaluation purposes.

OR

Stay in main room/exit breakout room to write (camera and mic off)!

10:00	**Break**
10:05	**Presentation**

Return to main room, turn on camera, mute mic, and listen to the next presentation! Share comments and questions in the chat box.

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Building Diverse, Equitable, & Inclusive Collaborations

Nicole Blalock, CSU Northridge

California State University Northridge

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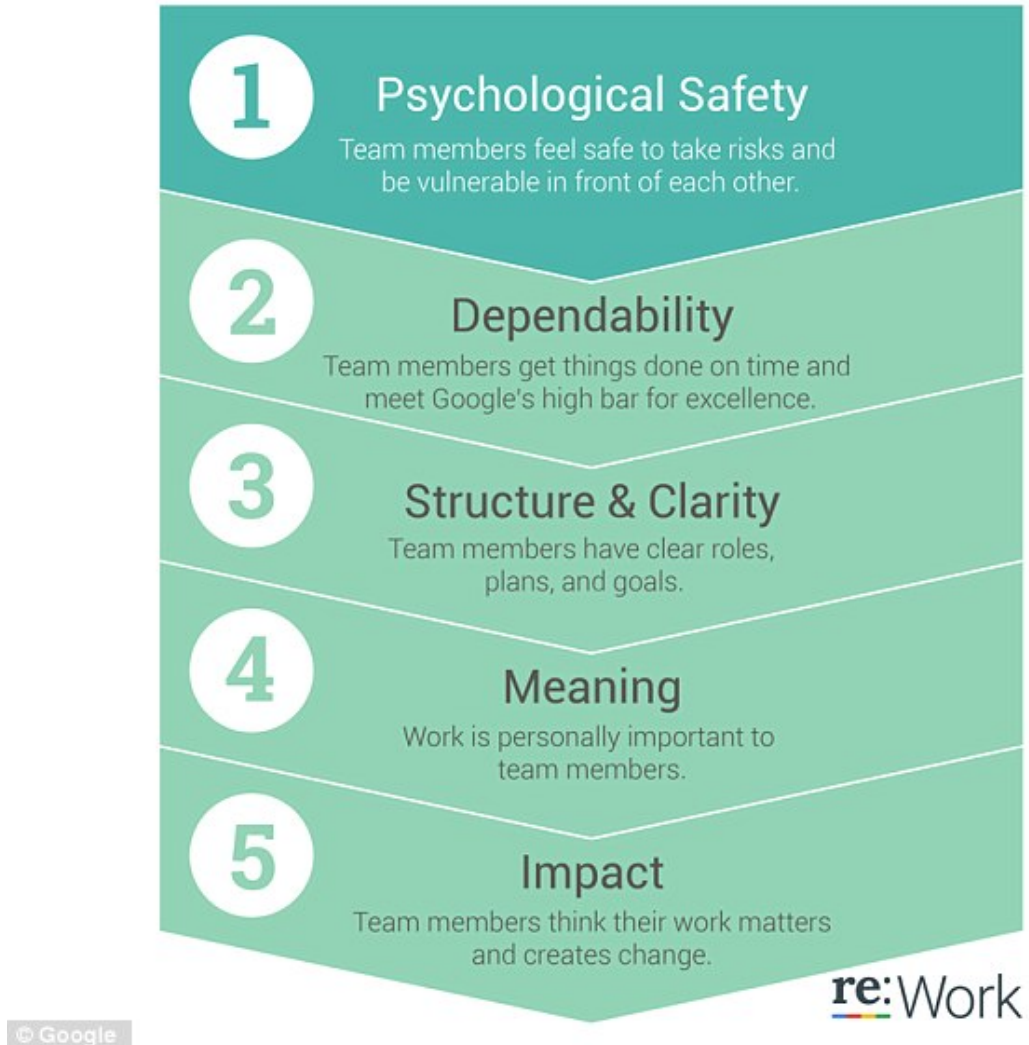
Building Diverse, Equitable, & Inclusive Collaborations

Collaboration *n.* The act of working together; united labor.

Build your projects/proposals with people with whom you have already built good relationships. Draw in and support your colleagues, students, and community into your work – authentically.


Planning for Evaluation
Designing an Evaluation Process
Collecting Information
Analysing information
Taking action
Evaluation



The Five Characteristics of a Successful Group

Photo Credit: https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/

Building Diverse, Equitable, & Inclusive Collaborations

- Is there a hierarchy?
- Are any members of the team in a more vulnerable position?
- Are various supports needed by different members of the team?
- Can resources be provided to avoid identification of disadvantages?
- Are systemic changes needed?

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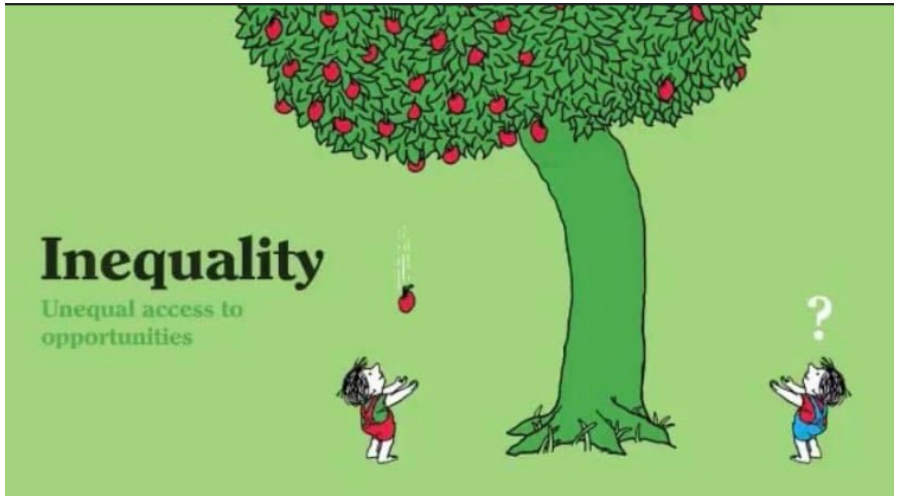
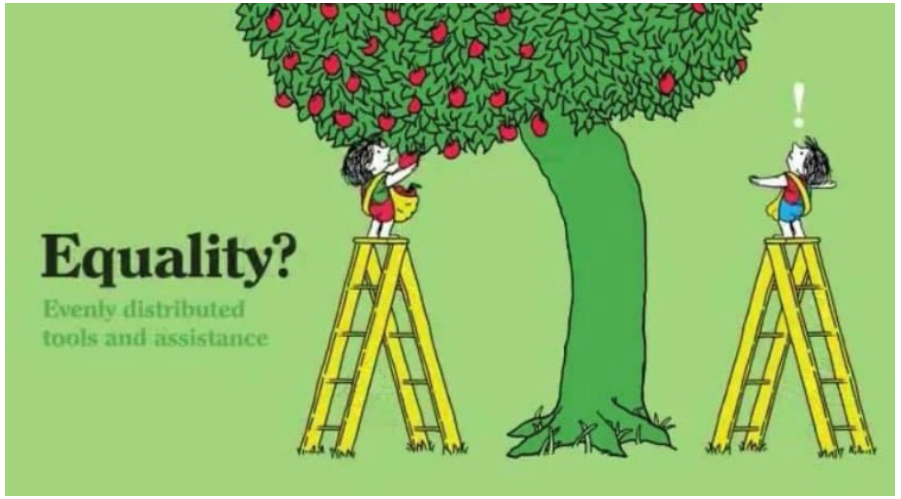
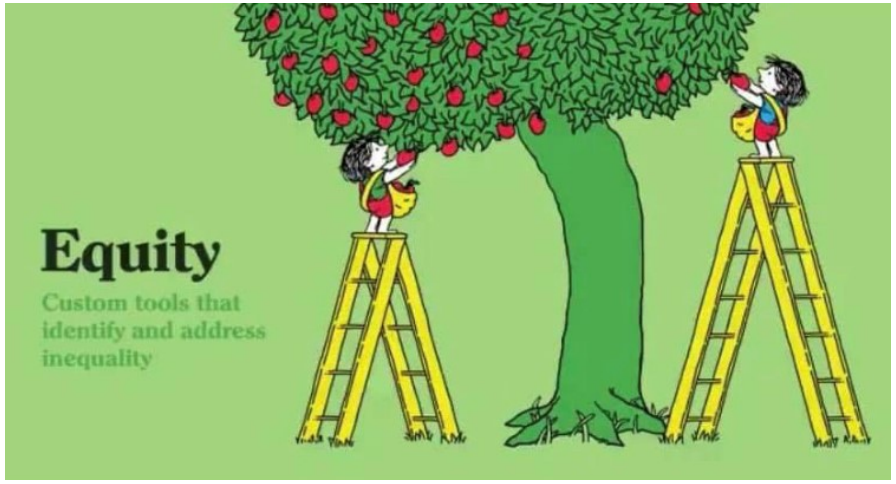
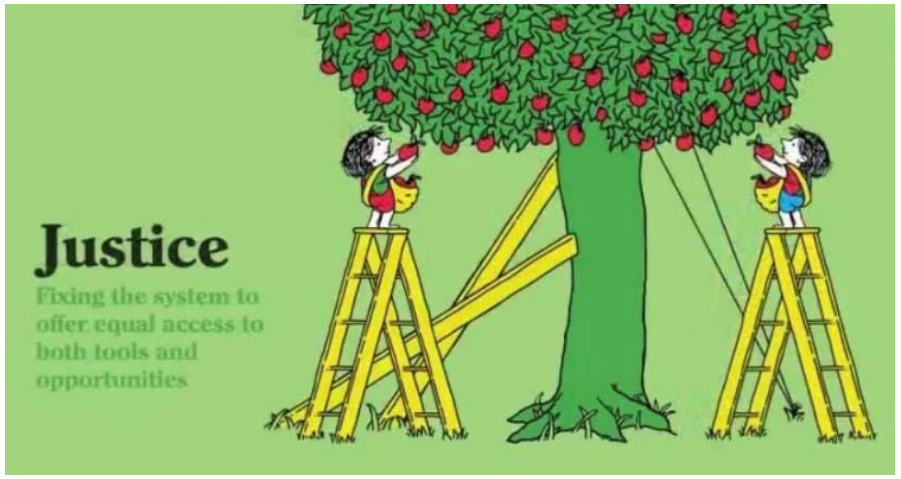
Building Diverse, Equitable, & Inclusive Collaborations

In order to approach **justice** in a system that was not designed to understand their needs, people from underrepresented groups must **hear their own voices and perspectives** reflected in decision-making within an equitable and inclusive environment.


Inequality
Unequal access to opportunities
?


Equality?
Evenly distributed tools and assistance
!


Equity
Custom tools that identify and address inequality


Justice
Fixing the system to offer equal access to both tools and opportunities

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Building Diverse, Equitable, & Inclusive Collaborations

- Inspire a shared vision for the project
- Call others in instead of out
- Challenge your own implicit biases
- Recognize contributions, effort, collaboration, and community
- Share expertise – teach others, be willing to learn from others
- A more diverse team will make better decisions!

Q&A Panel

Moderated by Leslie Ponciano, Chancellor's Office

Mentors:

- Keith Putirka, Fresno
- John Crockett, San Diego
- Barbara Taylor, Long Beach
- John Walkup, Fresno
- Archana McEligot, Fullerton

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Finding Your Compelling Story

Erika Wright, Humboldt State

HUMBOLDT STATE UNIVERSITY

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Find Your Compelling Story

- Provide a context for your project
  - Theoretical foundation/literature/inspiration
  - Preliminary data/prior work
  - Define the problem and the solution
  - How will this project advance your discipline?
  - How will this project have a positive impact?
  - How are you (and your team) qualified for this project?


Stories.
Connect.
People.
WHO?
WHAT?
WHEN?
WHERE?
HOW?
WHEN?
WHAT?


WHAT'S YOUR
STORY

Develop bold but credible goals!

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Break out room activity

You just realized that you are in an elevator with a program officer of a major funding source. You have one minute to pique their interest to invest in your project.

Presenter: Focus on the most important information and present it in the most compelling manner in one minute or less.

Program Officer: Stop the presentation at exactly one-minute and ask 1 – 2 tough questions.

1) Each take a turn as the presenter and as the program officer.
2) If time allows, provide feedback on what was compelling and interesting, what information was missing, and if the speech could be better organized.

If you don't have a project to share, read the examples provided via link in the chat and discuss if time allows

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Examples:

1. Today's problems demand a qualified and diverse STEM workforce; however, the low numbers of underrepresented minority students (URMs) and women in STEM programs are recognized as a key problem in undergraduate education. This proposal gets to the heart of the matter by executing rigorous mathematical research problems through three parallel pipelines: 1) focused theoretical faculty research, 2) student-centered industry-inspired projects, and 3) education and community engagement. CSUX is the prime location to influence change. A federally-designated, state-funded, mid-sized Hispanic Serving Institution located within range of a booming data-driven industry, the student population is majority Hispanic, first-generation college-attending, female, displaying raw talent in mathematics – all attributes with which the PI identifies. By providing undergraduate students with early quality research opportunities, much-needed resources and mentorship, and building industry and community relationships, a generation of talented but underserved students will be uplifted and transformed into STEM leaders and role models within our national community.
2. This application addresses current challenges in seismically isolated structures considering soil structure interaction (SSI). A number of knowledge gaps exist impacting the ability for isolation to meet performance goals including expected response due to vertical ground motions, low frequency near-fault ground motions, and SSI. There is a lack of data and validation of computational modeling. The proposed work addresses these knowledge gaps by examining the issue of SSI's influence on seismically isolated structures using new resources available to the engineering community – the largest soil box/shake table in the US and high-computational capabilities – to acquire significant experimental data to advance the current computational abilities for engineers. This will advance the field of seismic isolation by developing a better understanding of the impact of SSI on isolation effectiveness and the limitations of computational simulations as well as current guidelines.

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Writing the Project Summary

Dr. Leslie Ponciano, Chancellor's Office

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Writing the Project Summary

- Plagiarize the RFP!!
- Determine the most important aspects of the project
- Tell a compelling story!!

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- Be specific about the merit and impact
  - How will this project advance knowledge?
  - How many total people will benefit from the funding?
- Be bold, confident, and credible
- “Sell” the project – the power of word choice!
  - Innovative, transformative, novel

The findings from this project will close a gap in the literature and lead to further study.

Or:

The findings from this project will transform our understanding, create new lines of inquiry, and generate innovative solutions.

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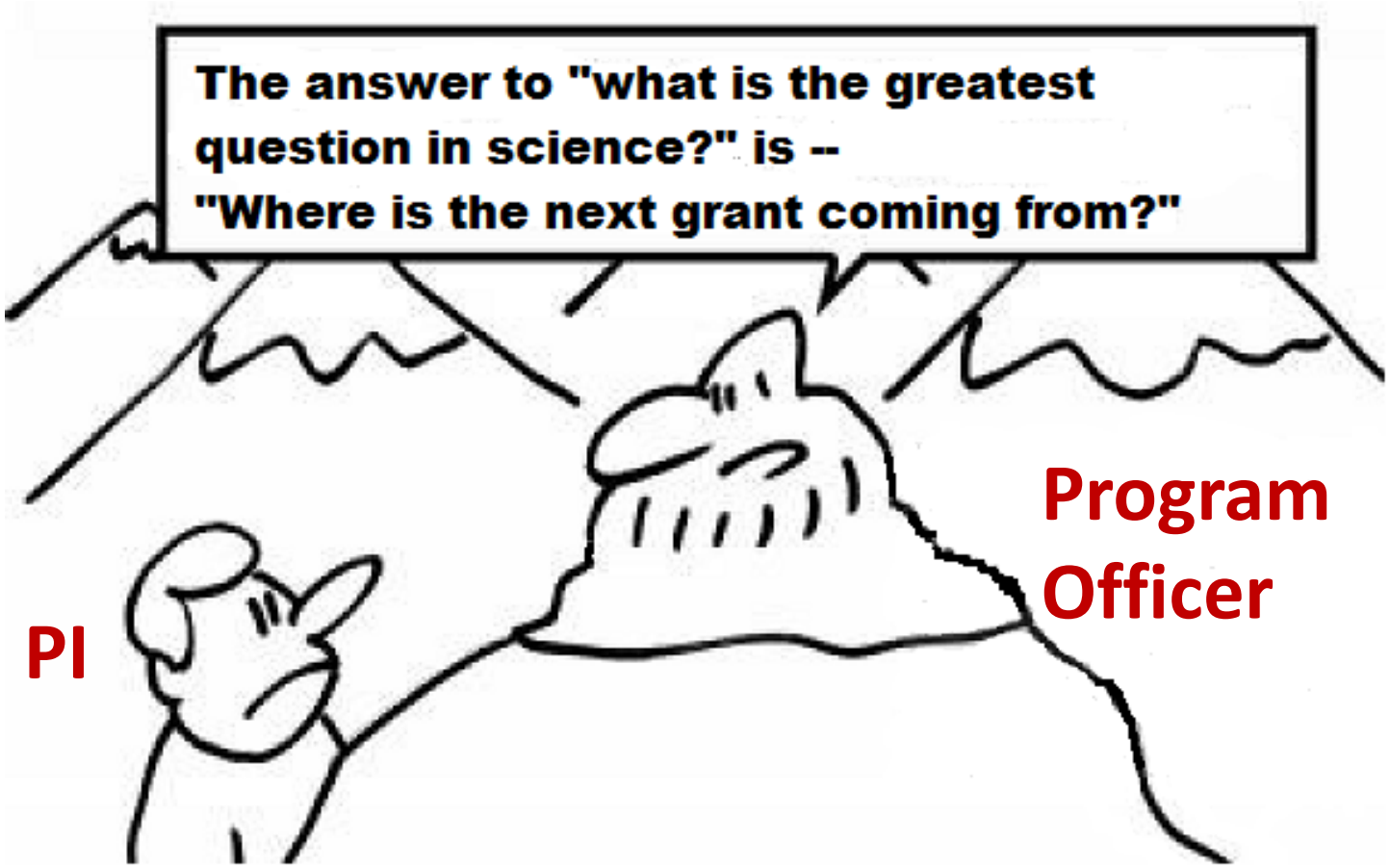
How and when do you talk to the program officer?



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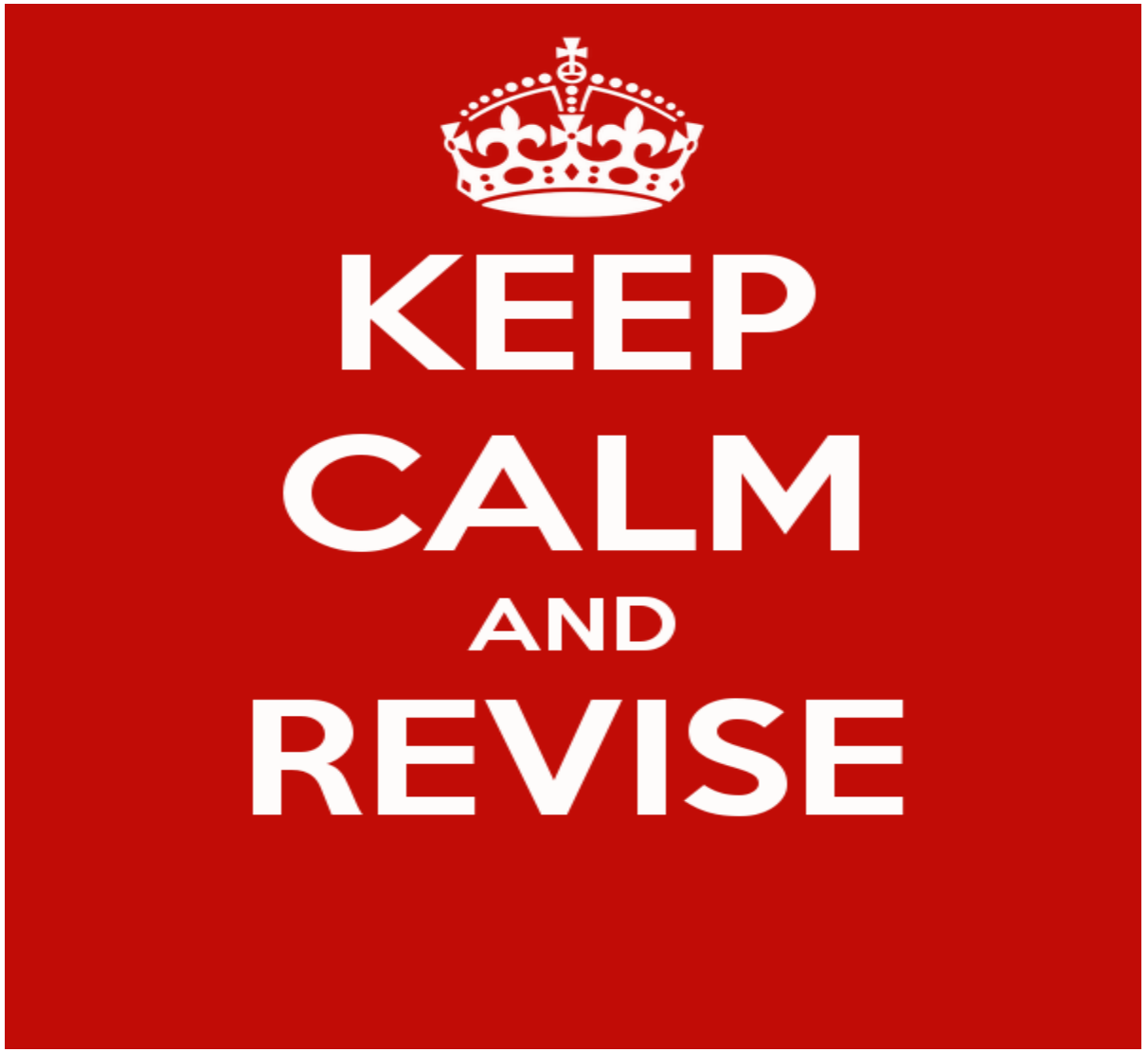

Take-aways from Today's Workshop

1. Plan, Write, Seek Feedback, Revise!
   - Manage your time and stress
2. A more **diverse** team will make better decisions.
   - Create a safe space for project members to hear their own voices and perspectives reflected in decision-making.
3. Tell a compelling story in your project summary and in your proposal.
   - What, Why, Who, and How
   - Develop **BOLD,** credible goals
   - Provide concise, relevant detail

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Next Steps

1. **Use the tools/strategies provided to motivate progress on your proposal.**
    - Tables, checklists, calendar, one-minute speech, project summary
2. **Return at 12:30 pm today to this Zoom meeting room to hear more strategies for writing and revising a strong proposal.**
3. **Talk to your campus research office and the program officer of your funding source.**
4. **Contact Leslie Ponciano at the CO when you have a proposal ready for a comprehensive, strategic review.**
    - lponciano@calstate.edu

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Writing & Mentoring Time!

Write/revise your project summary

Enter breakout room to listen or talk to mentors.

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OR

Stay in main room/exit breakout room/leave meeting to write!

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Thank you for attending this workshop!

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