





## **BUDGETING FOR COMPLEX GRANT PROPOSALS**



#### **PRESENTERS**



Emily Martell, Managing Director, Huck Institutes



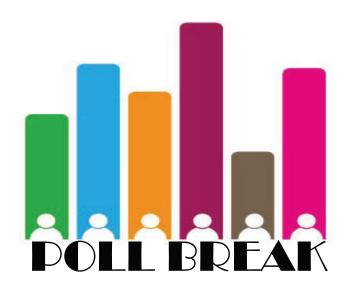
Diane Rudy, CRA Associate Director, Pre-Award Research Administration Strategic Interdisciplinary Research Office (SIRO)



Mary M McMonagle, CRA Contracting Officer, Office of Sponsored Programs (OSP)

## Poll

Have you ever prepared a budget for a grant proposal before?



Which part of budgeting is most challenging?

- A. Personnel
- B. Travel
- C. Subawards
- D. F&A
- E. Cost Share
- F. All of it
- G. None of it

# Huck Institutes Catalysis: Maximizing your Proposal Budget for Success



**Objectives** 

- 1. Strategies for using your statement of work (SOW) to create a comprehensive budget that allows you to accomplish all of your project goals
- 2. Overview of key budgeting components for large-scale grants: estimating labor costs and other direct charges.
- 3. Understanding F&A and Research Incentive Funds (RIF)
- 4. How and when to request cost share funding



# **Helpful University Budgeting Policies:**

RA10: Costing Principles for Sponsored Awards <a href="https://policy.psu.edu/policies/ra10">https://policy.psu.edu/policies/ra10</a>

RA21: Development of a Proposal Budget <a href="https://policy.psu.edu/policies/ra21">https://policy.psu.edu/policies/ra21</a>

Penn State University Travel Policy <a href="https://policy.psu.edu/policies/tr02">https://policy.psu.edu/policies/tr02</a>

RA50: Cost Sharing <a href="https://policy.psu.edu/policies/ra50">https://policy.psu.edu/policies/ra50</a>

RA30: Facilities and Administrative (F&A) Costs

https://policy.psu.edu/policies/ra30



# Maximizing your Proposal Budget for Success: Understanding Statement of Work



- You must understand the SOW or Project Description, as this will drive the budget.
   A reduction in budget is a reduction in the SOW.
- Create a Budget based on your SOW A financial plan outlining the cost of resources needed to perform the scope of work being proposed.
- You should budget based on the SOW even if it's higher than the award amount. Then you can go back and remove expenses and possibly reduce the SOW or identify funding needed for your cost share request.

### Me trying to explain to funders how our missions are aligned



## **Example SOW**



Dr. Smith will write a whitepaper of research findings, results, and recommended next steps toward the development of bioengineered and bio-enabled materials with novel properties. These properties are not available using traditional materials so Dr. Smith will explore biological advancements that offer a unique mechanism for developing advanced materials. As a component of the whitepaper, Dr. Smith will compile research studies into a technical overview of the current state-of-the-start procedure and will provide technical objectives, milestones, and approaches to developing new biomaterials with valuable properties.

# **Are Budgets Overwhelming?**

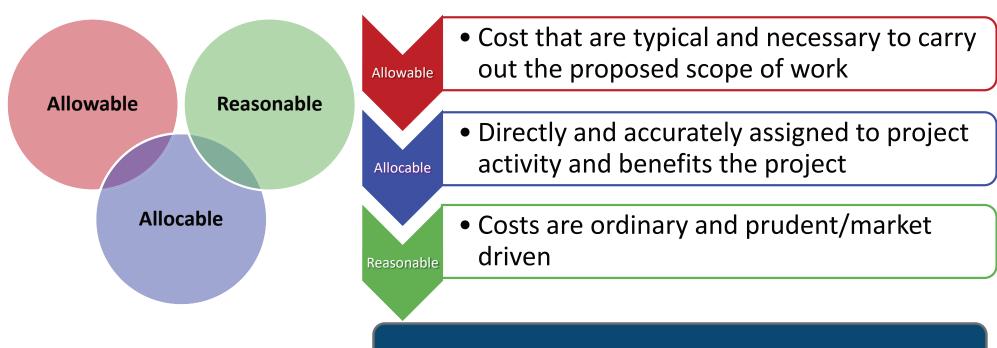
		Estimated Annual			v.a	
Project XYZ	B	Cost	Yr1	Yr2	Yr3	Total Grant
Cost Category	Description					
Personnel Prince	05~ 5% . 40.0 . 1	47.050.00	47.050.00	40.440.00	54.405.00	4.47.405.00
PI	35% Effort or 12.6 wks	47,250.00	,		,	147,495.60
Co-PI	15% Effort or 5.4 wks	15,000.00	,			46,824.00
Research Technician	50% Effort or 6 months	32,500.00	,	,	,	,
Project Manager	100% Effort	85,000.00	,	,	,	265,336.00
Graduate Assistantship	2 grade 14 half time per Academic Year (AY		,	,		,
Summer Graduate Assistantship	2 grade 14 half time	17,928.00	,		,	,
Postdoctoral Scholar		61,008.00	,		,	190,442.57
Part Time Lab Tech	15/hour - 24 hours a week	18,720.00	-			,
Total Labor		331,316.00	331,316.00	344,568.64	358,351.39	1,034,236.03
Fringe - Salary	Full Time Salary Fringe Rate FY25 = 39.9%	71,720.25	71,720.25	74,589.06	77,572.62	223,881.93
Fringe GA	Grad Assistant Fringe Rate FY25 = 12.9%	6,954.39	6,954.39	7,232.57	7,521.87	21,708.82
Fringe Postdoc	Postdoc Fringe Rate FY25 = 27.2%	16,594.18	16,594.18	17,257.94	17,948.26	51,800.38
Fringe Wage/Summer GA	Summer GA/Wage Fringe Rate FY25=8%	2,931.84	2,931.84	3,049.11	3,171.08	9,152.03
Total Fringe	3 3	98,200.66	98,200.66	102,128.68	106,213.83	306,543.17
Total Personnel Costs		429,516.66	429,516.66	446,697.32	464,565.22	1,340,779.19
Equipment	Instrumentation for project XYZ	4.000.00	4.000.00	0.00	0.00	4.000.00
Huck Core Facilities	Microscopy and Cryo EM Core Use	30,000.00	37,000.00	37.000.00	37.000.00	111,000.00
Lab Supplies	Reagents/Lab Supplies	26,635.00			26,635.25	79,905.25
External Evaluator - Consultant		10,000.00	,		,	30,000.00
	Conference Attendance/Annual Summit -			,		
Travel	9 PSU employees	50,000.00	50,000.00	50,000.00	50,000.00	150,000.00
Other Direct Costs		120,635.00	127,635.00	123,635.00	123,635.25	374,905.25
Modified Total Direct Costs		550,151.66	557,151.66	570,332.32	588,200.47	1,715,684.44
Tuition	2 grade 14 halftime Gas per AY tuition	42,400.00	42,400.00	44,096.00	45,859.84	132,355.84
Particpant Support Costs	Participant travel	50,000.00	50,000.00	50,000.00	50,000.00	150,000.00
Total Other Direct Costs	·	92,400.00	92,400.00	94,096.00	95,859.84	282,355.84
F&A Costs (MTDC basis)	F&A Rate 58.4%	321,288.57	325,376.57	333,074.08	343,509.07	1,001,959.71
Total Requested From Sponsor		963,840.22	974,928.22	997,502.40	1,027,569.38	3,000,000.00





**Understanding Costing Principles** 

RA10: Costing Principles for Sponsored Awards: <a href="https://policy.psu.edu/policies/ra10">https://policy.psu.edu/policies/ra10</a>



Expenses must consistently meet all three standards!

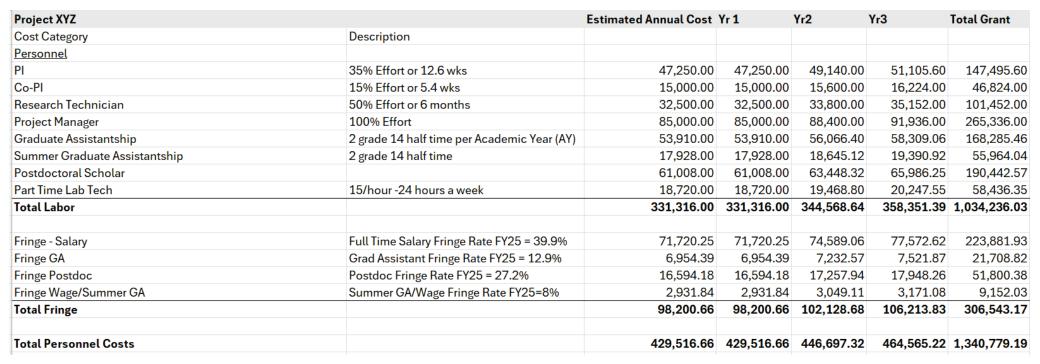
<u>Understanding Cost Categories</u>

- Direct Labor: Salaries and Wages
- Fringe Benefits: Negotiated Rates
- Other Direct Costs
  - Subcontracts, consultants, equipment, supplies, travel, internal/external services etc...
- F&A Costs: Facilities & Administration Costs



#### Labor

#### **Example**





### **Building your Budget**

#### **Direct Labor: Salaries and Wages**

**Step 1:** Start your budget with the labor: Identify your PI, Co-PIs, key personnel and other personnel. Remember that fringe must be added to all base labor amounts. F&A is then added to the total labor cost (Salary plus fringe plus F&A).

- We strongly encourage you to include a project manager for large interdisciplinary grants
- Include fall and spring and summer semester stipend for any graduate assistants (TIP: summer stipend incurs a lower fringe rate). Include tuition for fall and spring only.
- Include postdoctoral scholars Note: There is a minimum salary requirement
- Add any part time/wage positions
- Fringe Benefits and other rates for all labor categories can be found here:

#### Current - Rate Sheet (09-24-2024).xls

GA Stipend Table: <a href="https://guru.psu.edu/resources/rates-and-schedules/stipends-for-graduate-assistants">https://guru.psu.edu/resources/rates-and-schedules/stipends-for-graduate-assistants</a>

Postdoc Stipend Table: <a href="https://guru.psu.edu/resources/rates-and-schedules/stipends-for-postdoctoral-appointments">https://guru.psu.edu/resources/rates-and-schedules/stipends-for-postdoctoral-appointments</a>



## **Building your Budget**

#### **Direct Labor: Salaries and Wages**

- Some funding agencies have a salary cap. Be sure to work with your pre and post award administration to account for that if needed. <a href="RAG64-Salary Caps">RAG64-Salary Caps</a>
- Penn State along with many funding agencies requires a minimum percent of faculty effort: All senior personnel on a project are expected to allocate a percentage of their effort to the sponsored award (either as a direct charge or cost-share), unless there is an appropriate reason for not showing any effort (e.g., instrumentation grants).



## **Building your Budget**

 Salary budgets are based on the percent of time / effort the PSU employee will spend on the project Academic (36wk) vs Summer months (12 wks)

Annualized = 48 weeks

#### Examples:

AY: 1 week per month for 9 months = 9 weeks/36 weeks = 25% AY effort

SU: 3 weeks per month for 3 months = 9 weeks/12 weeks = 75% SU effort

Annual: 18 weeks per year = 18 weeks/48 weeks = 37.5%

• Effort Certification is the process by which PIs certify all salary payments and the percentage of effort actually performed on sponsored awards. This is completed annually and after the end of an award via an automated process in SIMBA.

## Supplemental Pay I and II



#### •Supplemental I Payment:

- Extension of a faculty member's contract in weeks and is considered institutional base pay for effort reporting.
- Only faculty working less than 48 weeks are eligible. Faculty can be paid for additional weeks up to 48wks.
- Example: 36-week appointment eligible for 12 weeks or 33.33% of supplemental I pay per year.
- Paid over the summer for most traditional 36-week faculty appointments (i.e., Summer Pay).
- Coordinate with post award team to determine effort distribution.

Example of supplemental I pay: Base 36wk salary: \$115,200/36wks =\$3,200 per week. 12wks supp I pay = \$38,400

#### •Supplemental II Payment:

- Not typically permitted to be charged to grants as it is similar to overtime.
- Not considered institutional base salary
- Used for work above and beyond the contract.
- Example: Teaching overload.

PSU Supplemental Pay Policy: <a href="https://policy.psu.edu/supplementary-compensation-information-full-time-academic-and-exempt-staff">https://policy.psu.edu/supplementary-compensation-information-full-time-academic-and-exempt-staff</a>

# Maximizing your Proposal Budget for Success: Building your Budget





#### **Fringe Benefits**

- In addition to salaries or wages, PSU employees also receive fringe benefits
- Fringe benefit costs include:

Health Insurance

Workers' Compensation

Life Insurance

Social Security/Medicare

Retirement

**Educational benefits** 

 Fringe benefits are budgeted as a fixed percentage of the salary or wage budget

# Maximizing your Proposal Budget for Success: <u>Building your Budget</u>



#### **Fringe Benefits**

Rates Summary Sheet Site: Current - Rate Sheet (09-24-2024).xls

FRINGE BENEFITS	Rate Type	7/1/24 - 6/30/25
CATEGORY I (Salaries) <sup>1</sup>	$FIXED^2$	39.9%
CATEGORY II (Graduate Asst.)	$FIXED^2$	12.9%
CATEGORY III (Wages)	$FIXED^2$	8.0%
CATEGORY IV (Students)	$FIXED^2$	0.3%
CATEGORY V (Postdocs)	$FIXED^2$	27.2%

#### Examples:

PI salary for one week: \$3,400 \* .399 = \$1,356.60. Total Labor Cost: \$4,756.60

Grad Assistant Stipend one month: \$2,592\*.129 = \$334.37. Total GA Cost: 2,926.37



## **Building your Budget**

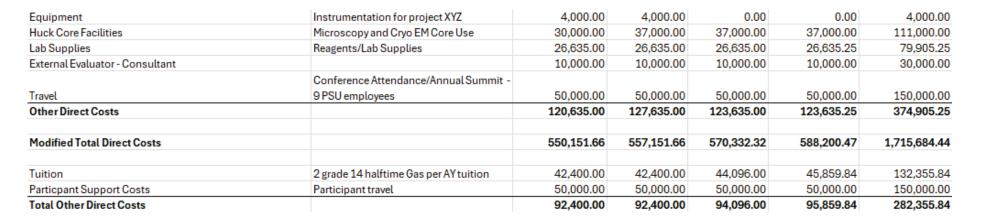
#### **Other Direct Costs (ODC)**

**Step 2:** Identify your non-personnel costs. If you think you'll have subawards, identify them early as they can be complex and take more time to plan.

- Other direct costs can be, but are not limited to, subcontracts, consultants, equipment, supplies and materials, travel, participant support costs, internal or external services, publication costs.
- If you plan to use any of the university's core facilities, be sure to include them in the budget!
- Carefully read the grant solicitation or instructions to see which specific costs are allowed under the ODC category. Some funding agencies may have restrictions on certain types of expenses, or they may have caps for particular line items.

#### **Other Direct Costs**

#### **Example**



# Maximizing your Proposal Budget for Success: **Building your Budget**



#### **Other Direct Costs**

**Estimate Costs Accurately**: For each ODC item, provide a realistic cost estimate based on:

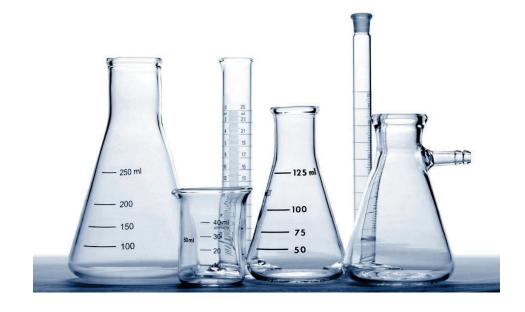
- •Quotes from vendors or service providers
- Historical costs from similar projects
- •Expected travel costs (flights, lodging, per diem ratės, etc.)

Check travel costs here:

https://www.concursolutions.com/home

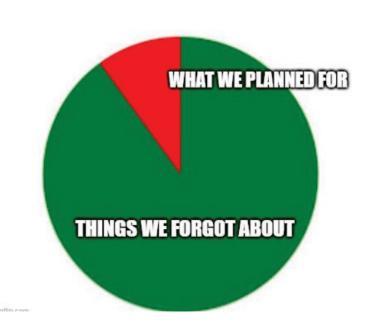
Check per diem rates here: <a href="https://www.gsa.gov/travel/plan-book/per-diem-">https://www.gsa.gov/travel/plan-book/per-diem-</a> rates

•Market rates for consultants and subcontractors



### **Building your Budget**

- **Justify the Need**: For each ODC, explain why it is essential to the success of the project.
- Consider Applicable Rates and Policies: Ensure compliance with the grantor's guidelines on rates for travel, per diem, and equipment.
- Break Down Major Costs: If any of the ODC items are substantial (e.g., purchasing equipment or hiring a consultant), break them down further into specific components (e.g., cost per unit of equipment, number of days of consultancy) to enhance transparency.





## **Building your Budget**

#### **Understand F&A Costs and Their Purpose**

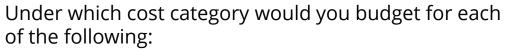
- F&A is typically intended to cover the costs of resources that support the project but aren't directly involved in project work (e.g., administrative salaries, office space and utilities). Calculated annually by the Cost Analysis Office.
- F&A costs are calculated as a percentage of certain direct costs (such as salaries and wages, materials, and supplies). They are generally not applied to certain categories, such as direct participant support costs or equipment purchases over a certain dollar amount, or tuition, depending on the funding agency's rules.
- F&A Rates can be found here: Current Rate Sheet (09-24-2024).xls

# Facilities and Administration (F&A)

#### **Example**

		Estimated Annual				
Project XYZ		Cost	Yr1	Yr2	Yr3	Total Grant
Cost Category	Description					
Personnel						
PI	35% Effort or 12.6 wks	47,250.00	,			,
Co-PI	15% Effort or 5.4 wks	15,000.00				
Research Technician	50% Effort or 6 months	32,500.00	-		,	,
Project Manager	100% Effort	85,000.00	,		,	
Graduate Assistantship	2 grade 14 half time per Academic Year (AY		,			
Summer Graduate Assistantship	2 grade 14 half time	17,928.00	,	,	,	,
Postdoctoral Scholar		61,008.00	61,008.00	63,448.32	65,986.25	190,442.57
Part Time Lab Tech	15/hour -24 hours a week	18,720.00	18,720.00	19,468.80	20,247.55	58,436.35
Total Labor		331,316.00	331,316.00	344,568.64	358,351.39	1,034,236.03
Fringe - Salary	Full Time Salary Fringe Rate FY25 = 39.9%	71,720.25	71,720.25	74,589.06	77,572.62	223,881.93
Fringe GA	Grad Assistant Fringe Rate FY25 = 12.9%	6,954.39	6,954.39	7,232.57	7,521.87	21,708.82
Fringe Postdoc	Postdoc Fringe Rate FY25 = 27.2%	16,594,18	16,594,18	17,257,94	17,948,26	51,800,38
Fringe Wage/Summer GA	Summer GA/Wage Fringe Rate FY25=8%	2,931.84	2,931.84	3,049.11	3,171.08	9,152.03
Total Fringe	0 0	98,200.66	98,200.66	102,128.68	106,213.83	306,543.17
Total Personnel Costs		429,516.66	429,516.66	446,697.32	464,565.22	1,340,779.19
Equipment	Instrumentation for project XYZ	4.000.00	4.000.00	0.00	0.00	4.000.00
Huck Core Facilities	Microscopy and Cryo EM Core Use	30,000.00	37,000.00	37,000.00	37,000.00	111,000.00
Lab Supplies	Reagents/Lab Supplies	26,635,00	,	,	,	,
External Evaluator - Consultant	neagents and expense	10,000.00	, , , , , , , , , , , , , , , , , , , ,	,	,	,
External Evaluation Computation	Conference Attendance/Annual Summit -	20,000.00	20,000.00	20,000.00	20,000.00	33,033.03
Travel	9 PSU employees	50,000.00	50,000.00	50,000.00	50,000.00	150,000.00
Other Direct Costs		120,635.00	127,635.00	123,635.00	123,635.25	374,905.25
Modified Total Direct Costs		550,151.66	557,151.66	570,332.32	588,200.47	1,715,684.44
Tuition	2 grade 14 halftime Gas per AY tuition	42,400.00	42,400.00	44,096.00	45,859.84	132,355.84
Particpant Support Costs	Participant travel	50,000.00				
Total Other Direct Costs	r articipant travet	92,400.00		-	-	-
F&A Costs (MTDC basis)	F&A Rate 58.4%	321,288.57	325,376.57	333,074.08	343,509.07	1,001,959.71
Total Requested From Sponsor		963,840.22	974,928.22	997,502.40	1,027,569.38	3,000,000.00

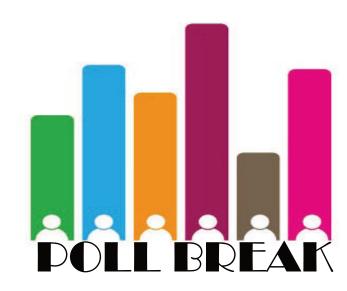
### **Poll**



- A. Tuition paid from College tuition account
- B. Office/Lab Space
- C. PI Effort
- D. Travel

#### Cost category options:

- A. Labor
- B. Other Direct Costs
- C. F&A
- D. Cost Share





## Research Incentive Funds (RIF)

- The Colleges receive annual RIF funds in January based on the previous year's research expenditures and F&A collected.
- 12% of the F&A for all sponsored awards with an F&A rate over 15% is distributed to colleges based on the faculty member's percent of credit on the grant.
- The RIF calculation and distribution is managed by the Office of the Senior Vice President for Research (OSVPR)
- Colleges have different processes in place that determine whether RIF funds are allocated to departments and individual faculty members.
- RIF funding can be used to support research expenditures within university policy.

# Maximizing your Proposal Budget for Success: Cost Share



Definition: Contribution from the institution or other sources towards the total cost of a research project or the portion of the project costs not covered by the grant. Cost share costs should be allowable, allocable and reasonable under the grant's guidelines

BEWARE The Cost Share!!!	Mandatory	Voluntary
Reportable Committed	<ol> <li>Required by sponsor</li> <li>Detailed financial reporting</li> <li>Included in budget/proposal</li> <li>Negative Consequences for failure to meet</li> <li>Rarely negotiable</li> </ol>	<ol> <li>Included in budget/proposal</li> <li>Detailed financial reporting</li> <li>Potential Negative         <ul> <li>Consequences for failure to meet</li> </ul> </li> <li>Commits funds that might be needed later</li> </ol>
Uncommitted Non-reportable	1. No such thing	<ol> <li>Not included in sponsor budget</li> <li>Internal tracking only</li> <li>No financial risk to PSU</li> <li>Can be changed</li> </ol>

Cost Share

- Use the proposal budget for the grant to help you determine your cost share needs
- Create a cost share request spreadsheet organized by costs and the department/college/administrative unit that you will be approaching with the request. Work with your pre-award staff to make your requests. For large grants proposals, the negotiation is between your advocate and the home colleges of your co-Pls.
- Ensure you have agreement from all parties on cost share commitments at least two weeks before proposal submission!
- Central Match requests are made by your pre-award research administrator through the Office of the Senior Vice President for Research.

<u>Cost Sharing/Matching - Research Support</u>



## **Case Study**

Case Study: The sponsor comes back and asks you to reduce your overall budget by 10%. What do you do?



- A. Remove direct costs and request more cost share
- B. Reduce the statement of work to remove a component
- C. Reduce Effort on the grant without changing the SOW
- D. Both A and B

# Huck Institutes Catalysis: Maximizing your Proposal Budget for Success



Summary

- 1. Strategies for using your statement of work (SOW) to create a comprehensive budget that allows you to accomplish all of your project goals Remember your budget is a financial representation of your project!
- 2. Overview of key budgeting components for large-scale grants: estimating labor costs and other direct charges. **Be realistic and accurate.** Check with seasoned PIs for tips and advice!
- 3. Understanding F&A and RIF funding Work with your Dept. Head to learn about your college's RIF distributions.
- 4. Provide a clear process for requesting cost share funding **Plan and request cost share early!!!**



# **Q & A**





NEXT TRAINING ON PROGRAMMATIC ASSESSMENTS:



**Learn more about Huck Catalysis resources:** <a href="https://www.huck.psu.edu/seed-funding-large-proposal-catalysis/huck-catalysis">https://www.huck.psu.edu/seed-funding-large-proposal-catalysis/huck-catalysis</a>