



# ABRF Business Skills Workshop

## Part 3 - Compliance and Rate Setting

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DATE: October 8, 2024 PRESENTED BY: Andy Chitty, Director, University Shared Resources, Oregon Health and Science University

# Acknowledgement

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# Compliance

# Federal Compliance Guidelines


Because many research service center users are paying with federal sponsored dollars, rates charged must adhere to cost principles established by the federal Office of Management and Budget's "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards", commonly referred to as the ***Uniform Guidance*** 2 CFR 200 subpart E - Cost Principles.






# Interpretation and Compliance

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# Uniform Guidance

Uniform Guidance  $\neq$  Uniform Interpretation

Uniform Interpretation  $\neq$  Uniform Compliance



# Smiley/Frowny Face #1

Core recharge centers have been chosen for audits by the Federal government. As Director of the program, you now find that you should review these two cores to prepare yourself for any negative findings the federal government may present.

# Smiley/Frowny Face #1

## **Mass Spectrometry & Proteomics Core Facility (MSPCF)**

This core was anticipated to have 15 users per month and the calculated rates that would achieve near breakeven results as was determined by the core manager. This projection turned out to be wrong when after the first year in business it averaged 22 users per month. This had a dramatic effect on the revenue/recovery. The annual revenue has exceeded the core's annual expense by \$100,000. The core director sees this as an opportunity to purchase some upgraded equipment.



## **Metabolomics Core (MC)**

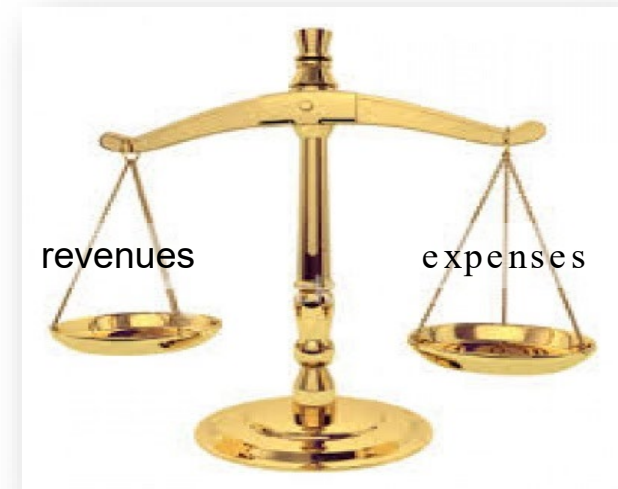
This core has seen a serious drop in business in the last year and has a looming deficit of ~\$56,000. Since MSPCF would have to wait until the next FY to purchase any equipment, the of operations manager of Shared Resources wants to make a transfer of \$56K from Mass Spec & Proteomics Core to the Metabolomics Core. The balance from the \$100,000 surplus will then be transferred to a reserve fund for the future equipment purchases. This will allow the cores to appear more sustainable.



# Concept of Cost Recovery

Many core facilities operate as cost recovery systems (recharge or break-even operations), at either full or partial cost recovery.

*“Operating at break-even means there is no significant profit or loss resulting from charging users for goods or services in the operating cycle... and any excess surpluses or deficits are eliminated by adjusting future rates.”*



# Concept of Cost Recovery

Accurate and appropriate cost recovery allows for:

- Fairness and compliance in charging customers
- Understanding costs and usage levels
- Calculating breakeven point  
(Breakeven rate does not always = price to users)
- Evaluating services
- Covering expenses



# Federal Compliance Guidelines

## Uniform Guidance 2 CFR 200. 468

The costs of such services, when material, must be charged directly to applicable awards based on **actual usage** of the services on the basis of a schedule of rates or established methodology that:

- Does not discriminate between activities under Federal awards and other activities of the non-Federal entity.
- Is designed to recover only the aggregate costs of the services normally both direct & allocable share of indirect costs.
- Rates must be adjusted at least biennially, taking in account deficits or surplus from the previous period.

# Federal Compliance Guidelines

## Uniform Guidance 2 CFR 200. 468

- All internal rates consistent.
- The costs for these facilities need to be based on actual usage, and the rates charged should be designed to cover the actual cost of providing the services, without profit.
- You must re-evaluate your rates at least every two years.

This ensures transparency and fairness in how facilities funded by federal grants charge for their services.

# Federal Compliance Guidelines

## Uniform Guidance 2 CFR 200. 403

### Factors Affecting the Allowability of Cost

#### Direct Cost Criteria:

- Allowable
- Allocable
- Reasonable
- Consistently Treated



# Uniform Guidance 2 CFR 200.403

## **Direct Cost Criteria:**

### **Allowable**

Conform to any limitations or exclusions set forth in these principles or in the Federal award as to types or amount of cost items.

### **Allocable**

A cost is allocable to a particular Federal award or other cost objective if the goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received.

### **Reasonable**

A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost.

### **Consistent treatment**

A cost may not be assigned to a Federal award as a direct cost if any other cost incurred for the same purpose in like circumstances has been allocated to the Federal award as an indirect cost.

# Uniform Guidance 2 CFR 200.403

## **Allowable**

Costs must be permissible under the rules.

## **Allocable**

The cost must benefit the project and only that project.

## **Reasonable**

The cost must make sense given the project's needs and the prices in the market. It shouldn't be excessive or overpriced. A reasonable person would agree that the cost is fair and appropriate.

## **Consistently Treated**

Costs should be handled the same way across the organization. For example, if you treat a certain cost as a direct expense for one grant, you should do the same for similar grants, and not count it as indirect on others.

These factors help ensure that federal funds are used responsibly and fairly for their intended purposes.

# Other things we see

- Investigators can not be charged less by donating equipment to a core.
- Investigators can not be charged less by contributing to equipment purchases.
- Federal funding can not be charged more than non-Federal users (external).
- Cores must operate on a break-even basis – generally every year.
- Fees can not be set solely based on “market prices.”

Core facilities may charge less than the full cost-based rate. In many cases, institutional investment is provided to bring their Year-End balance to zero. Breakeven does not always equal price – unless you factor in the central subsidy.

# Smiley/Frowny Face #1

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# Smiley/Frowny Face #1

## Mass Spec. & Proteomics/Metabolomics

- Rates should be periodically adjusted to prevent surpluses/deficits.
- Transfer of funds not allowable – Funds used for unrelated purposes.
- Universities shall recover equipment costs through depreciation.
- Perhaps the university did not have any written policies in place to prevent this.





# Smiley/Frowny Face #2

I have a new instrument that is covered by a warranty. When the warranty runs out in a couple of years, I'll need to purchase a service contract.

I know how much the service contract is going to be when the warranty runs out. I calculated how much I will have to charge users at that time to reach breakeven, and I plan to start charging them that amount now, while the instrument is under warranty. That has two great benefits:

- I can bank money for future years' operations or purchase new equipment.
- No one will get mad at me for raising rates when the warranty runs out.



# Smiley/Frowny Face #3

I'm a PI. I'm going to put 50% of one core's employee on my RO1 to strengthen the grant. The work performed for the grant will be the same as the services provided by the core, but it helps to have dedicate FTE listed, and it will help offload some of the core's expenses.



Okay. No problem! I'll still put them on the grant, but once funded, I'll move them off the grant and charge through the core so we can be compliant.



# Smiley/Frowny Face #4

I'm a benevolent PI. I have a fantastic Orbitrap Mass Spec. The warranty ran out, so I think I'll be generous and give it to the Proteomics Shared Resource. They will surely appreciate my generosity and allow me to use the instrument for free, since, after all it really is my instrument...



Okay. The heartless core director told me they won't let me use the instrument for free. I'll still give them the instrument, and they are offering me some form of priority access.



# Institutional Policies

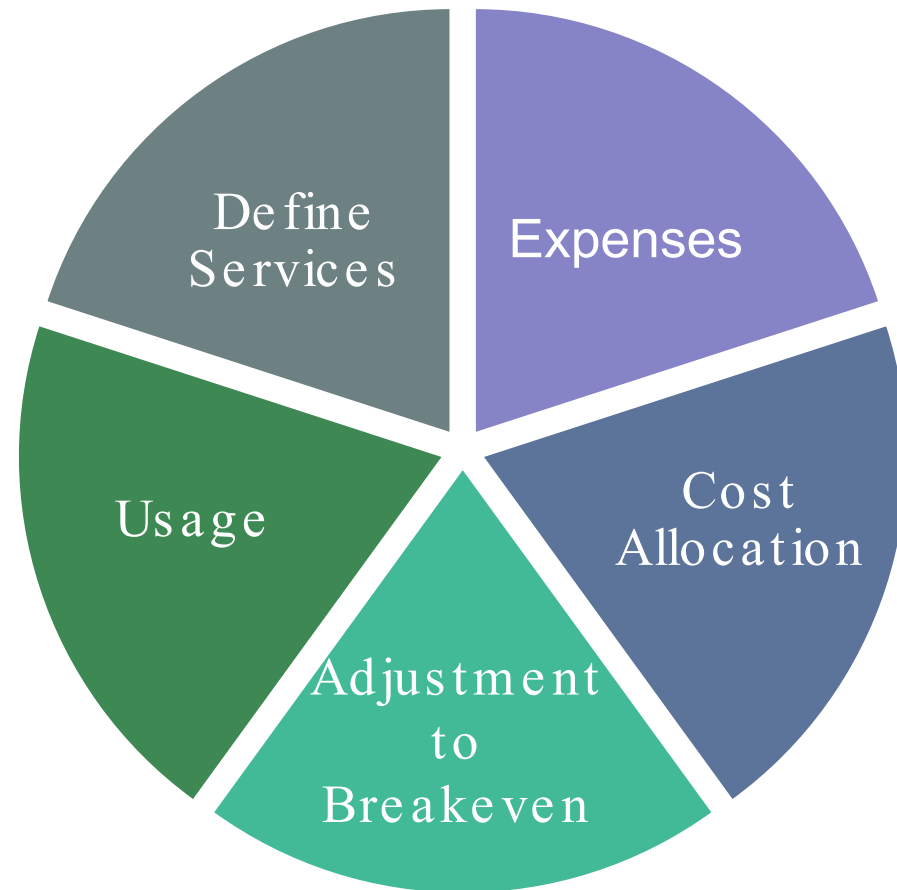
Interpretation of the Uniform Guidance and institutional policies are determined by each entity based on their budget, management structure, public or private, internal risk assessment, makeup of their negotiated facilities and administrative (F&A) cost pool, and other pertinent factors. States may have rules as well – e.g. unfair competition.



# Rate Setting



# Key Components for Rate Setting



# Formula for Rate Calculation

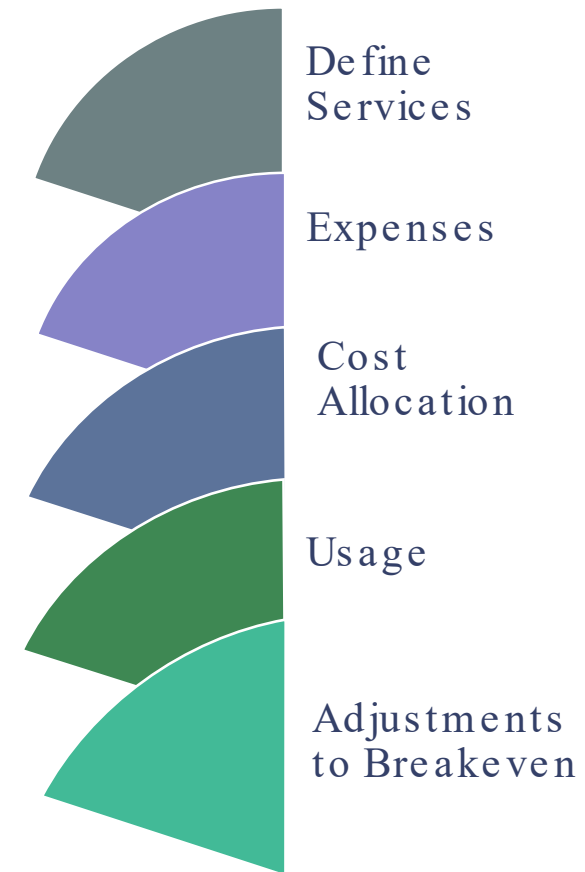
Annual expense  $\div$  annual usage level = breakeven rate

Breakeven point does not always equal price

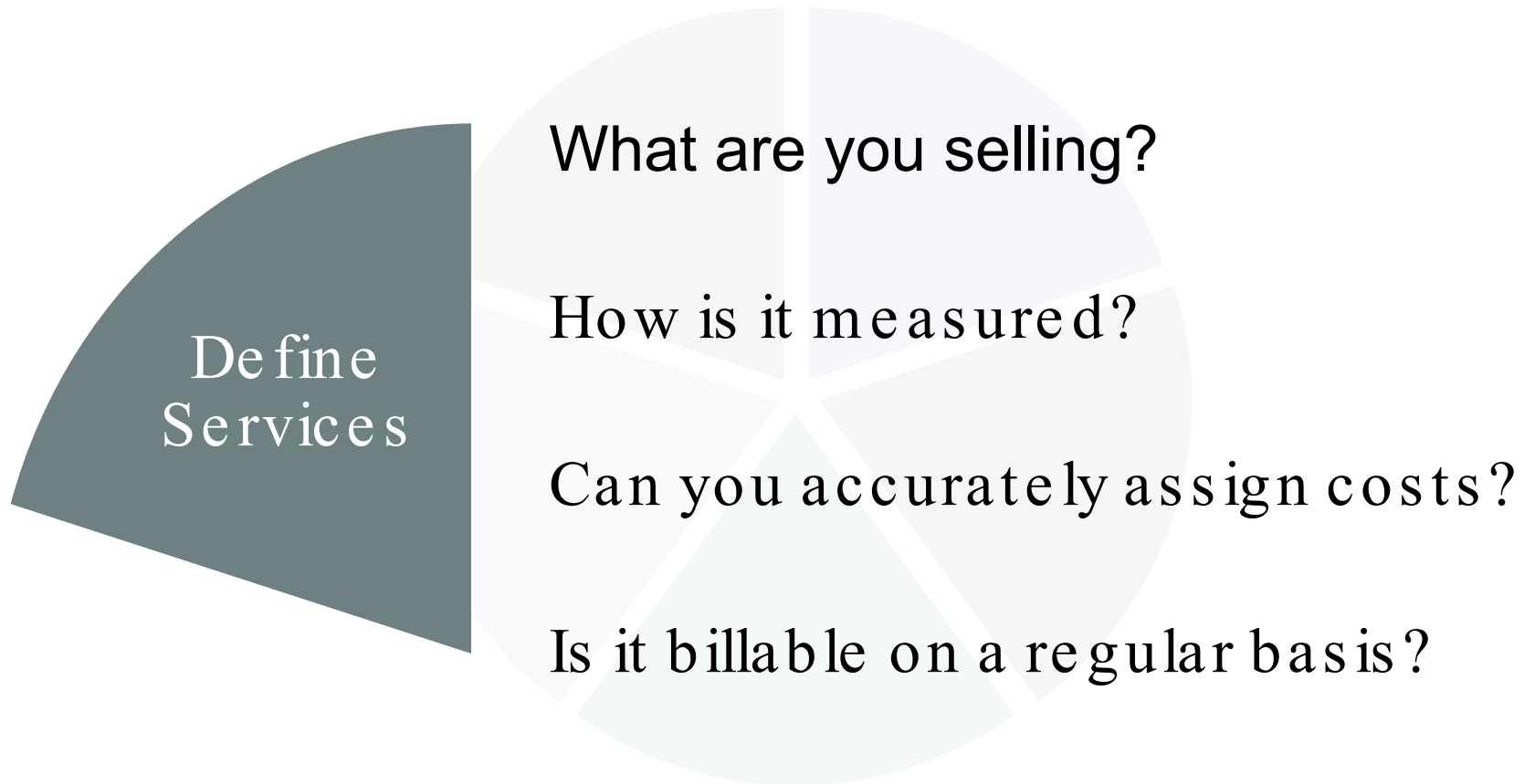
# Illustrated Formula for Rate Calculation

Annual expenses ÷ annual usage level = breakeven rate

Core Facility XYZ			
Expenses	Total Annual Expense	Service 1	Service 2
Personnel (salary & benefits)	15,000	8,500	6,500
Lab Supplies and Consumables	12,000	6,000	6,000
Service Contracts	6,000	2,250	3,750
Equipment Depreciation	10,000	7,500	2,500
Other costs	1,000	500	500
<b>Total Expenses</b>	<b>44,000</b>	<b>24,750</b>	<b>19,250</b>
<b>Estimated Usage per year</b>		<b>150</b>	<b>154</b>
<b>Breakeven price per unit (sales per year / total costs)</b>		<b>165.00</b>	<b>125.00</b>



# Key Component: Define Services



# Key Component: Define Services

Evaluate each proposed service:



Is it a stand-alone service or part of a bundle?

How is it different from other services *in terms of its costs?*



# Key Component: Define Services

Include a consultation or staff time / bench time rate

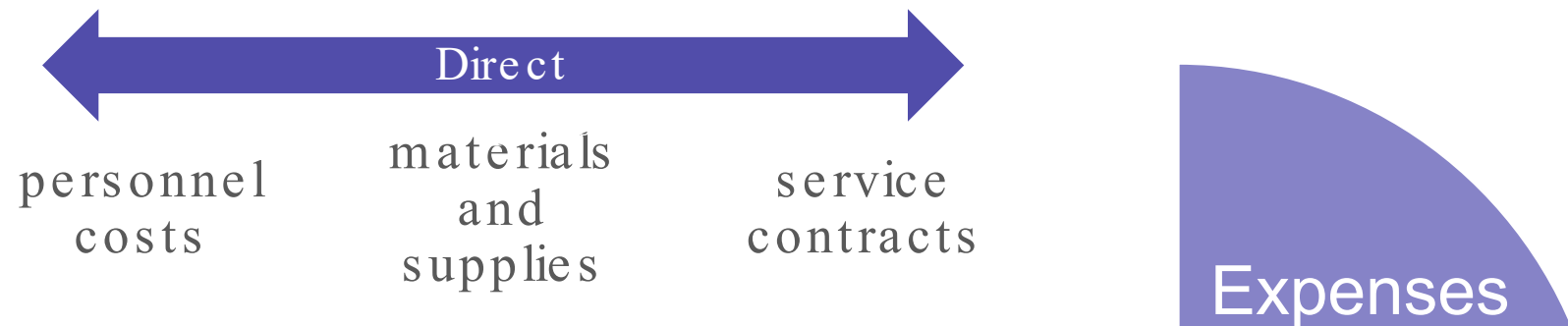


Define  
Services

Always have a mechanism in place to charge for one offs, one-of-a-kind projects, excess consultation time

# Key Component: Expenses

Costs included in the rate must be contributing to that service

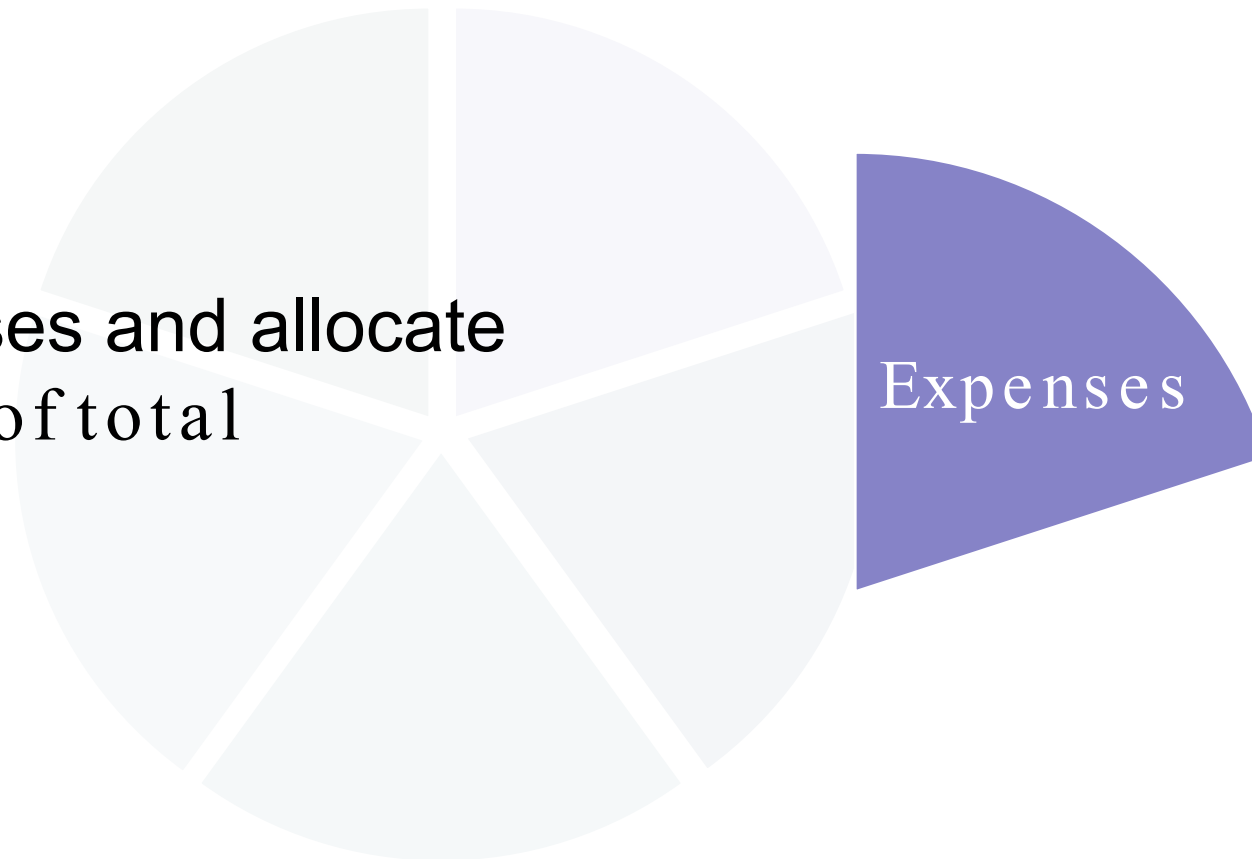


Other costs that *may be* recovered:



# Key Component: Expenses

Annualize expenses and allocate  
as a percentage of total



# Key Component: Expenses

## Equipment and Depreciation (if applicable)

Equipment is classified as an asset when it has a purchase price over a certain threshold (\$5 K) and a useful life of more than one year (OMB changed this to \$10 K as of this month).

The purchase price of an asset is spread over its useful lifespan. Expensing the purchase price across multiple years is referred to as depreciating.



Expenses

# Key Component: Expenses

Depreciation – not mandatory

Non-federally funded equipment can be depreciated on the core, IF it is not depreciated centrally as part of the indirect costs.

Core can then set aside the funds for future purchases.



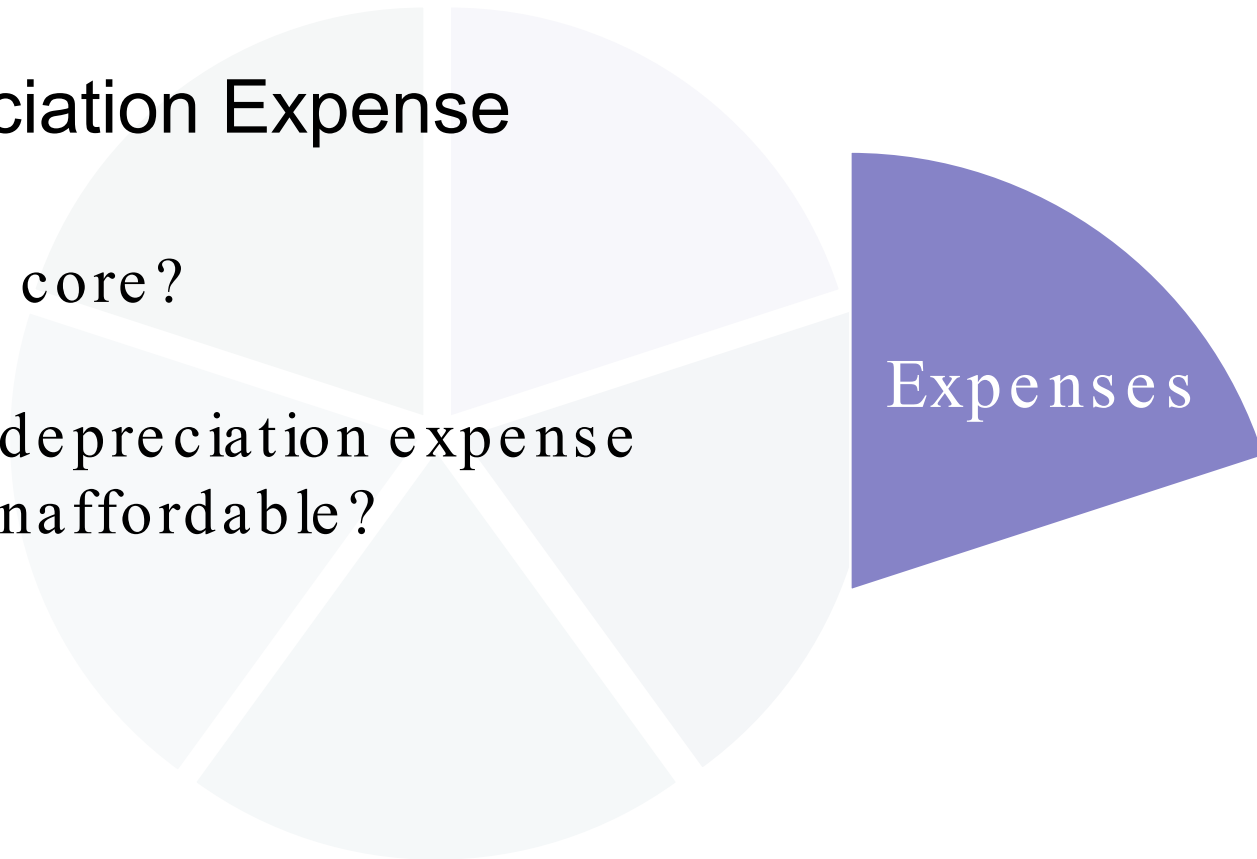
Expenses

# Key Component: Expenses

## Equipment Depreciation Expense

Is it allowable on the core?

Will inclusion of the depreciation expense render the service unaffordable?



# Key Component: Expenses

## Staff Training and Development

Generally allowable if directly applicable to the job, such as special certifications, technology related, etc.

## Indirect Direct expenses

Office supplies, computers, accounting and administrative staff, etc.; these items are not actually part of the output but required to run the core and can be attributed to core usage.




Expenses



# Key Component: Cost Allocation

Cost allocation is the process of assigning expenses to each service at the level used to produce that service.

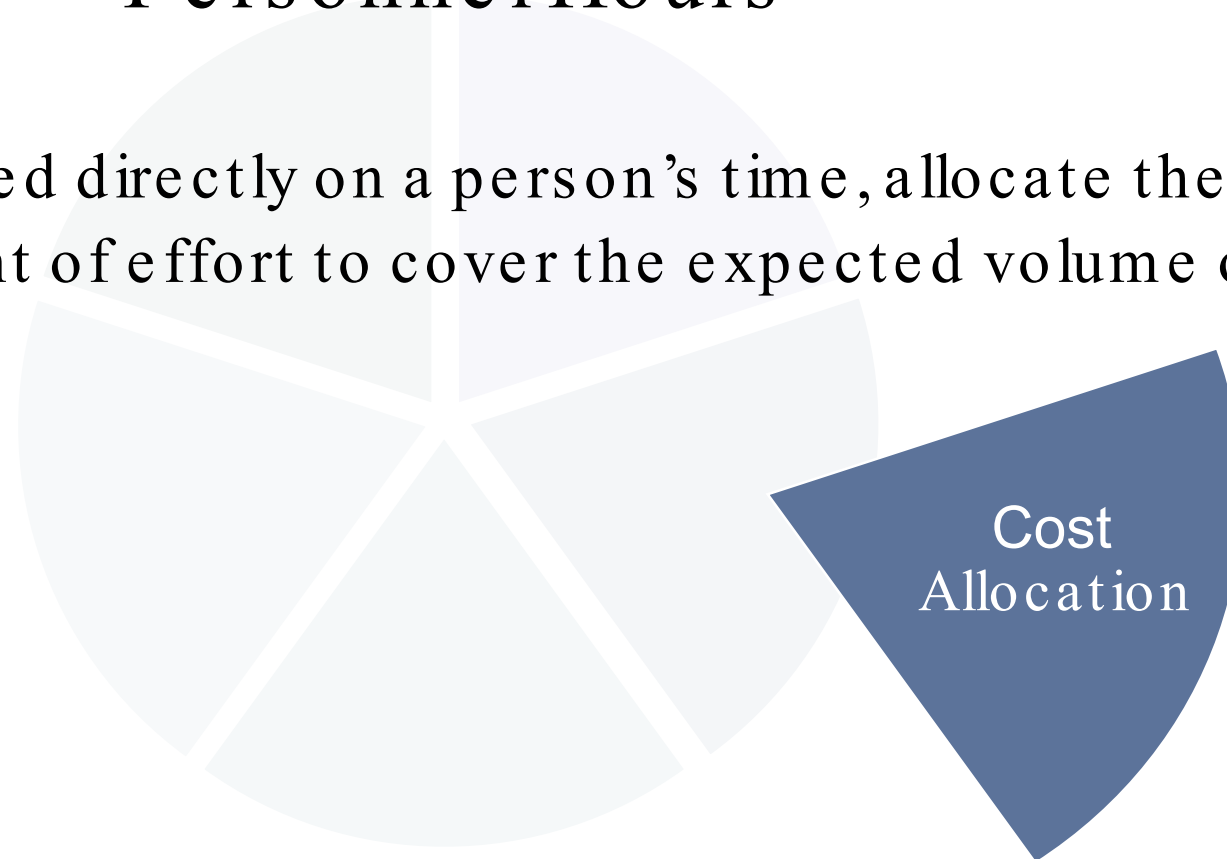


Expenses	Annual Expense	Service 1	Service 2
Personnel (salary & benefits)	15,000	8,500	6,500
Lab Supplies and Consumables	12,000	6,000	6,000
Service Contracts	6,000	2,250	3,750
Equipment Depreciation	10,000	7,500	2,500
Other costs	1,000	500	500

# Key Component: Cost Allocation

## Personnel Hours

When a rate is based directly on a person's time, allocate the appropriate amount of effort to cover the expected volume of work



# Key Component: Cost Allocation

Calculating allocations for rates based on  
people hours

Base allocation on actual billable hours per  
year

2080	hours in a work-a-day year
-88	paid holidays
-80	assumed leave time
-40	assumed sick time
1872	working hours in a year

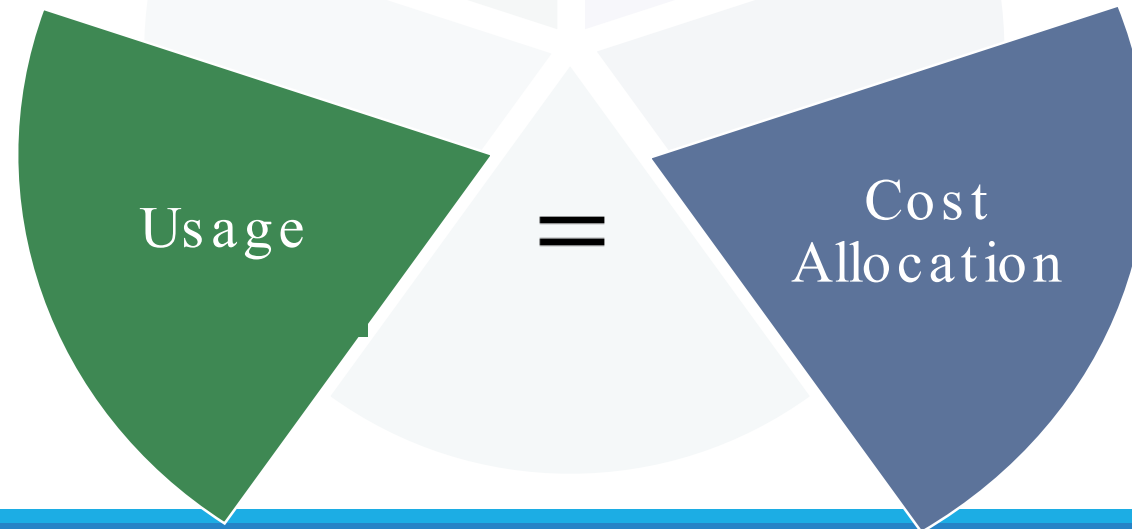


Cost  
Allocation

# Key Component: Allocation and Usage

Rates based on direct hours

You can't sell more than you have



# Key Component: Usage

## Sources of Data



- Historical data over a rolling period of time
- Know your users
- Capacity: staff time and/or instrument time

# Key Component: Usage

## Over-estimating usage

total expenses for Service 1	\$ 10,000.00
estimated annual usage units	500
Breakeven price per unit	<u>\$ 20.00</u>

If you sell 250 units you will  
recover only half your  
expenses

Actual annual usage units	250
Revenue: 250 units @ \$20.00	<u>\$ 5,000.00</u>
Deficit	<u>\$ 5,000.00</u>

## Under-estimating usage

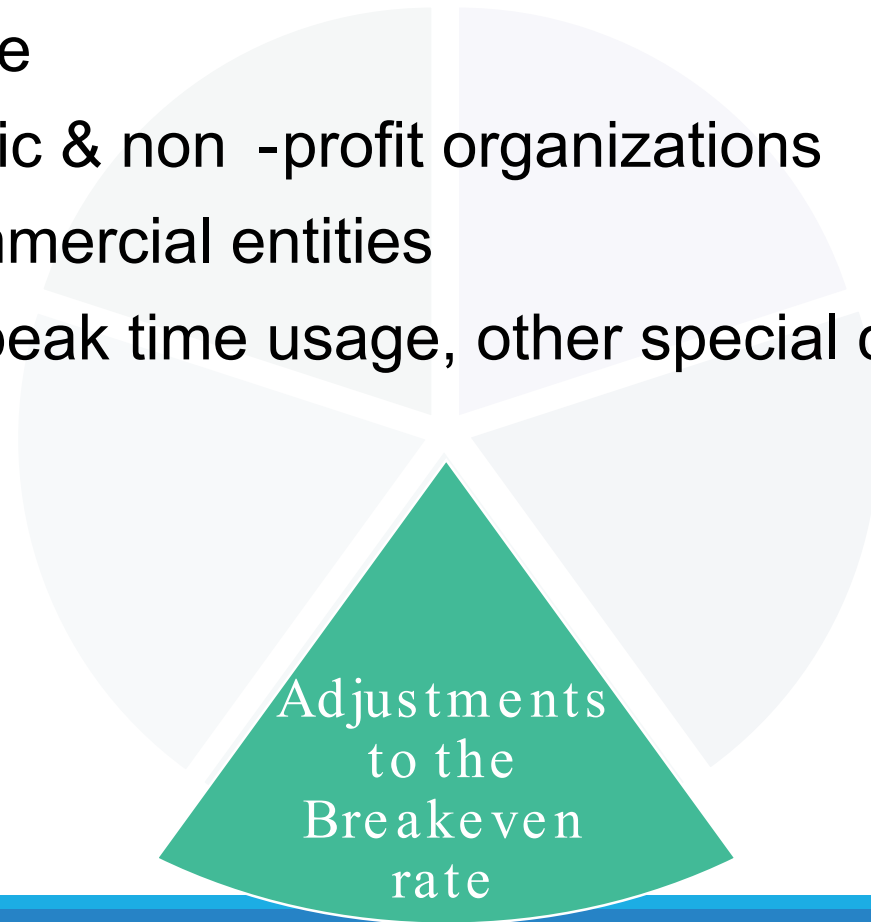
total expenses for Service 1	\$ 10,000.00
estimated annual usage units	500
Breakeven price per unit	<u>\$ 20.00</u>

If you sell 600 units, you are  
recovering more than  
breakeven

Actual annual usage units	600
revenues	<u>\$ 12,000.00</u>
Surplus	<u>\$ 2,000.00</u>

# Key Component: Adjustments to Breakeven

- Subsidized Usage
- External academic & non -profit organizations
- Industry and commercial entities
- Bulk pricing, off peak time usage, other special circumstances

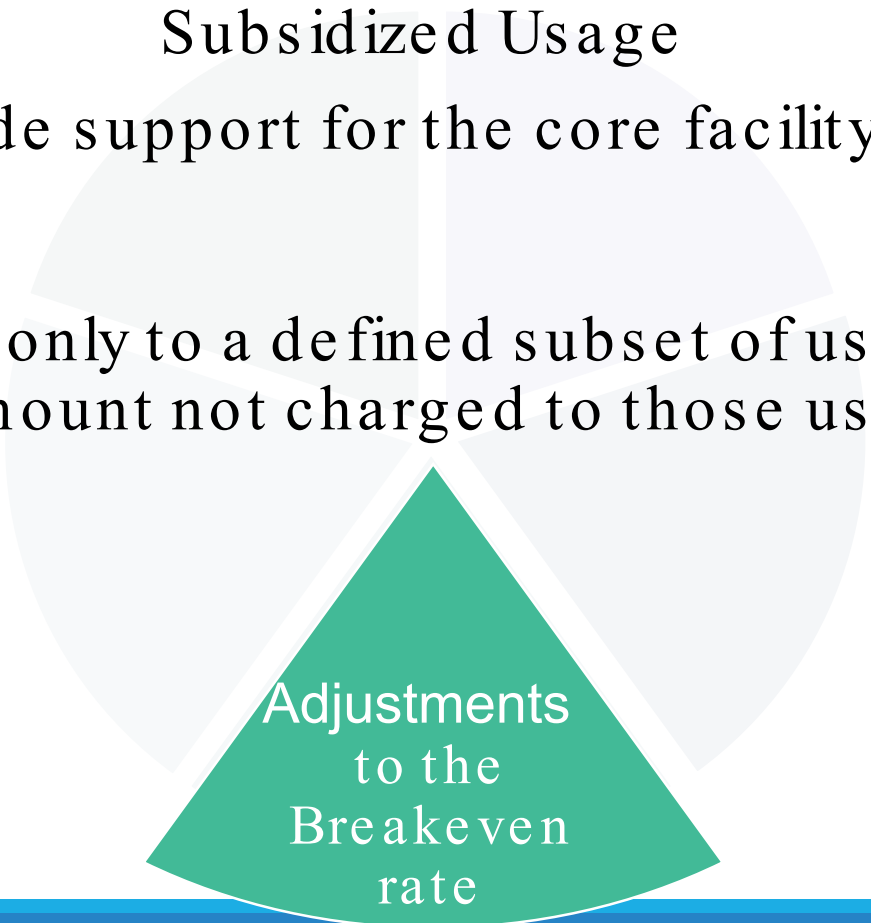


# Key Component: Adjustments to Breakeven

## Subsidized Usage

Subsidies that provide support for the core facility and are applied to all users equally.

Subsidies that apply only to a defined subset of users - the subsidy is used to cover the amount not charged to those users.



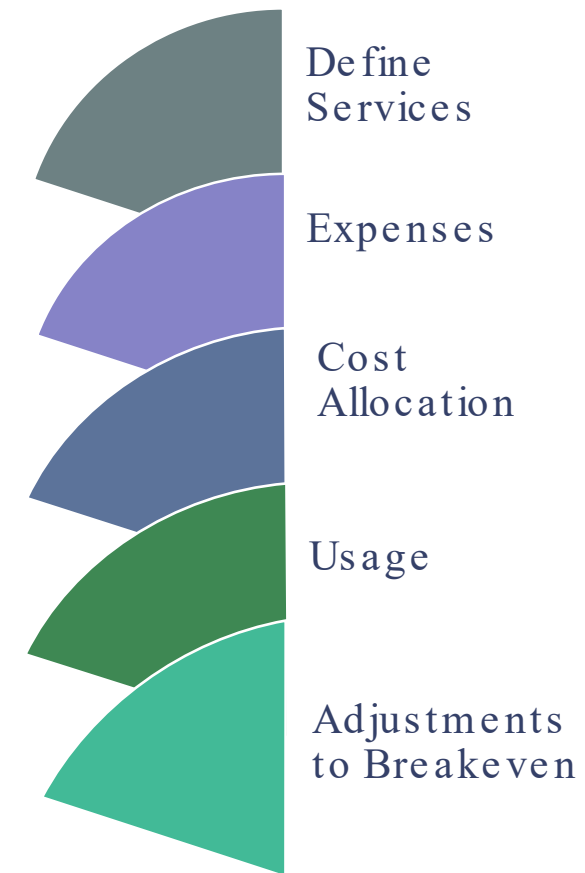
Adjustments  
to the  
Breakeven  
rate



# Key Component: Adjustments to Breakeven

Annual expenses ÷ annual usage level = breakeven rate

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# Key Component: Adjustments to Breakeven

## Subsidized Usage

A. Subsidies that provide support for the core facility and are applied to all users equally:

<b>Total Expenses</b>	<b>44,000</b>	<b>24,750</b>	<b>19,250</b>
<b>Subsidy</b>	<b>(10,000)</b>	<b>(5000)</b>	<b>(5000)</b>
<b>Net Expenses</b>	<b>34,000</b>	<b>19,750</b>	<b>14,250</b>
<b>Estimated Usage per year</b>		<b>150</b>	<b>154</b>
<b>Breakeven price per unit (total expenses / sales per year)</b>		<b>\$ 165.00</b>	<b>\$ 125.00</b>
<b>Subsidized Price per Unit</b>		<b>\$ 131.67</b>	<b>\$ 92.53</b>

Subtract amount of subsidy from total expenses for each rate, then apply formula using the net expenses

Annual NET expense ÷ annual usage level = subsidized rate

# Key Component: Adjustments to Breakeven

## Subsidized Usage

- B. Subsidies that apply only to a defined subset of users;  
The subsidy is used to cover the amount not charged to those users

	service 1	service 2
<b>Breakeven price per unit (total expenses / sales per year)</b>	<b>\$ 165</b>	<b>\$ 125</b>
<b>Total Subsidy for User Group A</b>	<b>\$ 1000</b>	<b>\$ 1000</b>
<b>Level of usage for Group A</b>	<b>50</b>	<b>100</b>
<b>Subsidy per unit for Group A</b>	<b>\$ 20</b>	<b>\$ 10</b>
<b>Amount charged to Users in Group A</b>	<b>\$ 145</b>	<b>\$ 115</b>

Divide the amount of subsidy per rate by expected level of subset usage to arrive at the amount of discount applied to each unit of each rate

# Key Component: Adjustments to Breakeven

Additions to breakeven rate for:

External academic & non-profit organizations

- Negotiated Facilities and Administrative rate (F&A rate)

Industry and commercial entities

- Negotiated Facilities and Administrative rate (F&A rate)
- Profit to reach 'market' rate

Adjustments  
to the  
Breakeven  
rate

# Key Component: Adjustments to Breakeven

## Reduced Pricing For:



Bulk Rate

Off Peak time  
usage

Other special  
circumstances

Any adjustments to the breakeven rate should be based on a difference in cost or the application of a subsidy to offset the reduced rate.

If reduced pricing is offered, it must be available to all users meeting the same criteria.

# Accounting for Surpluses or Deficits

## Surplus

Surpluses occur when there is more usage than estimated, or costs are lower than anticipated.

Eliminate surplus by reducing rates in the next period.

## Deficit

Deficits occur when sales are lower than expected, or costs run higher. Recover deficits by adding into your pricing in future periods until back at break even.

# Fund Balance

## Components of the account fund balance

- Carry forward allowance
- Equipment depreciation reserve
- External sales reserve

# Fund Balance

## Make-up of the recharge account fund balance

### *Carry Forward Allowance*

- 60 to 90 days annual operating expense
- Calculate the average monthly expense over a 12 to 18 month period, multiply by 2 or 3 months for allowable carry forward amount

### *Equipment Depreciation Reserve*

- Accumulated depreciation pool
- Add annual depreciation for each year, subtract out any equipment purchases made from the reserve

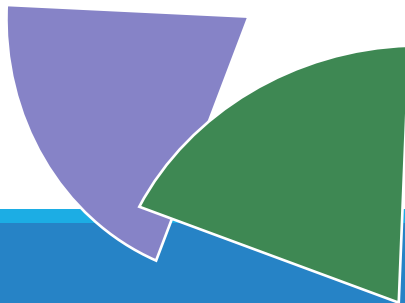
### *External Sales Reserve*

- Track any F&A component charged to external users
- Add F&A collected to running balance, subtract out any purchases made from the reserve



# Best Practices

- Review rates annually and make any needed adjustments.
- Invoice at regular intervals. For long term projects, this may mean *defining your services* in a manner that allows for periodic billing.
- Maintain a log of all output.
- Record all revenues and expenses in a single recharge account.



# Fund Balance

<u>Fund Balance Calculation - Adjust for depreciation, reserves and working capital</u>		
Fund balance on a given day		26,220
Less accumulated depreciation	(2,800)	
Less external sales F&A reserve	(2,380)	
		(5,180)
Actual operating fund balance		21,040
Less 60 day working capital allowance (6250 x 2 months)		12,500
This amount would be considered a surplus which should be included as a negative in the rate structure to return to breakeven		8,540

Name of Research Service Center: name  
 Account Number: account  
 Date: date

color coded areas contain preset formulas!

**BILLING RATE DEVELOPMENT WORKSHEET**

Rate	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rate 6	Rate 7	Rate 8	Totals
<b>Title of Rate</b>									
<b>COSTS</b>									
<b>DIRECT COSTS</b>									
a Salaries & Fringe Benefits	-	-	-	-	-	-	-	-	-
b Materials & Supplies	-	-	-	-	-	-	-	-	-
c Equipment Maintenance Contracts	-	-	-	-	-	-	-	-	-
d Other	-	-	-	-	-	-	-	-	-
Subtotal Direct Costs	-	-	-	-	-	-	-	-	-
Equipment Depreciation	-	-	-	-	-	-	-	-	-
<b>TOTAL DIRECT COSTS</b>	-	-	-	-	-	-	-	-	-
Add Allowable Fund Balance Deficit/(Surplus)									
<b>TOTAL COSTS TO BE RECOVERED</b>	-	-	-	-	-	-	-	-	-
Less Subsidies									
<b>NET COSTS TO BE RECOVERED</b>	-	-	-	-	-	-	-	-	-
Annual Operating Level	100								
Unit of measure	sample	Hour							
<b>BILLING RATE</b>									
(Total Costs to be Recovered/Annual Operating Level)									
a Internal Break-even Rate	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
b Internal Net Rate	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
c External Minimum Rate	-	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
d External Market Rate									
e External Other									
Member Subsidy 1 (underwriting for members only)	-	-	-	-	-	-	-	-	-
Member group annual usage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Subsidy / annual usage	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Member group rate	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>F &amp; A Rates:</b>									
* 55.5% beginning 7/1/17									
Proposed Internal Rate									
Proposed Internal Other Rate									
Proposed External Rate									
Proposed External Other Rate									

Sample  
rate development worksheet:  
summary page



Sample  
rate  
development  
worksheet:  
supplies detail  
page

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
			Name of Research Service Center: name															
			Account Number: account															
			Date: date															

**Listing of Materials & Supplies**

Description of Material/Supply	account	Total Amount	Amount Allocated to:																	
			Rate 1		Rate 2		Rate 3		Rate 4		Rate 5		Rate 6		Rate 7		Rate 8		Totals All Rates	
			0%		0%		0%		0%		0%		0%		0%		0%		%	\$
			%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$
				-		-		-		-		-		-		-		-	0%	-
				-		-		-		-		-		-		-		-	0%	-
				-		-		-		-		-		-		-		-	0%	-
				-		-		-		-		-		-		-		-	0%	-
				-		-		-		-		-		-		-		-	0%	-
				-		-		-		-		-		-		-		-	0%	-
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				-		-		-		-		-		-		-		-	0%	-
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**May you find effective ways to motivate for compliance, and may your operations receive only the smiliest of faces!**



# Thank you

FAQs for costing of NIH-Funded Core Facilities:

<https://grants.nih.gov/grants/guide/notice-files/NOT-OD-13-053.html>