

Rate Development Illustrations

Example A: Projected Operating Costs of a Service Center - Comparison of Consumption and Output Approaches:⁽¹⁾

	Service Center Operating Budget ⁽²⁾
Salaries and Wages	\$120,000
Fringe Benefits	18,000
Supplies	25,000
Materials	60,000
Communications	5,000
Depreciation	15,000
Net carry forward (Surplus/Deficit)	<u>(10,000)</u>
Total Costs	\$233,000

⁽¹⁾Assume this service center could be either a machine shop or a mass spectrometer facility.

⁽²⁾Each service center and recharge operation must have a separate, distinct account.

CONSUMPTION METHOD:

Machine Shop

Forecasted Machinist Hours:

40 Hours/Week x 52 Weeks	2,080 Hours/Year
# of Machinists: 2 x 2,080	4,160 Total Hours
Down time (Employee leave, etc.)	1,520 Hours
Billable Hours	2,640 Hours
Consumption Rate = $\frac{\$233,000 \text{ Total Costs}}{2,640 \text{ Billable Hours}}$	\$88.26/Hour

OUTPUT METHOD:

Mass Spectrometer Facility

Estimated Output:

Total Samples Analyzed	1,500
Unit Cost Rate = $\frac{\$233,000 \text{ Total Costs}}{1,500 \text{ Samples}}$	\$155/Sample

Note: It is important for the activity base chosen to relate directly to what drives the costs. For example, establishing a sample rate based on hourly use would not accurately distribute the operating costs. These costs directly relate to the number of samples analyzed.

Rate Development Illustrations with Departmental Subsidy

Projected Operating Costs of a Service Center -
Comparison of Consumption and Output Approaches:⁽¹⁾

	<u>Service Center Operating Budget</u>	<u>Subsidy Account⁽²⁾</u>	<u>Service Center Account⁽²⁾</u>
Salaries and Wages	\$120,000	\$120,000	
Fringe Benefits	18,000	18,000	
Supplies	25,000		\$ 25,000
Materials	60,000		60,000
Communications	5,000		5,000
Depreciation	15,000		15,000
Net carry forward (Surplus/Deficit) ⁽³⁾	<u>0</u>		<u>0</u>
Total Costs	\$243,000	\$138,000	\$105,000

⁽¹⁾Assume this service center could be either a machine shop or a mass spectrometer facility.

⁽²⁾Each service center and recharge operation must have a separate, distinct account together with a corresponding subsidy account.

⁽³⁾Prior year surplus of recharges must be applied to reduce the prior year subsidy account.

CONSUMPTION METHOD:

Machine Shop

Forecasted Machinist Hours:

40 Hours/Week x 52 Weeks	2,080 Hours/Year
# of Machinists: 2 x 2,080	4,160 Total Hours
Down time (Employee leave, etc.)	1,520 Hours
Billable Hours	2,640 Hours
Consumption Rate = $\frac{\$105,000 \text{ Total Costs}}{2,640 \text{ Billable Hours}}$	\$39.77/Hour

OUTPUT METHOD:

Mass Spectrometer Facility

Estimated Output:

Total Samples Analyzed	1,500
Unit Cost Rate = $\frac{\$105,000 \text{ Total Costs}}{1,500 \text{ Samples}}$	\$70/Sample

Note: It is important for the activity base chosen to relate directly to what drives the costs. For example, establishing a sample rate based on hourly use would not accurately distribute the operating costs. These costs directly relate to the number of samples analyzed.

Rate Development Illustrations (Cont'd)

Example B: User Fee Calculation for Providing Services

1. Projected Operating Cost

Salaries (5 technicians)	\$200,000
Salaries (support staff)	28,000
Fringe Benefits	51,300
Communications	2,800
Training and Development (travel)	2,000
Repairs and Maintenance	4,350
Supplies	5,500
Equipment Depreciation	6,345
Prior Year Operating Surplus	<u>(1,000)</u>
 Total Cost	 <u>\$299,295</u>

2. Projected Units of Activity

40 hours per week times 52 weeks	2,080
Minus holiday hours (14 days x 8 hrs/day)	(112)
Minus average annual leave (40 hrs/wk x 4 wks)	(160)
Minus average sick leave (6 x 8 hrs/day)	<u>(48)</u>
Hours worked per year	1,760
Minus mandatory breaks (1,760/8 = 220 days x .5 hrs)	(110)
Minus down time (meetings, training, etc.) (avg. 1.5 hrs/work day = 220 x 1.5)	<u>(330)</u>
 Total Average Available Hours per Technician	 <u>1,320</u>

1,320 x 5 technicians = 6,600 total hours for the facility (units of activity)

3. Calculate User Fee

$$\text{User Fee} = \frac{\text{Total Cost}}{\text{Units of Activity}} = \frac{\$299,295}{6,600} = \$45.35 \text{ per hour}$$

Rate Development Illustrations (Cont'd)

Example C: User Fee Calculation for Providing Goods

The following is an example of the user fee calculation for a pint of acid for which the cost (i.e. the actual purchase price) to the Service Center is \$10.00.

2. Projected Operating Costs

Salaries	\$25,000
Fringe Benefits	5,625
Office Supplies	1,000
Facilities Expense (paid by the operation or facility)	2,000
Net Carry Forward (Surplus)	(500)
Total Operating Costs	\$34,125

3. Projected Total Supplies/Materials Costs For Services Expected to be Rendered

Chemicals	\$100,000
Supplies	50,000
Glassware	31,250
Total Supplies/Materials Costs	\$181,250

4. Calculate Mark-Up Rate

$$\text{Mark-Up Rate} = \frac{\text{Operating Costs}}{\text{Supplies/Materials Costs}} = \frac{34,125}{181,250} = .1883$$

5. Calculate User Fee

Mark-Up Amount	=	Cost-Item Provided	X	Mark-Up Rate
	=	\$10.00	X	.1883
	=	\$ 1.88		
 User Fee	=	Cost-Item Provided	+	Mark-Up Amount
	=	\$10.00	+	\$1.88
	=	\$11.88		

Rate Development Illustrations (Cont'd)

Example D: User Fee Calculation that Includes Depreciation

1. Calculate Depreciation

<u>Equipment</u>	<u>Asset Item Number</u>	<u>Acquisition Cost</u>	<u>Acquisition Date</u>	<u>Useful Life</u>	<u>FY 99 Amount to be Recovered in Rate</u>
Copier A	345678	12,000	8/30/95	5 Years	2,400
Copier B	123456	5,000	10/24/90	5 Years	<u>0</u>
Total		<u>\$17,000</u>			2,400*

2. Calculate Operating Cost and Estimate Units of Activity

Salaries	\$20,000
Fringe Benefits	4,500
Repairs and Maintenance	10,500
Supplies	15,500
Equipment Depreciation*	<u>2,400</u>
Total Cost	<u>\$52,900</u>
Estimated number of copies per year (units of activity)	500,000

3. Calculate User Fee

$$\text{User Fee} = \frac{\text{Operating Cost}}{\text{Units of Activity}} = \frac{\$52,900}{500,000} = \$0.11$$