

Rate Development Illustrations

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

| Service Center Operating Budget | |
|-------------------------------------|------------------|
| 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) | (10,000) |
| Total Costs | \$233,000 |

⁽¹⁾ Assume this service center could be either a machine shop or a mass spectrometer facility.
⁽²⁾ Each service center 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 Input and Output

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

| | Service Center Operating Budget | Subsidy Account | Service Center Account |
|--|------------------------------------|--------------------|---------------------------|
| 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⁾ | 0 | | 0 |
| 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 Capacity:

| | |
|--|-------------|
| 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 sample rate based on the number of samples analyzed.

Rate Development Worksheet (cont'd)

Example B: User Fee Calculation Including Overhead Expenses

1. Projected Operating Expenses

| | | |
|------------------------------|------------------|--------|
| Salaries (support staff) | 28,000 | 20,000 |
| Fringe Benefits | 51,300 | |
| Communications | 2,000 | |
| Training and Development | | |
| Repairs and Maintenance | 4,350 | |
| Supplies | 5,500 | |
| Equipment Depreciation | 6,345 | |
| Prior Year Operating Surplus | (1,000) | |
| Total Cost | \$299,295 | |

2. Projected Units of Activity

40 hours per week
 Minus time by hours (7 days a week)
 Minus average annual leave (40 hr)
 Minus average sick leave (10 hr)
 Hours available per year
 Minus mandatory breaks (1,760/8 = 220 days x 1.5 hr)
 Minus downtime (220 x 1.5)

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

3. Calculate User Fee

$$\text{User Fee} = \frac{\text{Total Cost } \$299,295}{\text{Units of Activity}}$$

Rate Development Illustrations (Continued)

Example C: User Fee Calculation for Providing Goods

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

2. Projected Operating Costs

| | |
|------------------------------|---------------|
| Salaries | \$25,000 |
| Fringe Benefits | 5,000 |
| Office Supplies | 1,000 |
| Facilities | 1,000 |
| Net Capital | 1,000 |
| Total Operating Costs | 33,000 |

3. Projected Total Supplies 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

$$\text{Mark-Up Rate} = \frac{\text{Operating Costs}}{\text{Supplies/Materials Costs}} = \frac{33,000}{181,250} = 0.1883$$

$$\begin{aligned} \text{Mark-Up Amount} &= \$10.00 \times 0.1883 \\ &= \$1.88 \end{aligned}$$

$$\begin{aligned} \text{User Fee} &= \text{Cost Item Provided} + \text{Mark-Up Amount} \\ &= \$10.00 + \$1.88 \\ &= \$11.88 \end{aligned}$$

Rate Development Illustrations (Cont'd)

Example D: User Fee Calculation that Includes Depreciation

1. Calculate Depreciation

| Equipment | Asset Item Number | Asset Cost | Acquisition Date | Useful Life | FY 99 Amount |
|-----------|-------------------|-----------------|------------------|-------------|--------------|
| Copier A | 345678 | 12,000 | 8/30/95 | 5 Years | 2,400 |
| Copier B | 123456 | 5,000 | 10/24/90 | 5 Years | 1,000 |
| Total | | <u>\$17,000</u> | | | <u>2,400</u> |

2. Calculate Operating Cost and Estimate Service Quantity

| | |
|-------------------------|-----------------|
| Salaries | \$20,000 |
| Fringe | 4,000 |
| Repairs and Maintenance | 10,500 |
| Supplies | 15,500 |
| Equipment Depreciation* | <u>2,400</u> |
| Total Cost | \$52,900 |

Estimated number of copies per year =

3. Calculate User Fee

| | |
|----------------|----------|
| Operating Cost | \$52,900 |
| User Fee | |