BUSINESS SKILLS FOR CORE FACILITIES

South Central Core Collective

October 8, 2024

Part 2: Core Facility as Business Model

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Reality:

Many core facility scientists are charged with managing their labs as small businesses but have never had any formal training in finance or accounting. The same can be said for managing other resources including space and personnel.

Therefore, they are at a disadvantage when it comes to strategic decisions that involve resources. This includes determining how much money is needed to run and evolve the core, how to appropriately set recharge rates and how to best manage expenses.

What is a Business Model?

"A business model is a conceptual structure that supports the viability of the business and explains how it operates, makes money, and how it intends to achieve its goals and acts as a blueprint for the business and a roadmap to succeed." – Feedough.com

"A business model is supposed to answer who your customer is, what value you can create/add for the customer and how you can do that at reasonable costs." - Peter Drucker

Therefore, a business model is a description of how a company creates, delivers, and captures value for itself as well as the customer.

Components of a Business Model
4 Key Aspects

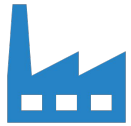
THE PRODUCT: What the business provides

THE CUSTOMER: Whom the business serves

THE OPERATING MODEL: How it provides its services

FINANCIALS: What are the costs involved & how the business generates income/revenue

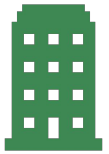
Types of Business Models



Manufacturer

Distributor

Retailer



Franchise

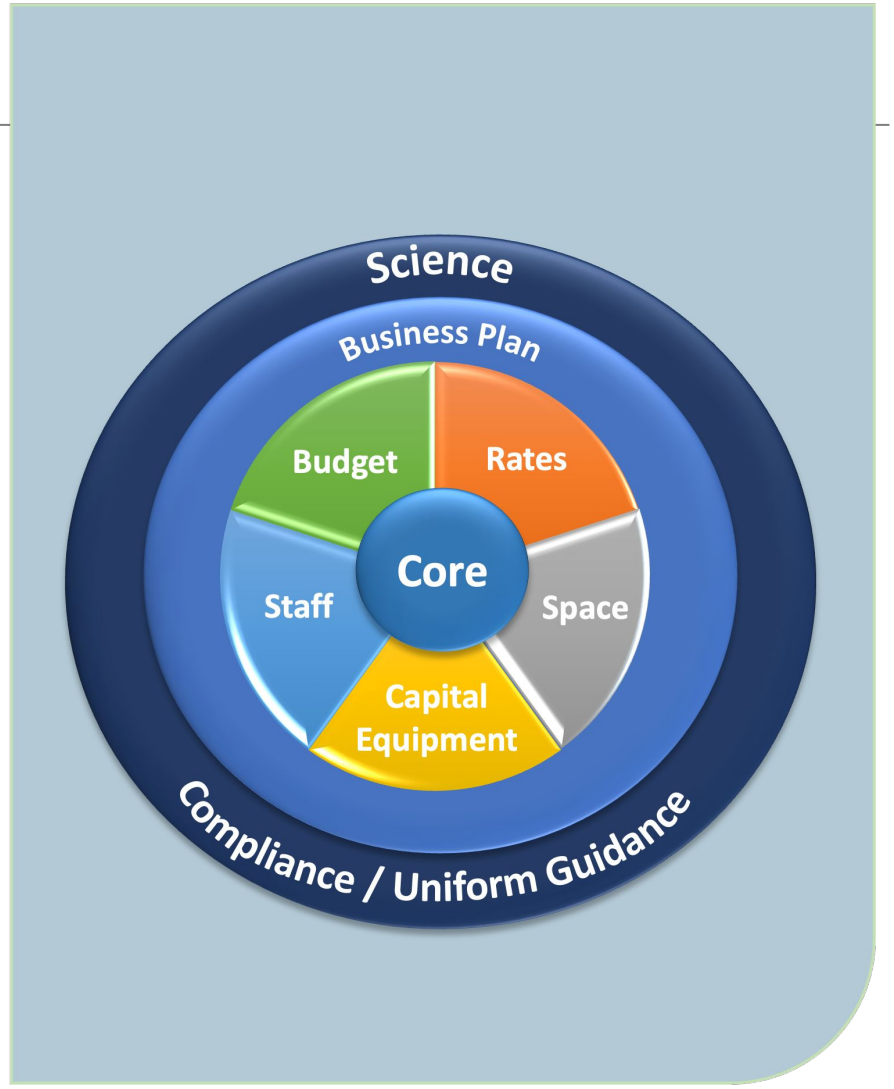
Core Facility

What is a Core Facility

"Core facilities are centralized shared research resources that provide access to instruments, technologies, services, as well as expert consultation and other services to scientific and clinical investigators……"

The typical core facility is a discrete unit within an institution with:

- Dedicated personnel
- Discrete expenses
- Equipment
- Defined space
- User fees to recover costs (Rates)
- Federal funding support – either direct or via recharge

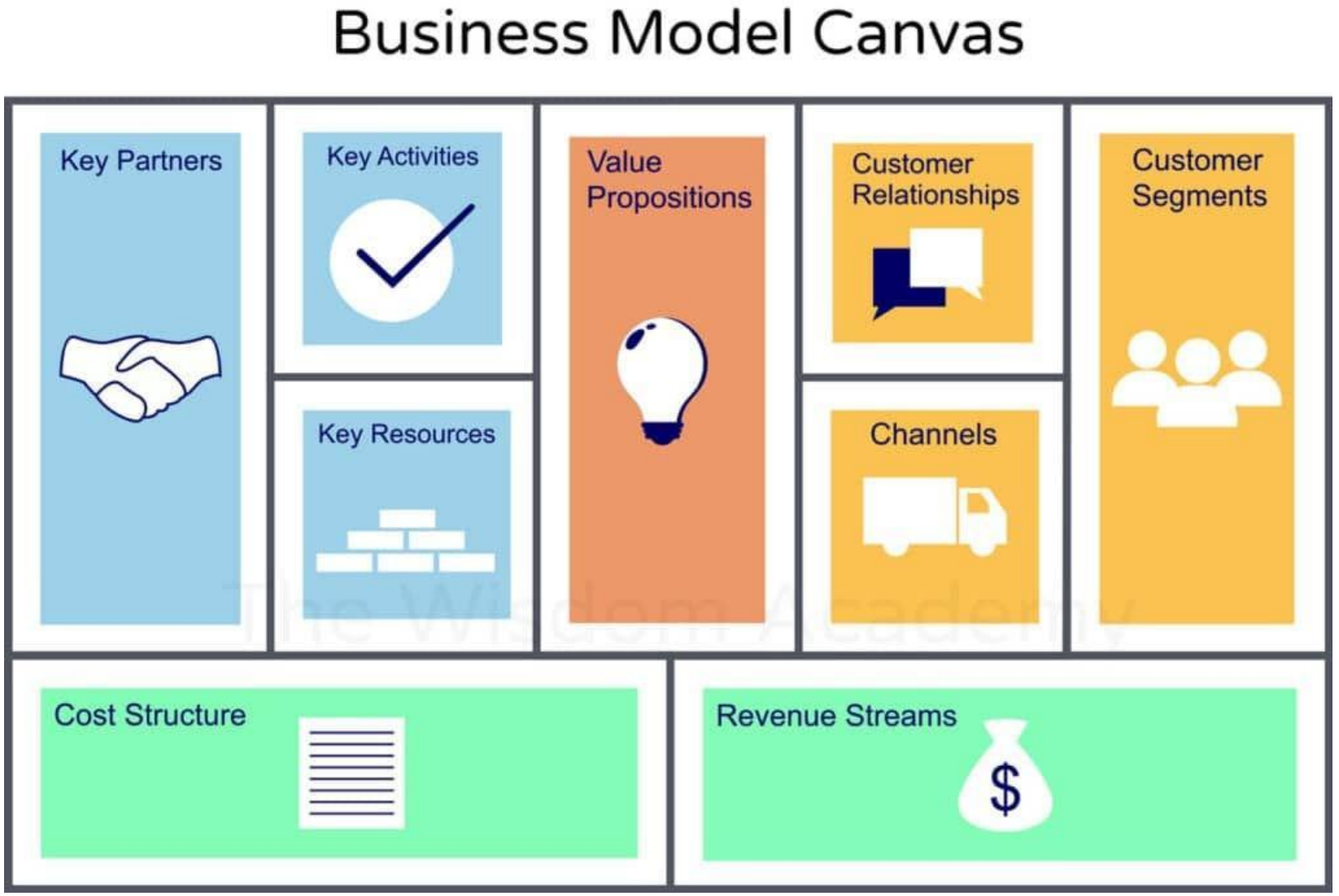


Concept of Cost Recovery vs. Non-Profit

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."

This differs from a non-profit entity, which can make profit, but the profit goes back into fulfilling the mission of the organization at large instead of going to shareholders or owners.



The Business Model Canvas

The Association of Biomolecular Resource Facilities

Core Components: Business Planning

Budget Components & Key Partners

Expenses

- Equipment
- Equipment maintenance
- Consumables
- Personnel

Projected Revenue

- Services volume
- Equipment use volume

Operation Components & Key Partners

- Survey to determine services needed
- Equipment
- Space (wet & dry)
- Utilities needed (electrical, HVAC, lab gases)

Business Considerations:

Why, What, Who, How much, How measured, Who else?

Purpose of the core

(Value Proposition)

Specific services or products offered?

(Key Activities)

How will services/products be measured – labor/machine hours, per test, CPU unit, etc.?

(Cost Structure)

Will be primary users (internal, external) and what is their source of funding?

(Customer Segments)

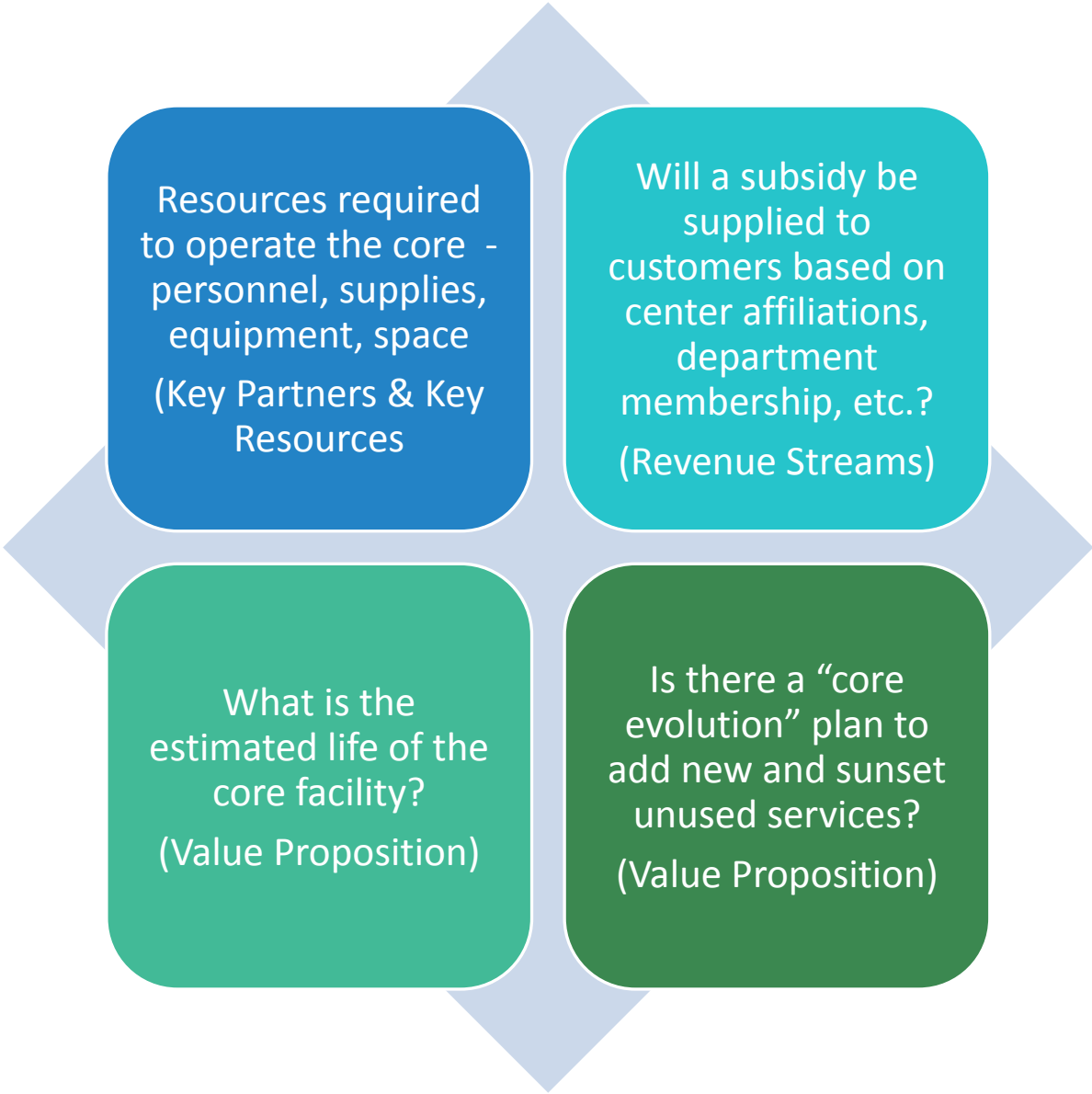
Demand for the service/product?

(Value Proposition)

Do other core facilities offer similar services/products?

(Value Proposition & Revenue Streams)

Core Facility Considerations - continued



Core Operations Review

- With a focus on scientific expertise, provide a justification for the personnel.
- Is there an advisory/oversight committee?
- What additional funding exists to support the service center/core?
- Will the service center/core be supported through user fees, grants, other sources?
- Is there a specific request for subsity/other resources to be provided by the institution (e.g. space)?
- Where will the services provided take place?

Core Operational Review

- Does the core overlap with any existing centers/cores? If so, describe the unique properties and how competition will be avoided.
- Can the proposed services be obtained from an outside vendor or contract research organization, and if so, at what cost?
- Provide usage statistics, broken down by department/division if service is currently offered.
- Compare an equivalent core within your geographic area, with a specific focus on services offered, pricing and usage.
- Define the benefits of providing the services onsite rather than outsourcing.

Business Office/Financial Review

Review a detailed description of the proposed goods or services	Who are the customers and their funding sources (e.g. general funds, grants, clinical revenue)	Review the justification for the proposed service	What is the frequency and method of collecting service revenue?
Five-year projections: expenses, revenue and capital equipment needs (instrument longevity)	Review the rate schedule supported by documentation of cost to provide the service	How will unanticipated deficits be supported – is there a defined fund?	Who is responsible for the scientific/technical operations and who is responsible for managing the financial/administrative duties?

Cost Analysis Review

FAQs for Costing of NIH-Funded Core Facilities

Notice Number: NOT-OD-13-053

Key Dates

Release Date: April 8, 2013

Usually, to become an approved service center and collect revenue, your facility must:

Operate in accordance with Office of Management & Budget (OMB) Uniform Guidance (UG) 2 CRF part 200

Federal regulations require that the cost of goods and services, when material, be charged directly to the applicable awards based on the actual usage of goods and services.

The usage benchmark is the volume of work expected to be performed expressed in units such as labor hours, machine hours, CPU time or any other reasonable measurement.

A separate rate should be calculated for each discrete product or service offered to users

Facilities SHOULD NOT use a billing structure where users are charged a membership fee or any other metric that is not based on actual usage.

REASONABLE INTERPRETATION OF OMB GUIDELINES: The federal government should be charged the lowest possible rate, and all federally funded investigators should be charged equitably.


Depreciation
Services
Rate Setting
Breakeven
Usage
Capital Equipment
Cost Allocation
Direct Expenses
Deficit
Expenses
Capacity
Lease Agreements
Indirect Expenses
Surplus
Service Agreements
Subsidy
Uniform Guidance
Consumables
Annual expenses ÷ annual usage level = breakeven rate
Discounts
External Customers

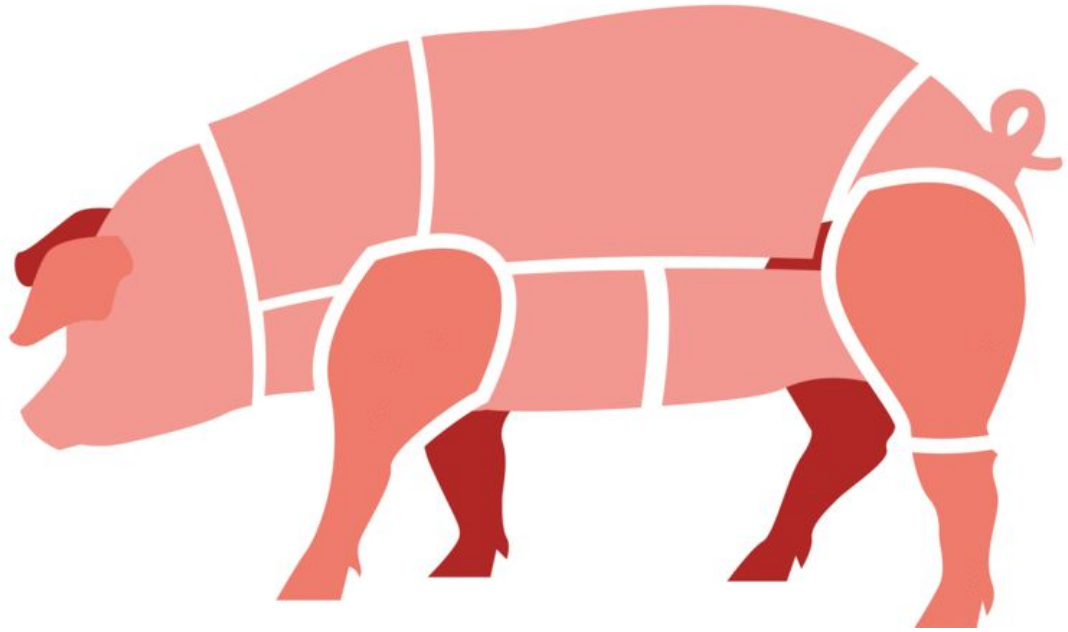
The Association of Biomolecular Resource Facilities

Core Components: Budget

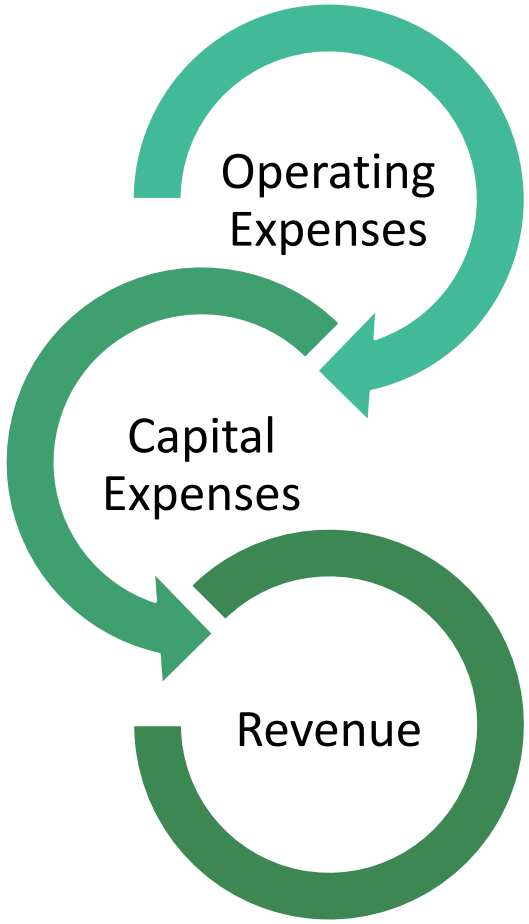
What is an Annual Operating Budget?

Budget = Plan = Forecast = Annual Estimate = Best Guess

That requires several itemized components be put together from a given time in order to help plan for the future.



Budget Components



- Salary & Fringe
- Consumables
- Instrument Service Contracts

- Equipment
- Space
- Facilities/Utilities

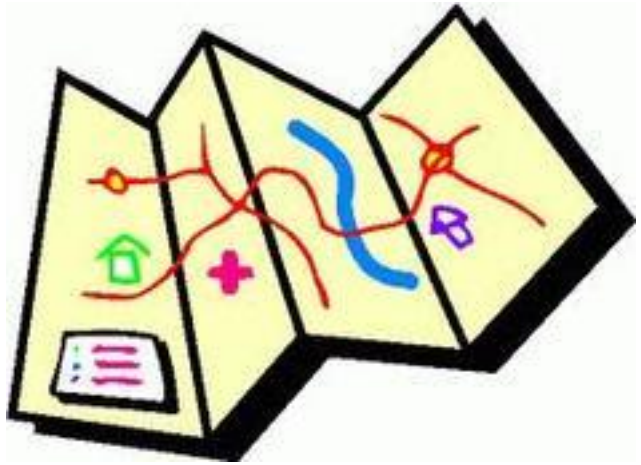
- Fee for service Revenue
- Grant Support
- Subsidy from Institution (Passive or Active)

Budgeting requires informed decision making and acknowledgement of history and vision

- Know your facility history
- Know the community in which your facility operates: Internal and External
- Know your vision/mission for your facility
- Be sensible
- Enact the smell test
- Remember – you are the expert of your facility

Benefits of Knowing Your Budget

- It creates transparency between all stakeholders in decision making processes associated with core facilities
  - Administration
  - Division/Department
  - Financial Administrators
  - Core Directors
  - Core Staff
- You become the navigator of the facility
- Creates a sense of authorization and better front line management of your facility



Key Components: Step 1 – Identify Expenses

People

- Core Personnel
- Administrators that help the core
- Know their effort in the facility

Equipment and Supplies

- Consumables
- PPE
- Instruments
- Supply Gases, LN2

Contracts

- Service Agreements
- Standing orders
- Know the start and end dates

Conferences and Training

- Membership Fees
- Travel Costs
- Conferences
- Training Costs

Key Components: Step 2 – Identify Funding Resources (Revenue)

External Grants

Philanthropy

Fee for Service Revenue

Institutional Subsidy

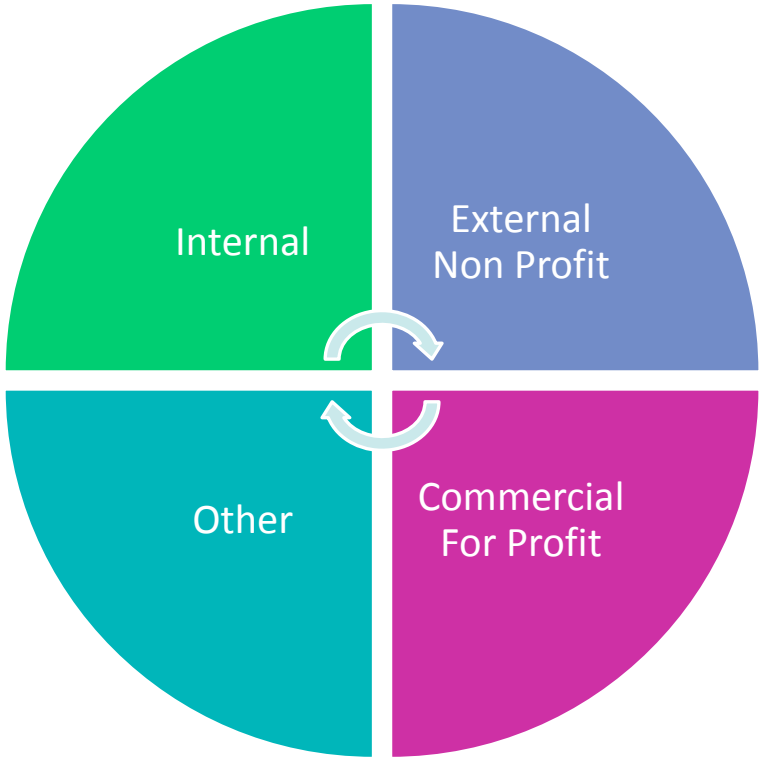
Other areas?

Key Components: Step 3 – Understand your Capacity & Utilization

- Time on Instruments
- Time for Repairs and Maintenance
- Training Time for Customers
- Custom Assays
- Consulting Time

Key Components: Step 4 – Understand your Market

Every Market is Different – do your research.



Budgets are…


Budget
100%
70%
15%
30%
70%
50%
25%
70%
10%
20%
12
06
04
02
45
30%
25%
45%

Core Facility Annual Operating Budget		
		FY2017-2018
		Budget
FUNDING:		
	Recharge	262,500
TOTAL FUNDING		262,500
EXPENSES:		
Personnel		
	Personnel	155,000
	Fringes (30%)	46,500
	Service Contracts	45,000
	Laboratory Supplies	15,000
TOTAL OPERATING EXPENSES:		261,500
NET SURPLUS (DEFICIT):		**1,000**

Core Facility Annual Operating Budget		
		FY2017-2018
		Budget
FUNDING:		
	Recharge	262,500
TOTAL FUNDING		262,500
EXPENSES:		
Personnel		
	Personnel	155,000
	Fringes (30%)	46,500
	Service Contracts	60,000
	Laboratory Supplies	15,000
TOTAL OPERATING EXPENSES:		276,500
NET SURPLUS (DEFICIT):		**(14,000)**

Annual Budget with Multiple Funding Sources (Portfolio Budget)

ANNUAL OPERATING BUDGET FACILITY XXXX		FY2017-2018 Budget	Source 1	Source 2	Source 3	Recharge
FUNDING:						
Recharge		200,000				200,000
Source 1 (Institution)		100,000	100,000			
Source 2 (grant)		25,000		25,000		
Source 3 (grant)		25,000			25,000	
TOTAL FUNDING		350,000	100,000	25,000	25,000	200,000
EXPENSES:						
Personnel	% effort					
PI	5%	5,000				5,000
Fringes		1,500				1,500
Technical Director	100%	75,000	10,000	-	8,000	57,000
Fringes		22,500	3,000	-	2,400	17,100
Personnel #1	100%	50,000	2,500	2,500	5,000	40,000
Fringes		15,000	750	750	1,500	12,000
Total Personnel Expense		169,000	16,250	3,250	16,900	132,600
Other Expenses						
Animal Care		30,600	20,000	4,500	6,100	-
Service Contracts/Maintenance		74,400	50,000	6,750		17,650
Professional Development		7,500		7,500		-
Animal Purchases/Facilities Chrgs		25,000		-	2,000	23,000
Laboratory Supplies		35,000	10,000		-	25,000
Office/Educational Supplies						-
Computers		7,000	3,750	3,000		250
All Other Supplies						-
Equipment						-
Travel		1,500				1,500
Total Other Expenses		181,000	83,750	21,750	8,100	67,400
TOTAL OPERATING EXPENSES:		350,000	100,000	25,000	25,000	200,000
NET SURPLUS (DEFICIT):		**0**	**0**	**0**	**0**	**0**

ANNUAL OPERATING BUDGET FACILITY XXXX		FY2017-2018 Budget	Source 1	Source 2	Source 3	Recharge
FUNDING:						
Recharge		200,000				200,000
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Office/Educational Supplies						-
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NET SURPLUS (DEFICIT):		**0**	**0**	**0**	**0**	**0**

AIB RTE
Research • Technology
Communication • Education

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EXPENSES:						
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NET SURPLUS (DEFICIT):		-	-	-	-	-

AIBRE
Research • Technology
Communication • Education

ANNUAL OPERATING BUDGET FACILITY XXXX		FY2017-2018 Budget	Source 1	Source 2	Source 3	Recharge	*Check Total*
FUNDING:							
Recharge		200,000				200,000	*200,000*
Source 1 (Institution)		100,000	100,000				*100,000*
Source 2 (grant)		25,000		25,000			*25,000*
Source 3 (grant)		25,000			25,000		*25,000*
TOTAL FUNDING		350,000	100,000	25,000	25,000	200,000	*350,000*
EXPENSES:							
Personnel	% effort						
PI	5%	5,000				5,000	*5,000*
Fringes		1,500				1,500	*1,500*
Technical Director	100%	75,000	10,000		8,000	57,000	*75,000*
Fringes		22,500	3,000		2,400	17,100	*22,500*
Personnel #1	100%	50,000	2,500	2,500	5,000	40,000	*50,000*
Fringes		15,000	750	750	1,500	12,000	*15,000*
Total Personnel Expense		169,000	16,250	3,250	16,900	132,600	*169,000*
Other Expenses							
Animal Care		30,600	20,000	4,500	6,100		*30,600*
Service Contracts/Maintenance		74,400	50,000	6,750		17,650	*74,400*
Professional Development		7,500		7,500			*7,500*
Animal Purchases/Facilities Chrgs		25,000			2,000	23,000	*25,000*
Laboratory Supplies		35,000	10,000			25,000	*35,000*
Office/Educational Supplies							*0*
Computers		7,000	3,750	3,000		250	*7,000*
All Other Supplies							*0*
Equipment							*0*
Travel		1,500				1,500	*1,500*
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TOTAL OPERATING EXPENSES:		350,000	100,000	25,000	25,000	200,000	*350,000*
NET SURPLUS (DEFICIT):		0	0	0	0	0	***0***

AIB RTE
Research • Technology
Communication • Education

Monitor through the Year:

Operating Budget, 3rd Quarter Actuals, Year End Projection and Variance 1

Unit	FY20XX-20XX Core Facility #1				
Report Period:	July 1, 20XX -	Mar 31, 20XX			
Account Number: XXXXXX	20XX/20XX	Actual	Estimate	20XX/20XX	Projected Variance
Description	Budget	Jul-Mar	Apr-June	Actual + Estimate	6/30/20XX
REVENUE					
Recharges	457,526	272,005	96,300	368,305	-89,221
Miscellaneous/Others	0	2,379	825	3,204	3,204
Total Revenue	457,526	274,383	97,125	371,508	-86,018
EXPENDITURES					
Salaries					
FTE	*1.90*	*0.60*	*1.90*	*1.90*	*0.00*
Permanent	154,486	101,255	26,400	127,655	26,831
Benefits	38,971	42,401	15,000	57,401	-18,430
Subtotal Salaries & Benefits	193,457	143,656	41,400	185,056	8,401
Non-Salary Expenditures					
Communication	2,452	290	96	386	2,066
Computing/Data Process	5,798	565	210	775	5,023
Other Services	0	78,988	22,958	101,946	-101,946
Equipment Mtnce	210,000	0	0	0	210,000
Other Supplies	40,000	41,145	6,010	47,155	-7,155
Travel	5,000	0	2,000	2,000	3,000
Other Expenses	819	587	225	812	7
Subtotal Non-Salary	264,069	121,576	31,499	153,075	110,994
Total Expenses	**457,526**	**265,232**	**72,899**	**338,131**	**119,395**
Net Operating Income/(Loss)	**-0**	**9,152**	**24,226**	**33,377**	**33,378**

Monitor through the Year:

Operating Budget, 3rd Quarter Actuals, Year End Projection and Variance 2

Unit	FY20XX-20XX Core Facility #1				
Report Period:	July 1, 20XX -	Mar 31, 20XX			
Account Number: XXXXXX	20XX/20XX	Actual	Estimate	20XX/20XX	Projected Variance
Description	Budget	Jul-Mar	Apr-June	Actual + Estimate	6/30/20XX
REVENUE					
Recharges	457,526	272,005	96,300	368,305	-89,221
Miscellaneous/Others	0	2,379	825	3,204	3,204
Total Revenue	457,526	274,383	97,125	371,508	-86,018
EXPENDITURES					
Salaries					
FTE	*1.90*	*0.60*	*1.90*	*1.90*	*0.00*
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Benefits	38,971	42,401	15,000	57,401	-18,430
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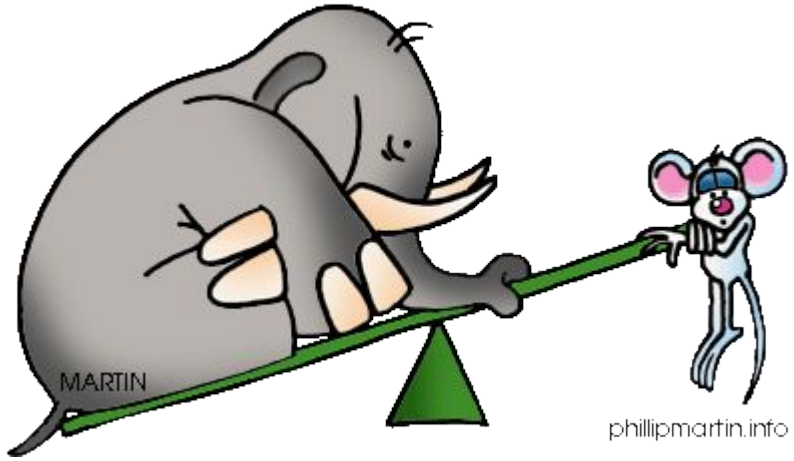
Non-Salary Expenditures					
Communication	2,452	290	96	386	2,066
Computing/Data Process	5,798	565	210	775	5,023
Other Services	0	78,988	22,958	101,946	-101,946
Equipment Mtnce	210,000	0	0	0	210,000
Other Supplies	40,000	41,145	6,010	47,155	-7,155
Travel	5,000	0	2,000	2,000	3,000
Other Expenses	819	587	225	812	7
Subtotal Non-Salary	264,069	121,576	31,499	153,075	110,994
Total Expenses	**457,526**	**265,232**	**72,899**	**338,131**	**119,395**
Net Operating Income/(Loss)	**-0**	**9,152**	**24,226**	**33,377**	**33,378**

Monitor through the Year:

Operating Budget, 3rd Quarter Actuals, Year End Projection and Variance 3

Unit	FY 20XX - 20XX Core Facility #2				
Report Period:	July 1, 20XX -	Mar 31, 20XX			
					Projected
Account Number: XXXXXX	2011/20XX	Actual	Estimate	20XX/20XX	Variance
Description	Budget	Jul-Mar	Apr-Jun	Actual + Estimate	6/30/20XX
REVENUE					
Recharges	260,686	66,343	18,000	84,343	-176,343
Miscellaneous/Others	0	-2,128	0	-2,128	-2,128
Total Revenue	260,686	64,216	18,000	82,216	-178,470
EXPENDITURES					
Salaries					
FTE	*2.00*	*1.00*	*2.00*	*2.00*	*0.00*
Permanent	122,564	99,134	28,620	127,754	-5,190
Benefits	47,678	36,982	10,320	47,302	376
Subtotal All Salaries & Benefits	170,242	136,117	38,940	175,057	-4,815
Non-Salary Expenditures					
Communication	600	0	0	0	600
Computing/Data Processing	0	705	150	855	-855
Membership & Subscriptions	0	400	0	400	-400
Printing, Reproduction	0	58	0	58	-58
Other Services	2,000	8,118	410	8,528	-6,528
Equipment Mtnce	0	0	0	0	0
Other Supplies	83,844	32,659	754	33,412	50,432
Travel	4,000	0	200	200	3,800
Other Expenses	0	575	0	575	-575
Capital Equipment	0	177	-177	0	0
Subtotal Non-Salary	90,444	42,692	1,336	44,028	46,416
Total Expenses	**260,686**	**178,809**	**40,276**	**219,085**	**41,601**
Net Operating Income/(Loss)	-0	-114,593	-22,276	-136,869	-136,869



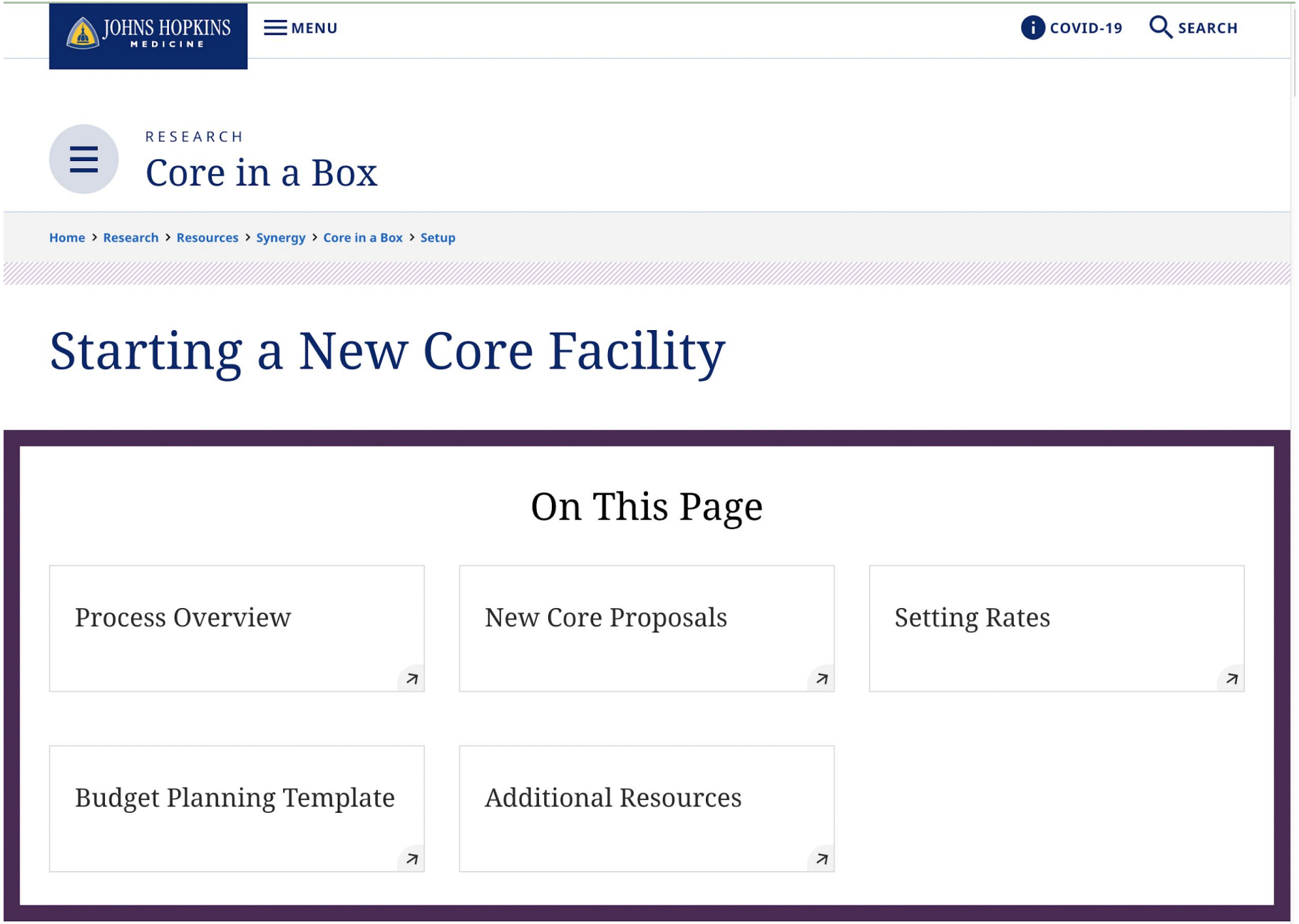
Don’t get trapped

- Leverage your budget plan
- Ensure your information is good: Garbage in Garbage out
- Don’t over analyze/complicate the process
- Monitor, monitor, monitor
- Use insight to understand the numbers
- Talk to your administrators
- Ask questions

Johns Hopkins “Core in a Box”

- Google search terms: Johns Hopkins core in a box
- Select “**Core Set Up**” then, “**Starting a New Core Facility**” then **“Budget Planning Template”**

https://www.hopkinsmedicine.org/research/resources/synergy/core-in-a-box/



CELLS THAT HAVE THIS BLUE COLOR SHADING ARE AVAILABLE TO YOU TO INPUT YOUR NECESSARY DATA. THE DATA WITHIN THESE CELLS ARE PROGRAMMED TO CALCULATE VARIOUS FIGURES THAT WILL CALCULATE YOUR RATES

Overview of Service Center Budget Template

-Template tabs used for input are numbered from 1 to 9. Please complete the analysis in numerical orde
9) on the template. Tabs 6-9 are predominantly computed Summary results.

-Tabs 1-9 containing cells highlighted in the BLUE color can be modified to input new values without disru
the formulas linking the various sheets.

-Please contact your school's core facilities contact if you need assistance adding rows or columns.

-This is a budget template; keep in mind your service center may have different information that needs to
presented another way.

1 Volume Projections Tab Green Tab)

- Record your anticipated volume for each service
- Determine your unit of measure for each service
- Enter the volume of services by users (both internal and external) so the appropriate rates can be applie
each type of user in future tabs.

2 Salaries & Fringe Tab (Red Tab)

- Please input the the following for each employee

(1) Full name, title, personnel number, annual salary and fringe rate for each individual related to the serv
(2) Enter the percent effort it takes for each individual to complete each service
(3) Check to make sure you have allocated the total effort assigned to the service center for each individu

3 Other Direct Expenses (Red Tabs)

- Enter service specific or fixed costs such as equipment leases, service contracts, kit costs, and consum
supplies for each service

4 Admin & Overhead Expenses (Red Tabs)

- Enter non-service specific or overhead costs to operate the service center. This includes one-time costs
such as travel, membership fees, large one time part repairs, rent, and administrative personnel.

5 Equipment Depreciation (Red Tab)

-Enter the detailed information (model, serial #, purchase price) for each piece of equipment with book va
your service center.

-For each piece of equipment, allocate the percent of usage for each service

Instructions | 1 Volume Projections | 2 Salary & Fringe | 3 Other Direct Expenses | 4 Admin Overhead Expenses | 5 Equipment Depreciat

Core in a Box Budget Setting Template

Tab 1: Volume Projections

Service Center Name:	Sleep Center Core Facility
Core Director:	Dr. Smith
Budget Number	80035520
Please enter data in the blue highlighted cells	
Do not fill. These are automatically populated or protected.	

				Internal	External Non-Profit	External For-Profit
Service #	Service Description	Metric	Total Estimated Annual Usage	University Users	Non-Profit Universities & State Agencies	For-Profit Corporations, Pharma, etc.
Example:						
Service 1		Machine Hours	105	100		5
Service 2		Completed Test	30	15	15	
Service 1	Database Initiation	Start-up	4	4	-	-
Service 2	Database Yearly Maintenance	Yearly	10	10	-	-
Service 3	Baseline Polysomnography (PSG)	Completed Test	175	175	-	-
Service 4	Sleep Fragmentation	Completed Test	17	17	-	-
Service 5	Forced Awakening Protocol	Completed Test	32	32	-	-
Service 6	CPAP and/or Oxygen	Completed Test	12	12	-	-
Service 7	Transcutaneous CO2 Administration	Completed Test	24	24	-	-
Service 8	Quanitative Snoring Measures (dBA)	Completed Test	12	12	-	-
Service 9	HST Ambulatory Setup	Completed Test	12	12	-	-
Service 10	PSG & NOX T3 Scoring / Interpretation / Reporting	Completed Test	500	500	-	-
Service 11	Specialized Reports	Completed Test	32	32	-	-
Service 12	Data Mangement	Hourly	1,600	1,600	-	-
Service 13	RPSGT Services	Hourly	1,320	1,320	-	-
		Total By Users	3,750	3,750	-	-

Tab 2: Salary & Fringe

Sleep Center Core Facility

Salary and Fringe

Fiscal Year 2023

Please enter data in the blue highlighted cells

Do not fill. These are automatically populated or protected.

									Service Description: Database Initiation		Database Yearly Maintenance		Baseline Polysomnography (PSG)	
Employee Name	Title	JHU Personnel #	Annual Salary $	Effort %	Effort Amount $	Fringe Benefit Rate %	Fringe Benefits Amount $	Total Salary & FB $	Service #1	% of Time	Service #2	% of Time	Service #3	% of Time
Example:														
Jane Doe	Technician	99999	48,000	100%	48,000	34.0%	16,320	64,320	32,160	50%	32,160	50%	-	0%
John Smith	Overreading PSGs		183,000	10.0%	18,300	34.0%	6,222	24,522	-		-		-	
Bill Jones	Data Analyst / Admin		73,181	90%	65,863	34.0%	22,393	88,256	3,530	4%	2,648	3%	4,413	5%
Sid Vishus	RPSGT		57,000	100%	57,000	34.0%	19,380	76,380	-		-		-	
Nancy Noble	RPSGT		38,469	100%	38,469	34.0%	13,079	51,548	-		-		43,816	85%
			351,650		179,632		61,075	240,707	3,530		2,648		48,229	

	Sleep Fragmentation		Forced Awakening Protocol		CPAP and/or Oxygen		Transcutaneous CO2 Administration		Quanitative Snoring Measures (dBA)		HST Ambulatory Setup		PSG & NOX T3 Scoring / Interpretati		Specialized Reports		Data Mangement		RPSGT Services			
Employee Name	Service #4	% of Time	Service #5	% of Time	Service #6	% of Time	Service #7	% of Time	Service #8	% of Time	Service #9	% of Time	Service #10	% of Time	Service #11	% of Time	Service #12	% of Time	Service #13	% of Time	Check Total	Comments
Example:																						
Jane Doe	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	100%	Check Total Must Equal % Effort
John Smith	-		-		-		-		-		-		24,522	100%	-		-		-		100%	
Bill Jones	-		-		-		-		-		-		-		2,648	3%	75,018	85%	-		100%	
Sid Vishus	-		-		-		-		-		-		34,371	45%	-		-		42,009	55%	100%	
Nancy Noble	2,577	5%	2,062	4%	1,031	2%	1,031	2%	515	1%	515	1%	-		-		-		-		100%	
	2,577		2,062		1,031		1,031		515		515		58,893		2,648		75,018		42,009			

Tab 3: Other Direct Expenses

Sleep Center Core Facility

Other Direct Expenses

Fiscal Year 2023

Please enter data in the blue highlighted cells

Do not fill. These are automatically populated or protected.

		Service Description																					
		Database Initiation		Database Yearly Maintenance		Baseline Polysomnography (PSG)		Sleep Fragmentation		Forced Awakening Protocol		CPAP and/or Oxygen		Transcutaneous CO2 Administration		Quanitative Snoring Measures (dBA)		HST Ambulatory Setup		PSG & NOX T3 Scoring / Interpretation / Reporting			
Description of Service or Supply	Total	Service #1	%of Time	Service #2	%of Time	Service #3	%of Time	Service #4	%of Time	Service #5	%of Time	Service #6	%of Time	Service #7	%of Time	Service #8	%of Time	Service #9	%of Time	Service #10	%of Time	Check Total	Comments
Example:																							
Equipment Maintenance Agreement	**5,000**	5,000	100%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	**100%**	**Check Total Must Equal 100%**
Supplies (e.g. equipment supplies)	**1,200**	600	50%	600	50%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	**100%**	
PSG Supplies	**4,925**	-		-		4,925	100%	-		-		-		-		-		-		-		**100%**	
Data Storage	**2,880**	-		-		2,880	100%	-		-		-		-		-		-		-		**100%**	
SQL DATABASE Hosting	**1,200**	-		-		1,200	100%	-		-		-		-		-		-		-		**100%**	
		-		-		-	100%	-		-		-		-		-		-		-		**100%**	

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Tab 4: Admin Overhead Expenses

Sleep Center Core Facility

Administrative Overhead Expenses

Fiscal Year 2023

Please enter data in the blue highlighted cells

Do not fill. These are automatically populated or protected.

Description of Service of Supply	Annual Salary	Effort %	Effort Amount	Fringe Benefit Rate %	Fringe Benefits Amount	Less: University Subsidy	Other/Non-Salary	Total	Comments
Example:									
Administrative Staff	50,000	100%	50,000	27.6%	13,800	(40,000)		**23,800**	
General Office Supplies							500	**500**	
Lan service			1,908		-			**1,908**	
Telephone			531		-			**531**	
Technical Advisor			5,000	34.0%	1,700			**6,700**	
Patient Coordinator			5,000	34.0%	1,700			**6,700**	
Manager	73,181	10%	7,318	34.0%	2,488			**9,806**	
	73,181		19,757		5,888	-	-	**25,645**	

Tab 5: Equipment Depreciation

Sleep Center Core Facility

Equipment Depreciation

Fiscal Year 2023

Please enter data in the blue highlighted cells

Do not fill. These are automatically populated or protected.

This tab is for purchased equipment only. If you are leasing your equipment, please enter the expense on tab 3 Other Direct Expenses

									Service Description											
									Database Initiation		Database Yearly Maintenance		Baseline Polysomnography (PSG)		Sleep Fragmentation		Forced Awakening Protocol			
Equipment Description	**Serial #**	**Model #**	**BU Asset ID (Tag) #**	**Acquisition Date**	**Purchase Price**	**Accum. Depr.****	**Useful Life**	**Annual Depr.****	**Service #1**	**% of Usage**	**Service #2**	**% of Usage**	**Service #3**	**% of Usage**	**Service #4**	**% of Usage**	**Service #5**	**% of Usage**	**Check Total**	**Comments**
Example:																				
Ultraviolet/Visible spectrophotomete	ABC12345	00499999	888555	1/1/12	85,000	15,938	8.00	10,625	10,625	100%	-	0%	-	0%	-	0%	-	0%	100%	Check Total Must Equal 100%
Embla N7000 US-Somno	2008-C0811026-CU-0320		JHU: 0077800	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2008-C0811059-CU-0320		JHU: 0077797	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2008-C0820002-CU-0320		JHU: 0077796	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2009-CU-C1000200-0320		JHU: 0083466	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2008-C0907059-CU-0320		JHU: 0083465	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2008-C0820031-CU-0320		JHU: 0077798	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
Embla N7000 US-Somno	2008-C0811088-CU-0320		JHU: 0077799	2/11/09	14,460	14,460	10.00	-	-		-		-		-		-		0%	
TRANSCUTANEOUS PO2P	880R0005N005		JHU: 0077824	6/18/08	14,994	14,994	10.00	-	-		-		-		-		-		0%	
							1.00	-	-		-		-		-		-		0%	
							1.00	-	-		-		-		-		-		0%	
							Totals	-	-		-		-		-		-			

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Tab 5: Equipment Depreciation (cont.)

5-Year Equipment Purchasing Plan

Please indicate what equipment you plan to purchase in each year.

Equipment Description	Purchase Price	Useful Life	Year 1 (FY23)	Year 2 (FY24)	Year 3	Year 4	Year 5
Data Acquisition Equipment	15,000	5.00		15,000		-	-
Total	15,000		-	15,000	-	-	-

5-Year Depreciation Schedule

Please calculate the anticipated depreciation in each year based on the purchase price and useful life.

Equipment Description	Purchase Price	Useful Life	Year 1	Year 2	Year 3	Year 4	Year 5
Data Acquisition Equipment	15,000	5.00		3,000	3,000	3,000	3,000
Total	15,000		-	3,000	3,000	3,000	3,000

Tab 6: Expense Summary

Sleep Center Core Facility

Summary of Expenses and Calculation of Rate

Fiscal Year 2023

Please enter data in the blue highlighted cells

Do not fill. These are automatically populated or protected.

	Service 1	Service 2	Service 3	Service 4	Service 5	Service 6	Service 7	Service 8	Service 9	Service 10	Service 11	Service 12	Service 13	
Allowable Costs:	Database Initiation	Database Yearly Maintenance	Baseline Polysomnography (PSG)	Sleep Fragmentation	Forced Awakening Protocol	CPAP and/or Oxygen	Transcutaneous CO2 Administration	Quanitative Snoring Measures	HST Ambulatory Setup	PSG & NOX T3 Scoring / Interpretation /	Specialized Reports	Data Mangement	RPSGT Services	**Total**
Salary and Wage Expenses (From Salary and Wage Worksheet)	3,530	2,648	48,229	2,577	2,062	1,031	1,031	515	515	58,893	2,648	75,018	42,009	240,707
Other Expenses (From Other Expenses Worksheet)	-	-	9,005	-	-	-	-	-	-	-				9,005
Depreciation (From Equipment Depreciation Worksheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct Operating Costs	3,530	2,648	57,234	2,577	2,062	1,031	1,031	515	515	58,893	2,648	75,018	42,009	249,712
Admin Overhead Expenses (From Admin Overhead Exps Worksheet)	**24,300**													25,645
Prior Year Deficit (Surplus) Adjustment														(20,000)
Total Allowable Overhead														5,645
% of Allowable Overhead to Total Direct Operating Costs														2%
Administrative Overhead Allocation	80	60	1,294	58	47	23	23	12	12	1,331	60	1,696	950	5,645
Total Allowable Costs	3,610	2,708	58,528	2,636	2,109	1,054	1,054	527	527	60,224	2,708	76,714	42,959	255,357
Volume Projections of Good or Service:														
Total Number of Units Per Year (From Volume Projections Worksheet)	4	10	175	17	32	12	24	12	12	500	32	1,600	1,320	
Cost Per Unit:	$ 903	$ 271	$ 334	$ 155	$ 66	$ 88	$ 44	$ 44	$ 44	$ 120	$ 85	$ 48	$ 33	

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Tab 7: Proposed Rates

Sleep Center Core Facility

Summary of Proposed Rate(s)

Fiscal Year 2023

		Service #1	Service #2	Service #3	Service #4	Service #5	Service #6	Service #7	Service #8	Service #9	Service #10	Service #11	Service #12	Service #13
		Database Initiation	Database Yearly Maintenance	Baseline Polysomnography (PSG)	Sleep Fragmentation	Forced Awakening Protocol	CPAP and/or Oxygen	Transcutaneous CO2 Administration	Quanitative Snoring Measures	HST Ambulatory Setup	PSG & NOX T3 Scoring / Interpretation /	Specialized Reports	Data Mangement	RPSGT Services
Recommended/Calculated Cost Per Unit (From Expense Summary)		903	271	334	155	66	88	44	44	44	120	85	48	33
Charge Per Unit: (Please enter unit price)		650	360	425	220	50	25	25	25	75	125	25	50	36
Proposed Rate(s):														
Internal:		650	360	425	220	50	25	25	25	75	125	25	50	36
Rate Distribution:														
Operations		650	360	425	220	50	25	25	25	75	125	25	50	36
Equipment Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-
External - Non-Profit:		650	360	425	220	50	25	25	25	75	125	25	50	36
* typically internal rate														
Rate Distribution:														
Operations		650	360	425	220	50	25	25	25	75	125	25	50	36
Equipment Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-
JHU F&A		-	-	-	-	-	-	-	-	-	-	-	-	-
External - For-Profit:		1,118	619	731	378	86	43	43	43	129	215	43	86	62
*internal rate plus applicable Indirect Cost rate up to market (see below)														
Indirect Cost Rate To Charge:	72.00%													
Rate Distribution:														
Operations		650	360	425	220	50	25	25	25	75	125	25	50	36
Equipment Reserve		-	-	-	-	-	-	-	-	-	-	-	-	-
JHU F&A		468	259	306	158	36	18	18	18	54	90	18	36	26

The approved Federal Indirect Cost Rates (F&A) are as follows:

Commercial Sponsored Research	**Rates**
On-Campus	72.00%
Off-Campus	34.00%

Tab 8: Revenue Summary

Summary of Projected Revenues

Fiscal Year 2023

	Service #1	Service #2	Service #3	Service #4	Service #5	Service #6	Service #7	Service #8	Service #9	Service #10	Service #11	Service #12	Service #13	
	Database Initiation	Database Yearly Maintenance	Baseline Polysomnography (PSG)	Sleep Fragmentation	Forced Awakening Protocol	CPAP and/or Oxygen	Transcutaneous CO2 Administration	Snoring Measures (dBA)	HST Ambulatory Setup	T3 Scoring / Interpretation / Reporting	Specialized Reports	Data Mangement	RPSGT Services	Totals
Requested Rate(s)														
Internal (From Proposed Rate(s) Worksheet)	650	360	425	220	50	25	25	25	75	125	25	50	36	2,091
External - Non-Profit (From Proposed Rate(s) Worksheet)	650	360	425	220	50	25	25	25	75	125	25	50	36	2,091
External - For-Profit (From Proposed Rate(s) Worksheet)	1,118	619	731	378	86	43	43	43	129	215	43	86	62	3,597
Projected Volume:														
Internal (From Volume Projections Worksheet)	4	10	175	17	32	12	24	12	12	500	32	1,600	1,320	3,750
External - Non-Profit (From Volume Projections Worksheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External - For-Profit (From Volume Projections Worksheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Projected Volume	**4**	**10**	**175**	**17**	**32**	**12**	**24**	**12**	**12**	**500**	**32**	**1,600**	**1,320**	**3,750**
Projected Revenue:														
Internal	2,600	3,600	74,375	3,740	1,600	300	600	300	900	62,500	800	80,000	47,520	278,835
External - Non-Profit (From Proposed Rate(s) Worksheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
External - For-Profit (From Proposed Rate(s) Worksheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Projected Revenue	**2,600**	**3,600**	**74,375**	**3,740**	**1,600**	**300**	**600**	**300**	**900**	**62,500**	**800**	**80,000**	**47,520**	**278,835**

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Tab 9: 5 Year Plan

Sleep Center Core Facility
Service Center 5 Year Projection

Please enter data in the blue highlighted cells
Do not fill. These are automatically populated or protected.

Start Date (MM/DD/YY):	07/01/22
Months In Service During Year 1:	12.0
Inflation Factor:	3%
Start-Up Lag (% of total expected volume in Year 1):	100%

REVENUE	FY 2023 Total	FY2023 Lagged	FY 2024	FY 2025	FY 2026	FY 2027
Services:						
Database Initiation	$ 2,600	$ 2,600	$ 2,678	$ 2,758	$ 2,841	$ 2,926
Database Yearly Maintenance	$ 3,600	$ 3,600	$ 3,708	$ 3,819	$ 3,934	$ 4,052
Baseline Polysomnography (PSG)	$ 74,375	$ 74,375	$ 76,606	$ 78,904	$ 81,272	$ 83,710
Sleep Fragmentation	$ 3,740	$ 3,740	$ 3,852	$ 3,968	$ 4,087	$ 4,209
Forced Awakening Protocol	$ 1,600	$ 1,600	$ 1,648	$ 1,697	$ 1,748	$ 1,801
CPAP and/or Oxygen	$ 300	$ 300	$ 309	$ 318	$ 328	$ 338
Transcutaneous CO2 Administration	$ 600	$ 600	$ 618	$ 637	$ 656	$ 675
Quanitative Snoring Measures (dBA)	$ 300	$ 300	$ 309	$ 318	$ 328	$ 338
HST Ambulatory Setup	$ 900	$ 900	$ 927	$ 955	$ 983	$ 1,013
PSG & NOX T3 Scoring / Interpretation / Reporting	$ 62,500	$ 62,500	$ 64,375	$ 66,306	$ 68,295	$ 70,344
Specialized Reports	$ 800	$ 800	$ 824	$ 849	$ 874	$ 900
Data Mangement	$ 80,000	$ 80,000	$ 82,400	$ 84,872	$ 87,418	$ 90,041
RPSGT Services	$ 47,520	$ 47,520	$ 48,946	$ 50,414	$ 51,926	$ 53,484
TOTAL REVENUE	**$ 278,835**	**$ 278,835**	**$ 287,200**	**$ 295,816**	**$ 304,691**	**$ 313,831**

EXPENSES	FY 2023 Total	FY2023 Lagged	FY 2024	FY 2025	FY 2026	FY 2027
Salaries & Fringe:						
John Smith	$ 24,522	$ 24,522	$ 25,258	$ 26,015	$ 26,796	$ 27,600
Bill Jones	$ 88,256	$ 88,256	$ 90,904	$ 93,631	$ 96,440	$ 99,333
Sid Vishus	$ 76,380	$ 76,380	$ 78,671	$ 81,032	$ 83,462	$ 85,966
Nancy Noble	$ 51,548	$ 51,548	$ 53,095	$ 54,688	$ 56,328	$ 58,018
Sub-Total Salaries & Fringe Benefits	**$ 240,707**	**$ 240,707**	**$ 247,928**	**$ 255,366**	**$ 263,027**	**$ 270,918**
Non-Salary Costs:						
Other Direct Costs	9,005	$ 9,005	$ 9,275	$ 9,553	$ 9,840	$ 10,135
Equipment Depreciation Expenses	-	$ -	$ 3,000	$ 3,000	$ 3,000	$ 3,000
Admin Overhead Expense	25,645	$ 25,645	$ 26,415	$ 27,207	$ 28,023	$ 28,864
Sub-Total Non-Salary Costs	**$ 34,650**	**$ 34,650**	**$ 38,690**	**$ 39,760**	**$ 40,863**	**$ 41,999**
TOTAL EXPENSES	**$ 275,357**	**$ 275,357**	**$ 286,618**	**$ 295,126**	**$ 303,890**	**$ 312,917**
Projected Yearly Surplus/(Deficit)	**$ 3,478**	**$ 3,478**	**$ 582**	**$ 690**	**$ 801**	**$ 915**
Subsidy If Any?: Please describe the source of the subsidy below.		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Accumulated Surplus/(Deficit)	**(20,000)**	**$ (16,522)**	**$ (15,940)**	**$ (15,250)**	**$ (14,449)**	**$ (13,535)**

Subsidy Detail (Source, Amount, Duration)

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The Association of Biomolecular Resource Facilities

Core Components: Staffing

Staffing: Job Families

Core Specific Job Families – many institutions have developed core career tracks.

Generally, differ from PI-based lab staff regarding:

Require advanced training & expertise

- Expert knowledge of sophisticated instrumentation/equipment
- Application knowledge of a wide variety of instrumentation
- Scientific knowledge to span application across a broad variety of research programs

Interpersonal skills

- Ability to communicate effectively to scientists and administrators

Customer service focus

Business acumen and training

Staffing Structures:

Faculty Director aka Faculty Supervisor aka _____

- Dedicated or Advisory Role
- Limited % effort
- Grant/funding responsibility
- Runs interference with clients

Core Director aka Technical Director aka _____

- Overall Responsibility
- Experimental design
- Operations - works closely with manager
- Budget Development
- Grants/Funding

Core Manager aka Asst. Director aka _____

- Supervisory
- Defines Work Flow
- Budget Development assistance
- Experimental Design
- Works at the bench
- Grants/Funding

Core Research Assistant aka Technician aka _____

- Works at the bench
- Varying Levels of Expertise
- Experimental Design

Supporting Roles:

Advisory Committee

- Reviews operations and utilization at least annually
- Annual user survey
- Vets/prioritizes equipment requests
- Vets/prioritizes new service requests
- Grants/Funding

Financial Manager

- Works with Directors & Managers to ensure financial health
- Develops Budgets
- Grants/Funding

The Association of Biomolecular Resource Facilities

Core Components: Space ("the Final Frontier")

Space

Space planning and acquisition processes vary with each institution. New buildings/renovations for research should set aside ~15% of space for shared facilities in the plans.

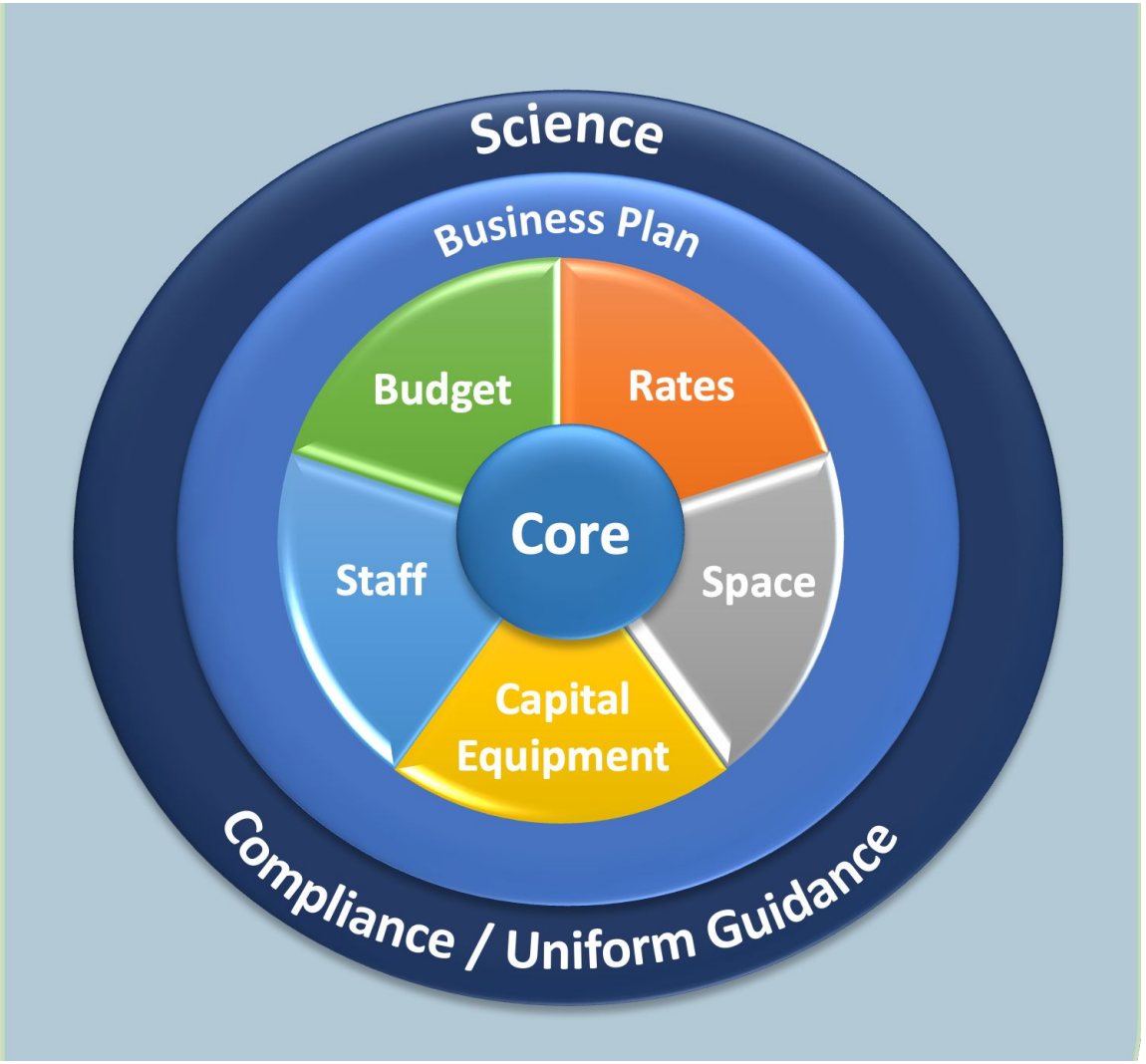
Must work collaboratively with administration and leadership to address space issues recognizing this is **shared** space and must be flexible enough to accommodate core evolution.

New instrumentation acquisition requires careful planning:

- Equipment manufacturers site prep guides
- Heat generation & HVAC needs
- Electrical and lab gas needs
- Measure multiple times
- Include space for access to maintain/repair instruments

Office space is needed for managerial tasks, personnel conversations and client consultations

Safety – adequate space is needed for core clients to work comfortably, effectively and safely..


Science
Business Plan
Budget
Rates
Staff
Core
Space
Capital
Equipment
Compliance / Uniform Guidance

In Summary